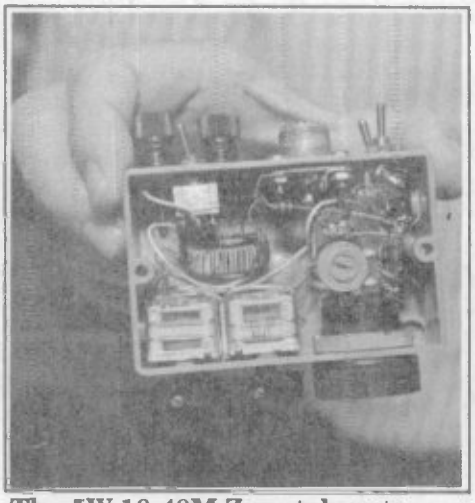
Emergency Communications • Public Service • International Friendship

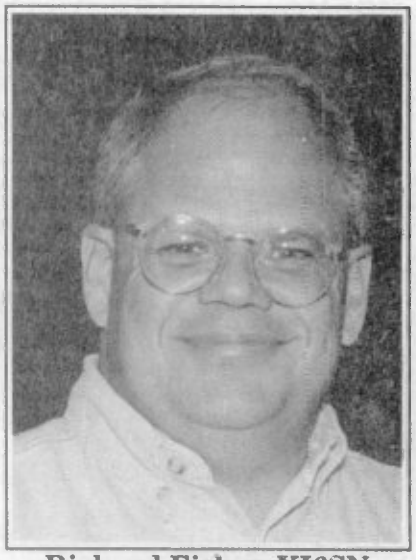
WORLDRADIO

Year 27, Issue 5 November 1997 • $1.50

Chip Margelli, K7JA, famous Yaesu person, spoke on Ham Travel Adventures and Simple Access to Ham Satellites.



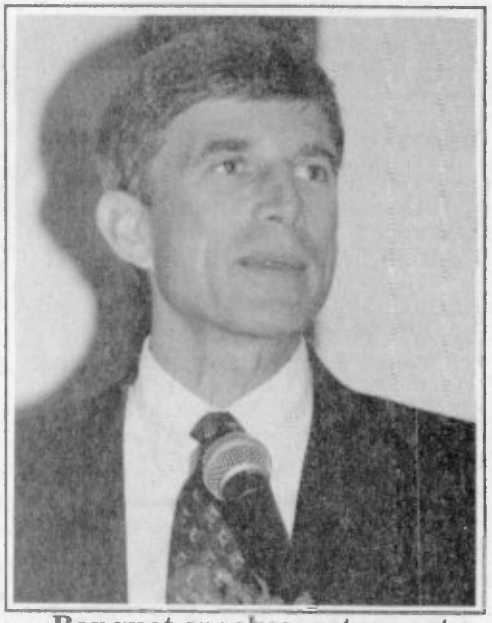
The 5W 10-40M Z-match antenna tuner of Charles Lofgren, W6JJZ.



Richard Fisher, KI6SN, *Worldradio's* QRP columnist.

Enjoying the convention were perennial attendees Dee Davis, KC6FIZ, and George Mitchell, K6 Zero Energy.

Dave Bell, W6AQ, Banquet Master of Ceremonies.



Banquet speaker, astronaut Col. Ron Sega, Ph.D, KC5ETH.

Down at the Riverside... SW Division Convention

NEWSFRONT

Worldradio

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

Section Manager election results

Ballots have been counted in the Section Manager election for the San Francisco Section. The term of office begins October 1, 1997.

The results are as follows: San Francisco Section, Tom Orman, KD6VWD, 270 votes, John Wallack, W6TLK, 318 votes. Wallack was declared elected.

Eight other sections were not contested. The following were declared elected: Colorado Section, Tim Armagost, WBØTUB.

Georgia Section, Nelson "Sandy" Donahue, W4RU.

Eastern Washington Section, Kyle Pugh, KA7CSP.

Los Angeles Section, Phineas Icenbice, Jr., W6BF.

Sacramento Valley Section, Jettie Hill, W6RFF.

South Texas Section, Ray Taylor, N5NAV.

West Virginia Section, Olie Rinehart, WD8V.

Western Washington Section, Harry Lewis, W7JWJ.

K1ETR turns 100!

Thomas W. "Bill" Petrie, K1ETR, of Waltham, Massachusetts, turned 100 years old on 30 August. In a letter, ARRL Executive Vice President David Sumner, K1ZZ, extended hearty congratulations to Petrie on behalf of the officers, directors, members and staff of the League. Petrie's niece, Marcy Just, says Petrie was born in England and came to the U.S. as a youngster. A World War I veteran and retired from the Waltham Watch Company, he's been a ham for more than 40 years and is still active on the air. Ken Hopper, K2VAM, in Phoenix, Arizona, says that Bill recently told him he was planning to make a trip up his tower to "tighten some bolts."

Amateur Radio hero

An Amateur Radio operator in San Diego is alive today thanks to the concern of another ham. When longtime *Newsline* contributor Mike Sullivan, WA6HJJ, noticed that something didn't sound right in the voice of a fellow ham, he took note. But then Mike looked into the situation a little further when his friend failed to show up on a High Frequency net, failed to answer his phone and wouldn't return e-mails. It seemed as if the person who lived alone had vanished from view.

Fearing the worst, Mike asked the local authorities to visit his friend's house. When the police arrived and found old newspapers stacked up, they made entry and found the man collapsed on the floor. He had been unable to eat, drink or move for two days, having collapsed because of a previously undetected medical condition. Now he is recovering in a community hospital and praises Mike for saving his life.

Radio hobbies are many things to many people, but this incident underscores the vital sense of community that Amateur Radio engenders. Thanks to Mike Sullivan, WA6HJJ, for having a keen ear, and for taking the time out of his schedule to look into a mystery. That action, ultimately, saved a life. —*via CGC Communicator*

Huntsville Hamfest

For the second year in a row the Huntsville Hamfest has bucked the downward trend in attendance. In fact, Huntsville appears to be the first major ham radio outing to show substantial growth in 1997. While attendance figures are not yet available, convention administrators are saying unofficially that show attendance may be up as much as 15 percent over 1996. Compare this to the 10 to 20 percent drop in attendance that most other shows have reported, and it says that the folks in Huntsville have found out what the public wants.

There was a significant increase in the number of youngsters in attendance. Newsline reporters attending the show counted close to 250 youngsters walking the display floor on Saturday. More than half of them were licensed. Amazingly, at least one third of these were teenage girls. Obviously a major shift in Amateur Radio demographics is beginning to take place in the Southeastern United States. —*via Newsline*

KE6MWX Yagi project among science fair winners

Fourteen-year-old Sara Hanna, KE6MWX, of Willits, California, was among the winners at the 46th annual California State Science Fair held in May in Los Angeles. Her project, "Does the design of the driven element affect the radiation pattern of a Yagi antenna?" placed first in the junior division of elec-

tricity and electronics, She received a gold medal and a cash award. Last year, Sara finished in second place in the same division with her project comparing Yagi and quad antennas. Her parents are Tim and Sue Hanna, WB9NJS and KE6YKY, respectively. *—Tom Orman, KD6VWD*

Polk County antenna victory

There is better tower and antenna news out of Florida. There, thanks to the efforts of many hams, the Polk County Board of County Commissioners has instructed the Planning Division to exempt Amateur Radio towers from the proposed tower restriction ordinance.

According to N4DL, the Planning Division had recommended a maximum height of 65 feet for ham towers. Over 65 feet would have required a special exemption, the cost of which may have been excessive for many people. But the area's amateur community was able to convince city planners of the importance of Amateur Radio to the community. As a result the exemption for Amateur Radio was granted. *— via N4DL*

K7UGA may have Alzheimer's Disease

Amateur Radio's elder statesman many be suffering from the onset of Alzheimers disease. Roy Neal, K6DUE, said, "In a press conference on Monday, 15 September, Susan Goldwater, the wife of retired U.S. Senator Barry M. Goldwater, K7UGA, admitted that he may be suffering from the early symptoms of Alzheimer's disease. Mrs. Goldwater told reporters that there are 'different opinions' on whether the 88-year-old retired senator definitely has the debilitating disease or is suffering from a 1996 stroke.

"Doctors said last year's stroke triggered an underlying incipient Alzheimer's disease, and at the news conference Mrs. Goldwater said her husband occasionally suffers from memory loss and confusion and has difficulty with mobility. But the former nurse added that this is not unusual for a man of his advanced age.

"Susan Goldwater asked that the American public trust that the family is taking very good care of Barry, adding: 'He is very much at home, preferring to be here and doing just what he wants to do.'

"A statement read by his son, Barry Goldwater, Jr., backed her, saying family members all are working together to make his dad's remaining years as happy and comfortable as possible.

"It is because of Barry Goldwater that congress was convinced to enact the enabling legislation that made possible the all-volunteer testing system and Amateur Auxiliary to the FCC. Barry also shared his Amateur Radio hobby numerous times with millions of would-be hams through his appearances in numerous ARRL- and AMSAT-sponsored films and videos.

"Now in his declining years, Barry says he wants to step out of the spotlight and let others take his place. We know that you join us in saying: 'Mr. Senator — well done.'"

Amateurs who appreciate all the good work that Barry Goldwater has done for Amateur Radio during his illustrious career in Washington might consider dropping him a QSL card with a message of support. Address your good wishes to Senator Barry M. Goldwater, K7UGA, 6250 North Hogan Drive, Scottsdale Arizona, 85253. *—via published news reports*

Dr. Chalfin honored

Dr. Norman L. Chalfin, K6PGX, founder of the Newsline Support Fund and Fund Administrator for over a decade has been honored by the Radio Club of America for his numerous professional accomplishments. Dr. Chalfin will receive the Edgar F. Johnson Pioneer Citation at the annual Radio Club of America Awards Banquet the evening of November 21st in New York City.

Norm served many years in the Patent Office at the Jet Propulsion Laboratory in Pasadena, California, where he was also active with the JPL Amateur Radio Club. He wrote the AMSAT-OSCAR column for ***Worldradio*** for several years. Among other accomplishments, Norm served as a volunteer historian to AMSAT for well over two decades and provided much of the Amateur Radio satellite materials used in ham radio films produced for the ARRL. *—via Radio Club of America*

Fed Reg search code

A searchable Code of Federal regulations, including 47CFR97, the Amateur Radio regulations, is available at http://www.access.gpo.gov/nara/cfr/cfr-tablr-search.html from the National Archives and Records Administration. *—Ed Hare, W1RFI*

Congratulations to David Mennock, N3ZNE,
winner of a $200 gift certificate (redeemable from MFJ). His name was selected at random by the computer from the ***Worldradio*** subscriber list. Check here next month to see if your name has been selected.

Worldradio
November 1997

News & Features

Departments

Next month's columns will include 10-10, Computers & Basic Stuff, Old-time Radio, RFI & You, With the Handi-Hams, YLs on the Air, & coming soon.... a club column!

Worldradio

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November 1997 Year 27, Issue 5

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Our goal is to be a valuable resource of ideas and experiences beneficial to the Amateur Radio community. We publicize and support the efforts of those who bring the flame of vitality to this avocation. As readers, you are participants in an alliance of active radio amateurs concerned with reality, using radio as a communications tool to develop the skill, quality and full potential of Amateur Radio.

We emphasize the positive aspects of this great activity, and desire your contributions dealing with dramatic, personal and humanitarian uses of Amateur Radio. Articles for consideration may be submitted through the U.S. Postal Service or e-mail to n6wr@ns.net

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Publisher's Microphone

After one has climbed to the top of Mount Kilimanjaro, single-handedly solved the mysteries of Judge Crater and Jimmy Hoffa and found Amelia Earhart's intact aircraft, what else is there to do that will compare, or even come close?

One could become a ***Worldradio*** SuperBooster! The latest to take that momentous step as Lifetime Subscribers are:

•Jane Frost, N1RTJ, Marston Mills, MA

•Charles Stokes, WB4PVT, Newport News, VA

•Scott Mathews, W8JT, North Canton, MA

•C. Edward Way, KA9IED, Fairview Heights, IL

•Nancy Royall, KC5YGT, San Angelo, TX

•

In thanking us for subscription donations which were given at a club dinner, Gerald Boos, KØHVS, Owatonna, MN, said, "I believe that ***Worldradio*** is not only a great magazine, but my favorite, and the best value in the Amateur Radio market today." William McSheehy, W1KPZ, Sudbury, MA, also said, "A very good value for a Ham magazine."

Mike Hall, KE4GBE, Ackworth, GA, wrote, "You give me things I can't find in other mags, and I suppose that's the intention. Keep up the good work!" Phil Waters, AB5ZU, Mountain Home, AR, said, "For me it has more interesting articles than other magazines I receive."

And we are receiving a great deal of mail regarding our expanded QSL route listings.

•

The great International DX Convention will be held in Visalia, CA, over the weekend of 01-03 May, 1998. To attend: Don Bostrom, N6IC, 4447 Atoll Ave., Sherman Oaks, CA 91423. Home phone, (818) 784-2590.

This convention really pumps up the adrenaline and I'll bet there isn't anyone who, when they get home that Sunday night, doesn't turn on their rig and look for DX.

•

Norm Brooks, the world-famous K6FO, was recently in Grand Haven, MI, and attended a meeting of the North Ottawa ARC. They have an 8-1/2 x 11 sheet, printed in three columns on both sides, that can be folded in three and mailed. It's a club information package that has advice on becoming an Amateur Radio operator. I'm sure that for an SASE they would send you one so you could utilize their ideas for your club's package. Write to NOARC, PO Box 44, Ferrysburg, MI 49409.

•

At the Southwestern Division Convention Joe Fairclough, WB2JKJ, told me many people were donating their entire stations to his youth program. While that is admirable, the reason is a little sad. They were quitting Amateur Radio saying that with a computer, communicating was so much easier.

President Kennedy, in announcing the landing on the moon project, said we were doing it not because it was easy, but because it was hard.

Well, goodbye, fair-weather friends. The next sunspot peak may be one of the very best and you will miss it. I saw some writing by Greg Dean, N9NWO, who said, "I think there are those who have Amateur Radio in them and then there are those who are just in Amateur Radio...it's fairly easy to tell one from the other." There are those who see Amateur Radio as an adventure. Yes, their personal identity is as an amateur.

While there are those who are wandering away, another group seems to be getting even more and more enthusiastic. In reading their various publications one could use the words: devoted, eager, wild about, ardent, passionate, zealous, fervent, etc. And those are the QRPers! Some of them take to the hills and dales on camping trips and take with them a rig which has a power supply made up of eight AA batteries! With a whole one watt (and a dipole or end-fed wire) they make contacts with other QRPers and have a really grand time of it.

•

Those who saw the John Travolta movie "Phenomenon," in which the call sign W6QLF is used (QLF is the unofficial Q sign for "Now send with your left foot."), may have wondered about the usage in the movie.

The holder of that real call, Chuck Roblin, Ventura, CA, tells us that his friend Gerald Di Pego was the screenwriter on the film and had asked Chuck's permission to use the call. And so now, just as in listening to Paul Harvey, you know the rest of the story.

—Armond, N6WR

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*Cellular & 900 MHz Cordless Phone frequencies blocked.

BRAARC travels to Orient!

PETE CHESEBROUGH, KB4CCE

The headlines and editorial articles in the *Pioneer* on Day Two of the largest recorded tire fire in West Michigan said it all — "Burning tires rout residents," "Firefighters, community team up in disaster situation," "Tire fire disaster was well handled" at the Schumacker Salvage Yard in Orient Township south of Evart. Helping the Red Cross in their relief efforts (a fact not recorded in the local media) were many members of the Big Rapids Area Amateur Radio Club.

For one member of BRAARC, Mark Watkins, KC8CBX, the excitement started early in Day One (Wednesday, 16 April), as he was a man wearing many hats. His primary job is Firefighter #216 for the Hersey FD, but he is also a Red Cross coordinator, as well as the ARRL Emergency Coordinator for Osceola County. According to the record, the fire started at around 2 a.m. with an estimate of 200,000 tires burning. Area residents were evacuated about 5:30 a.m. The evacuation effort energized the Red Cross relief procedure, and that process resulted in the inclusion of BRAARC to help with communications between three Red Cross sites: the Evart High School gym, the fire site itself, and Red Cross HQ in Big Rapids.

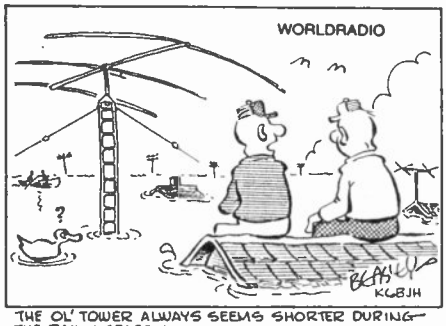
With Mark initially coordinating the communication net efforts, the first responder to the gym was Bob Harris, KB8VST, who was then sent to the fire site and joined by Joe Jones, AA8TM. Pete Chesebrough, KB4CCE, went to the Big Rapids Red Cross location and energized a somewhat reluctant 2-meter base station, and continued as emergency net operator. In the next few hours there were numerous hams checking in to the net to lend aid and support in one way or another: George Rouman, W8OWN; Vern Williams, KC8FUV; Gene Gilson, KC8BYH; Bev Callewaert, WD8PFC; Bill Windhorst, N8OMG; Diane Marshall, KC8AND; Dave Cherba, WZ8T; Jack Reiman, N8XQG; Jim Orlowski, N8PUG; Bob Nuttle, KB8UNM; John McDowell, KC8BAR; Jerry Covey, N8PHZ; Terry Moore, N8KDR; Dan Gramer, KB8ZEQ; Richard Osborne, KC8UB; Tom VanderMel, KB8VEE; Tom Teodoro, KB8YTJ; Jim Kennedy, N8YVX; and Don Chamberlain, KG8SX. Of these, Don offered personnel and equipment from Clare county, and Gene the same from the Gladwin county hams. Jack made a whole bunch of phone calls, including some to the Lions, Masons, and Moose requesting food help, and Richard went to the gym to set up a base station.

As the fire got larger, and the smoke thicker, reports and rumors flew around indicating the fire was consuming millions of tires, and the relief effort would involve over 100 families. The Red Cross (and BRAARC) were looking at a prolonged period of time (5-7 days) before the end of the fire, and the relief effort. Consequently, some time was spent in scheduling people for a continuing cycle of involvement with the emergency communication net. In the afternoon, George took over as net operator, Pete took a load of food up to the gym in the afternoon, and Bob and Joe continued communicating from the fire site. As the afternoon wore on, Bev took over as net operator, and Mark had a list of volunteers that could work through the next morning.

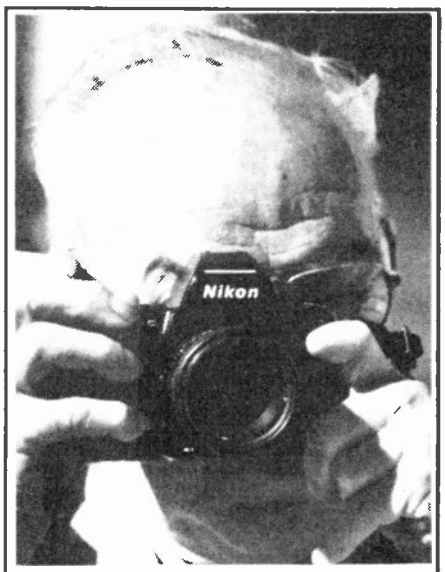
At 5:55 p.m. Mark called for a poll of hams on the frequency, and nine responded, including Jake Spence, KB8ZHG; Joni Blanchard, KC8BHY; Bill Brown, N8JCP; Mark Thurston, KB8WXI, and Sue Shook, KC8FYH, in addition to some of the hams mentioned before. Also at that time there was talk of establishing a second shelter in Mecosta County, but that never materialized.

During the early evening hours, the net continued to relay offers of help from the community with food and lodging, but it became increasingly obvious that the dire predictions of the emergency were not as bad as thought previously. Only about 40 families had to be evacuated, and only a few people showed up at the shelter. By the time George took over the net at his home at 7 p.m., Bob and Joe had left their position at the fire, and the need for a full evening crew had diminished. By 9:30, the Thursday volunteer schedule was cancelled, with the exception of net operation, and at 10 p.m. the 2-meter repeater was returned to normal use.

The general consensus of opinion was that BRAARC did well with the net. We managed to get set up and operating within a reasonable length of time, had an adequate communications network set up where phones/cell phones were less than adequate for a long period of time, and were a clear and present benefit to the emergency efforts. One item that would have helped in the initial setup and continued operation of the on-site relief effort would have been a communications trailer. In the meantime a trailer has been procured, and will be outfitted for use during emergencies, as well as Field Day and the Memorial Day 131 Expressway event. Well done BRAARC and other hams — you did well! WR



THE OL' TOWER ALWAYS SEEMS SHORTER DURING THE RAINY SEASON



Got a Nikon? Take a picture for Worldradio!

The Tire Fire — on location

BOB HAMS, KB8VST

On Wednesday, 16 April, I got the call from Mark Watkins, KC8CBX, to help out with communications at the Evart High School gym, an evacuation point for the Orient Tire fire. When I got to the gym, I was redirected to the fire scene to give assistance to Brad, a Red Cross relief coordinator. By that time Joe Jones, AA8TM, had arrived to help, and we were shown an area to set up that unfortunately was rather muddy from the rain the night before.

Our first priority was to get a strong and clear signal to the emergency net. We found a nearby camper trailer to use to support Joe's 3-element beam and had our radio operational in about ten minutes. I had taken along a 5-element beam but it stayed in the Suburban, and on reflection would have been overkill for the situation: a smaller beam is fine for working the net from anywhere in the area or county.

As we continued through the day, I took some notes and upon reflection of the activities, came up with some observations for consideration.

1. As an Amateur Radio volunteer, you will most likely be set up near the Red Cross or Salvation Army. This is really good, because you will be closer to the coffee, and at night, you can tap into their AC generator!

2. Because you will be called on to go locate people (like Red Cross relief workers, etc.), an extra radio on a simplex channel, boots, rain gear, and flashlights would come in handy.

3. A second frequency (440 repeater?) should be used to contact Net Control while the Red Cross and other units are having QSOs on the repeater link with priority traffic.

It was a great experience for me. As a former Fire Chief and fire fighter, and someone who has never been to a disaster scene with Amateur Radio, I did not think I would be very busy. Was I wrong! Boredom was NOT a concern! Although the emergency location wasn't planned to be staffed with a two-person unit, it should be. Joe's assistance was invaluable during antenna set-up, site control (while I was looking for people), and most importantly, that extra BRAIN to remember things I forgot (like coax, HI HI).

Although the brain sometimes failed me, my nose didn't, and I was still able to locate DA COOKIES!!! By the way, DA COOKIES were made and delivered to the scene by Lois Reiman, N8XQG's YL, for all to enjoy. They were. Thanks Lois, they were great! And although it's been done before, here's a list of things to have on scene:

a. Three radios and ample batteries
b. 3-element beam antenna
c. J pole
d. Various lengths of coax
e. large note book
f. extension cords
g. generator
h. Jumper cables
i. (2) 600/800 Ah batteries
j. flashlights/batteries
k. Portable light–AC
l. Table/chairs
m. Tent/tarp
n. ponchos/rain gear/boots
o. radio toolbox w/conns., nylon ties, tape, etc.
p. small TV for news updates, etc.
q. 35mm camera/video camera **WR**

MARCO — 2nd opinion on medical CW waivers

MARCO, the Medical Amateur Radio Council says it can put an end to most abuses of the Morse code medical exemptions plaguing the U.S. Amateur Radio licensing system. Ira Wexler, W3HEF, president of MARCO, offered the group's assistance to help validate medical exemptions by providing volunteer physicians to scrutinize these requests.

According to Wexler, there was considerable discussion of possible abuses of the medical exemption process at a recent MARCO meeting in San Francisco. As a result, MARCO has offered to become a consultant to any VE team that would like to get a second opinion on a medical exemption request.

Wexler says MARCO has the necessary volunteer physicians to investigate and evaluate all medical Morse exemption requests. It will be up to the FCC to decide if it wants such a service if or when MARCO files a formal rule making request. *—via W5YI Report*

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ORACLE and CW

The lead article in the W5YI Report for 1 September, "ORACLE Begins WRC-99 Campaign to End Code Requirement," is reproduced below with permission from Fred Maia, W5YI.

(Editor's comment: Eliminating the treaty requirement from the International Radio Regulations, Article S25-5, does not require or encourage member Administrations of the ITU to make consequent changes in their national radio regulations [see, for example, the discussion on Sovereignty with respect to national regulations]. When and if the treaty requirement is deleted, it will be the prerogative of the FCC to determine future status of CW as an operating mode in the U.S., and the prequalifications, if any, which will be required license-wise. The U.S. radio amateur community will undoubtedly have a voice in that determination. I feel that the position is oversold, to its possible detriment. For example, the section on Discrimination, with its reference to the UN International Covenant of Civil and Political Rights, is sort of like using a sledge hammer to kill a fly.)

To preserve the clarity of the W5YI text we have preserved the quotes and subquotes as they appear in the W5YI text.

ORACLE, the New Zealand-based "Organization Requesting Alternatives by Code-Less Examinations, Inc." has sent a formal letter to the telecommunications regulatory agencies of 64 different countries. In it they ask support in ending the Amateur Radio manual telegraphy requirement.

ORACLE was the group that persuaded their government in 1994 to support an end to the international Morse code requirement. ORACLE representatives used to be affiliated with New Zealand's national radio society, New Zealand Amateur Radio Transmitters, Inc. They left NZART to lobby New Zealand's telecommunications regulatory body, the Ministry of Communications. At WRC-95, held Oct/Nov 1995 in Geneva, the New Zealand government proposed (on 31 October 1995) to Working Group 4C to abolish RR2735 (which was renumbered to Article S25-5).

Actually, no Amateur Radio issue was on the agenda for WRC-95. The proposal was introduced into the ITU conference through an on-going review ". . . to study 'Allocation and improved use of the Radio Frequency Spectrum and Simplification of the Radio Regulations.' "

RR2735 (S25-5) is the international regulation that requires Amateur Radio operators to prove that they are " . . . able to send correctly by hand and to receive correctly by ear, texts in Morse code signals" when the operation takes place below 30 MHz. The New Zealand MOC said that the following Radio Regulation 2736 (renumbered to Article S25-6) was all that is necessary for the ITU countries to require Morse code proficiency if they believed it important.

RR2736 simply reads "Administrations shall take such measures as they judge necessary to verify the operational and technical qualifications of any person wishing to operate the apparatus of an amateur station."

Amateur Radio Call Signs

The following shows the last call sign in each group to be assigned for each VEC Region under the sequential call system as of 4 September1997.
For more information about the sequential call sign sytem, see Fact Sheet PR5000 #206-S dated August 1996, or contact the Federal Communications Commission, Consumer Assistance Branch, 1270 Fairfield Road, Gettysburg, PA 17325-7245, toll-free 1-888/225-5322.

Radio District	Group A Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
Ø	ABØGC	KIØJT	++	KCØBXJ
1	AA1SP	KE1II	N1ZRK	KB1CEY
2	AB2EB	KG2ML	++	KC2CIU
3	AA3QA	KF3AH	N3ZVJ	KB3BUX
4	AF4FF	KU4KG	++	KF4TVD
5	AC5NS	KM5LY	++	KD5CDL
6	AD6CX	KQ6RM	++	KF6NMB
7	AB7WH	KK7JP	++	KC7ZCT
8	AB8BC	KI8DQ	++	KC8ILA
9	AA9UW	KG9LF	++	KB9RJE
N. Mariana Is.	NHØB	AHØAY	KHØGT	WHØABI
Guam	++	AH2DE	KH2SI	WH2ANU
Hawaii	AH7V	AH6PD	KH7GC	WH6DEH
Amer. Samoa	AH8P	AH8AH	KH8DK	WH8ABF
Alaska	ALØF	AL7QU	KLØKG	WL7CUM
Virgin Is.	++	KP2CM	NP2JR	WP2AII
Puerto Rico	NP3M	KP3BC	NP3QM	WP4NNL

++All call signs in this group have been issued in this district.

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Thank you!

Some administrations (including the United Kingdom) supported the proposal — others (including Germany, Israel, Switzerland and Canada) wanted to study the matter further. It was agreed to recommend item 2-2 for inclusion in the WRC-99 agenda. Agenda item 2-2 simply reads "Consideration of Article S25 concerning the Amateur Service and the Amateur-satellite Service."

The ORACLE letter dated 13 August 1997 " . . seeks the support of your administration on preparation for updating international radio regulations for the amateur service. Our New Zealand-based organization, formed in 1994, continues to develop international connections with Amateur Radio operators who seek regulatory changes."

The letter points out that "The WRC-95 Conference agreed to a provisional agenda for WRC-99, which includes 'consideration of Article S25 concerning the amateur and amateur-satellite services' (Resolution PLEN-5). Article S25 in the simplified regulations was formerly called Article 32. This review of Article 25 was triggered by the New Zealand Administration introducing a proposal at WRC-95 to remove S25.5 (formerly RR2735)."

ORACLE included a copy of the WRC-95 input paper entitled "Corrigendum 1 to Document 29-E 27 October 1995" along with their letter. *(Ed: though not identified, one presumes that this was the first 'correction' to the New Zealand proposals document to WRC-95, judging by its low number and the date).*

"Our organization supports the New Zealand position described in this WRC-95 paper, and we are advised that the New Zealand administration is continuing to seek removal of S25-5.

"In order to prepare a suitable path to the future for Amateur Radio, we recommend that your administration should, at the WRC-97 Conference, confirm that review of Article S32 be an agenda item for WRC-99." *(Ed: Article 25?)*

"Nearer to the time of the conference that reviews Article 25, which will hopefully be WRC-99, our organization intends to provide administrations with a prepared package of detailed recommendations for changes. It is also our intention to become an ITU-recognized organization and to attend selected conferences with observer status, especially WRC-99, which is likely to be where administrations make various decisions on Amateur Radio regulations.

"In summary, we make two points: 1.) Please support the agenda item for timely review of Article S25 at WRC-99. 2.) Note that many operators in the amateur service seek timely changes to international regulations; especially regarding S25.5.

"Attached is a summary of issues on Morse testing in the amateur service."

Restrictive practice

The letter is signed by Dave Walker, ZL2BHE, ORACLE's Overseas Publicity Officer. Included with the letter was an August 1997 "Summary of Issues Concerning Morse Code Testing in the Amateur Service."

ORACLE suggested that " . . . proficiency in sending and receiving texts in Morse code has not been a genuine international testing requirement for many years, but instead a form of restrictive practice aimed at limiting participation on frequencies below 30 MHz. We understand that the international regulations are intended to act as guiding principles, thereby retaining flexibility in order to keep pace with telecommunication developments."

ORACLE said that "international regulation S25-6 is broad enough to encompass all forms of technical and operational qualification requirements. In 1997, we therefore question whether or not Morse code proficiency is a genuine international licensing requirement for an amateur operator to access any amateur band. We suggest the way ahead is to allow for individual administrations to introduce suitable alternative ways of qualifying, such as a higher level technical examination."

Discrimination

ORACLE believes that " . . . requiring candidates to demonstrate proficiency in a subject that is not a genuine requirement is a form of discrimination. The subject of individual human rights is dealt with in some detail by the United Nations with an internationally agreed document entitled International Covenant of Civil and Political Rights.

"This is available from the internet at http://www.hrweb.org/legal/cpr.html The folly of current Morse testing regulations is easily illustrated by the policy used by some Administrations to grant waivers to persons with disabilities, which is in effect reverse discrimination. We suggest this practice if granting waivers to persons who could not undertake a test is proof enough that Morse code proficiency is not a genuine international qualification requirement."

Sovereignty with respect to national regulations

"Removal of S25.5 has the outcome that individual Administrations will then have a choice of what each can specify in national regulations regarding Amateur Radio qualifications. National regulations are a suitable place for specifying such detail. We respect the sovereignty of administrations.

"Removal (suppression) of S25.5 begins the process of Administrations introducing (in national regulations) alternative ways of qualifying, thereby giving candidates a choice that best suits each of their particular circumstances. It is clear that Morse code tests could, therefore, continue as one of the alternatives to choose from.

Scrutiny and contestability of policies

"There are some strongly held views for and against Morse code testing in the amateur service. We suggest that all Amateur Radio

regulations should be publicly contestable (be debated far wider afield than by the incumbents alone), and that any parts considered to involve discrimination, restrictive practices or technology promotion be consistent with overall economic, social and scientific policies of your Administration.

"The Amateur Radio qualification requirements need to be fit for the purpose of administering the amateur service as a part of a range of modern radio services. The self-training aspect of Amateur Radio is a low-cost way for young persons to be able to experiment with radio technologies. Likely some will be attracted to seek careers in the radio and communication industries. Having successful radio and communications industries adds to national value, and the low-cost introductory aspect that Amateur Radio can provide should not be underestimated.

"We believe the drop in the number of Amateur Radio licensees and candidates for Amateur Radio examinations in recent years in some countries is not a good sign for the future of Amateur Radio. It is questionable to continue with restrictive international regulations in such a situation. This is where individual sovereignty should decide on appropriate solutions to problems with licensing under national jurisdictions, with guidance for compliance coming from the principles set by international regulation.

Overhaul of international regulations is overdue

"International regulations pertaining to the Amateur Service are in need of overhaul if the amateur service is to survive well into the future. We applaud the Administration of New Zealand for introducing the Amateur Radio Morse code issue to WRC-05, as this is one of the major topics of concern as it needlessly limits the public image of Amateur Radio.

"We are now aware of consequent developments and growing support by administrations to remove S25.5 from the international radio regulations. There are also several other international improvements that can be made that will help the future of Amateur Radio.

"In fast-moving times, Amateur Radio needs similar attention as occurs for other radio services in being able to keep up to date. Our organization was formed to provide independent commentary in order to show that Amateur Radio can do better than continuing to keep falling behind the times.

"We are uncomfortable with an image of Amateur Radio being the dinosaur of radio services. We are hopeful that Amateur Radio can have a long future, but for this to be possible we believe that there needs to be timely updating of the international radio regulations at WRC-99."

(Ed: The content and context of the letter reminds me of a line from Shakespeare's "Hamlet" [Act 3, scene 2]: "The lady doth protest too much, methinks.")

ARRL'S new Tech Q&A

The ARRL's Tech Q&A, *Your Quick & Easy Path to a Technician Ham License,* will be available starting in mid-August. Written by Larry Wolfgang, WR1B, the new book includes each question and answer for the new Novice (Element 2) and Technician (Element 3A) question pools.

Where's the "quick and easy" part? The format of Tech Q&A will make studying for the Tech exam a breeze. Each question is printed with the correct answer letter shown in bold type. An accurate, but brief explanation follows each question. It's everything the aspiring ham needs to pass the Technician exam in a straightforward, uncluttered presentation — no hunting around.

Tech Q&A is $12.95. Order Item #6222. Call toll-free 888/277-5289 to order. —*ARRL Ltr Vol, #16/32* WR

Milwaukee tower ordinance

This summer brought bad news to Milwaukee radio amateurs. On 25 July, the Common Council approved a new ordinance on "transmitting towers" that effectively limits the height of new towers to 40 feet (including the mast and antenna) in most residential areas. Simply applying for permission to go beyond the zoned height limit will require payment of a $300 fee, to be used to hold public meetings to which neighbors will be invited. The ordinance is scheduled to go into effect on 1 November.

The ordinance was passed in response to the rising number of cellular telephone towers in the city, as well as changes in the local broadcast TV scene. Amateur Radio operators didn't even rise to the status of an afterthought in the entire process.

Existing towers will be grandfathered as "legally non-complying," but the new ordinance no longer has an exemption for Amateur Radio towers. Local hams learned about the new ordinance very late in the process, after the mayor had signed the bill.

Options at this time appear to be:

(1) Ask the City Attorney to review the new ordinance in the light of PRB-1.

(2) Organize Milwaukee hams by meeting en mass with their alderpersons. (Such meetings are unlikely to get the attention of members of the Common Council unless they see at least 40-50 of their own constituents present.)

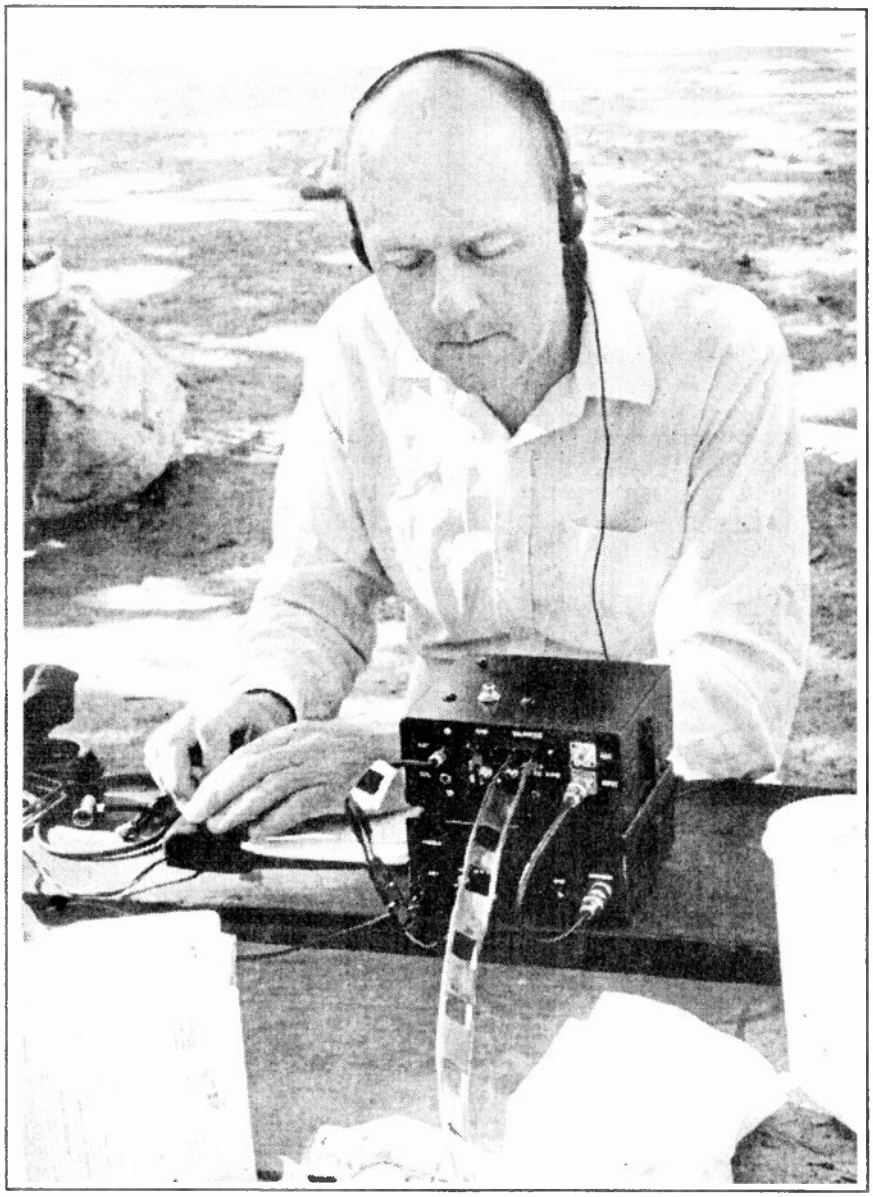
(3) Go to Federal District Court to attempt to have the new ordinance nullified, at least as applied to Amateur Radio towers. WR

E-mail your story

Please send your contributions to: n6wr@ns.net

Call for help from remote Sierras aids ailing cyclist

BIL PAUL, KD6JUI



Bil Paul, KD6JUI, operating in a campground in the Angeles National Forest.

Liz Burke, a 60-year-old bicycle touring enthusiast from Santa Barbara, was known to us as "Ironlegs." Despite the 40-50 pounds of gear on her bike, the former tennis pro was usually the first out of a campground in the morning and a leader on the highway, so we were mystified when she began to slow down as we biked out of the canyon of the North Fork of the Kings River on 15 June. Soon she was near the tail end of our group of seven. Finally she lay her bike down on the dirt road and said she couldn't go further. She was even too tired to walk and complained of abdominal pains.

The day before we had all met for our annual bicycle tour along the Pacific Crest Bicycle Trail, a route which parallels the Pacific Crest Hiking Trail from Canada to Mexico. All were returnees from previous trips, so our reunion at Camp Four campground along the Kings River was especially joyous. We were Liz, from Santa Barbara; Zeke, from the LA area; Ruth, from Sunnyvale; Cory, from Monte Rio; Ingrid, from Yuba City; and myself. Only Wayne Estes, W9AE, was from out of California, hailing from the Chicago area. This year for the first time the women outnumbered the men.

Ruth and I stayed with Liz while the others kept riding up the road. Soon Wayne caught up with us. Liz was now laying on the ground. We had thought that we might take tums walking her bike up the road for her, but her inability to walk ditched that idea.

While Wayne was riding his bike from Fresno the day before to join the group, he'd been talking with Charles Barrow, WA6WQG, in Fresno on the 2-meter calling frequency, 146.52 simplex. Wayne and I decided to call for some kind of assistance for Liz, and it wasn't long before Wayne raised Charles again using his HT and bike-mounted whip antenna. What we wanted was to have a ranger, or someone with a vehicle, come and pick up Liz and take her to the end of the unpaved road up above, near where it joined Highway 180. The other cyclists up ahead would be waiting there.

Meanwhile, we speculated on what could be causing Liz's abdominal problems — I thought maybe a sudden bout of stomach flu.

But what started out as a minor request bloomed into something much bigger. Charles' wife ended up calling 911. Soon, we were hearing about the possibilities of an ambulance being sent from Fresno, and needing a landing site for a helicopter. We were in a remote area, 10 or 12 miles from the nearest paved road. Also, it was difficult for the authorities to understand exactly where we were even though we provided a forest road number and road name. They asked us what Liz had eaten over the past several days, her

skin color, and other symptoms.

Liz said she didn't want an expensive emergency pickup, and she didn't seem to be in that bad a condition to us, either. We repeated many times that we wanted a forest ranger to come down and take Liz to the top end of the unpaved road. Finally, after many long minutes of airtime, that was arranged, but not before a helicopter flew over! Eventually, after a ranger drove her and her gear to the end of the dirt road and she rested, Liz recovered enough to ride with the group another several thousand feet up to Azalea Campground in Kings Canyon National Park.

I'm happy to report that Liz recovered fast and fully, and was in fine form on the next day of riding. She finished the tour with the rest of us a week later in the Angeles National Forest north of Los Angeles. She was also very impressed with the possibilities offered by Amateur Radio and said she wanted to get her tech license.

Wayne Estes, W9AE, calling for help on remote road near Kings Canyon National Park.

After Liz's problem eased, I could devote some time to using the portable HF equipment I was carrying. I had my trusty Wilderness Radio Sierra CW transceiver along and again it worked flawlessly in campgrounds. A solar panel on the back of my bike charged a battery which I used both to power the Sierra and as a night-light for operating after dark. The Sierra runs between 2 and 5 watts.

The new item on this year's trip was a multi-band antenna. On the previous several years' trips I'd used a coax-fed inverted-V dipole for 20, 30 and 40 meters which used built-in clips to extend the length of the "arms." The problem was that the antenna had to be lowered and raised each time a band change was desired. This year I took the G5RV-type antenna I'd been using at home. It's a design by Charles Lofgren, W6JJZ, and was featured in the ARRL Antenna Compendium Vol. 2. It's 90 feet long and fed with a 42' length of 450-ohm ladder line. My Kanga Super Tee antenna tuner has a built-in 4:1 balun and connections for balanced line, so it mated well with the all-bander. Adjusting the tuner was barely necessary on 20 and 40, though 30 required some tweaking, and the 42-foot line allowed a near-perfect antenna height. However, setting up an inverted-V among tree branches and leaves can be a challenge!

Next year, maybe I'll make do with a vertical or random wire only, which would be easier to set up and take down and require less storage space. I would also like to build smaller ham gear and have SSB capabilities.

I wish I could claim I worked DX on this trip but such was not the case. Band conditions were minimal for the entire trip and I worked mostly western-states stations on 20, 30 and 40. In several locations we were deep in a canyon and I wasn't able to get out at all. When I was at high altitude in the Sierra Nevada — that's when the contacts happened.

A little bit about the cycling. We rode an average of 50 miles per day through mountainous and desert areas carrying all our own camping and cooking gear and food. At one store in the Sierra with a large outdoor scale and we were able to weigh each of our bikes fully loaded with gear. The combinations ranged from 75 to 85 pounds. Coupling that with our body weights, we were moving some heavy-duty stuff around the mountains! I dropped five pounds on this trip.

This year we had to deal with heat in the foothills, and the mosquito netting I asked everyone to bring came in handy at several bug-infested campgrounds.

I should mention that Zeke, one of our non-ham riders, brought along a pair of new Motorola HT-like transceivers which don't require licenses to use. So between Wayne, W9AE's, and my HTs, and the Motorolas, we had excellent communications between the slow and fast riders. In fact, on one day when the fast group had already settled into a campground on Lake Kaweah, I would have missed them and rode on to the next campground if I hadn't called for them on the Motorola at the entrance to the campground and learned they were there.

What drives people to ride those ridiculously heavy bikes thousands of feet up mountains, sometimes in the heat? Well, there are the exhilarating downhill rides which follow, but also I figure it's because adversity breeds camaraderie. Besides, there's nothing like eating all you want to because you need every calorie. All I know is, people keep returning year after year for this tour.

Note: next year's 350-mile tour is open to hams with bicycle touring experience who are in shape. The tour will begin in the Angeles National Forest, pass by Big Bear Lake, the towns of Idyllwild and Julian, and will end at Tijuana, Mexico. To be put on a mailing list for the date announcement and the exact route, write Bil Paul, KD6JUI, PO Box 1275, Belmont, CA 94002. The touring group is limited to 10 riders. WR

Long Term Performance of the Yaesu G-5400B Dual-Axis Rotator

KEN PIERPONT, KF4OW

By the time this is published, the Yaesu G-5400B Dual Axis Rotator system will have been in continuous operation for two years at Satellite Station KE4ZXW. This is a fully automatic, 9600 Baud, digital satellite station operating 24 hours a day communicating with other amateurs through UO-22, KO-23, & KO-25. The station is the focal point of the large Amateur Radio Exhibit located at the Virginia Air & Space Center in Hampton, Virginia, and resulted from 11 local Amateur Radio clubs working together as a unit.

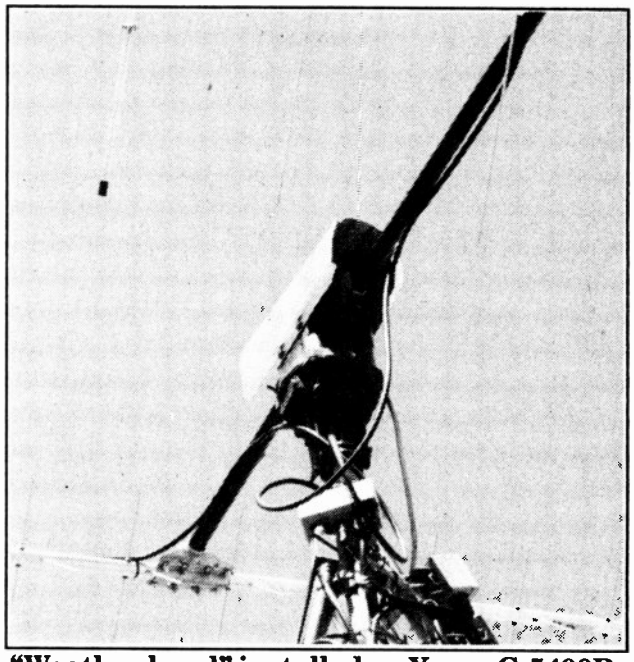
Except for brief stoppages during power outages from storms, system maintenance or upgrading, these rotators have operated essentially flawlessly since they were put "on-line" 21 September 1995. Neither were they damaged when lightening struck the building only a short distance away and nearly destroyed the cooling tower for the building air conditioners. We did lose a mast-mounted pre-amp to that huge discharge, though. The system utilizes several interlinked software programs including SATSKED, SATLINK, and INSTANTRACK with the rotators ultimately controlled by ORBITDRIVE and PRAIRIE, the software for the latter designed jointly by Chaz Richard, W4HFZ, and Jim Sanford, WB4GCS.

The G-5400 Dual Axis Rotator System was expected to be used in typical Amateur Radio applications, which are at best usually only intermittent and often infrequent.

But in our application the system is operating 24 hours a day tracking three satellites, each of which makes an orbit about every 100 minutes. Also, the rotator system is subject to very severe operating conditions resulting from running the drive motors from a constant voltage source with stepwise motion commands. In addition, this antenna system is located on a tower on the roof of the Space Center immediately adjacent Hampton River, a tributary of Chesapeake Bay. With primary exposure to the East and Northeast, wind-driven salty rain sprays the equipment with every major coastal storm.

Consequently, it was early recognized that any reduction of the sudden start-stop duty cycle along with additional protection from the elements would benefit the useful life of the G-5400. Because the final motor commands are generated by the software for the Prairie Board, the step size could readily be adjusted. It was increased from about 1 to nearly 3 degrees, which should markedly increase the mean time between failure and overhaul. No discernible reduction of data rate was observed from this change. The antennas are the Hygain Oscar Link system with crossed Yagis circularly polarized for the 2-meter and 70-cm bands. The second modification consisted of fabricating and installing a "weather hood" over the rotator system. This hood was made from aluminum house flashing material cut to approximately 16 inches square. The edges were crimped and corners rounded. It was then shaped like an old-fashioned covered bridge and secured along both sides with the main attachment bolts. When the antennas are in the horizontally "stored" position between passes, rain and spray protection is afforded over the entire unit and for several inches beyond the bearing seals.

Periodic physical inspections are made to look for any unusual motion, or "slop", which would suggest excessive gear or bearing wear. So far, none has been observed. Hopefully this Yeasu G-5400B rotator system will continue to give trouble-free service for a long time yet.



"Weather hood" installed on Yaesu G-5400B Dual Axis Rotator at KE4ZXW.

About the author: Ken Pierpont, KF4OW, is an extra class licensee, a member of the Southern Peninsula Amateur Radio Klub (SPARK), and is retired from NASA Langley Research Center as Chief Engineer of its largest research division after 38 years of aerodynamic research. He was actively engaged in the design and construction of the Amateur Radio Exhibit in the Virginia Air & Space Center, Hampton, Virginia, and presently serves as Station Engineer for all KE4ZXW hardware. He is Secretary of the VASC Amateur Radio Group, Inc., which is a consortium of 12 Amateur Radio clubs (a new one recently added) in the cities and communities of Hampton Roads and which is responsible for the exhibit and the satellite station operations. WR

Clive Penna, GM3POI, and Bill Schuchman, W7YS.

A visit to the Orkney Islands

BILL SCHUCHMAN, W7YS

It was the 15th of May and the *Island Princess* dropped her anchor offshore near the city of Kirkwall. After a cold, wet cruise up through the Irish Sea and west of the Hebrides, it was a surprise when we arrived in the Orkneys, north of Scotland, where the sun was shining and the temperature was mild due to the warm waters of the Gulf Stream. It rarely snows there. We were told that the area experienced gale force winds 120 days of the year, but the day we spent there was perfect.

I had worked Clive, GM3POI, on CW in March, and he said he would meet me at the dock at 2 p.m. After lunch on the ship, my wife, Dot, and I boarded the tender and went ashore. I was expecting a Scotsman, I guess, and was surprised to find that Clive was a very youngish fellow, ex-G3POI, who had retired at the early age of 52 years and moved to Orkney, where he purchased an ideal piece of ground for Amateur Radio. We met Clive and his wife Terri on the dock, and drove about 10 miles out of town toward the west side of the island.

Orkney has no trees. The wind blows so hard that the trees are stripped of any leaves and they just don't make it. The island is beautifully green with lots of sheep, fertile land, and stone houses. From a long way down the highway I could see Clive's 100-ft. tower dominating the whole countryside with a view of the ocean in almost every direction. It was the most rugged steel bar tower I have seen, and guyed with heavy cable.

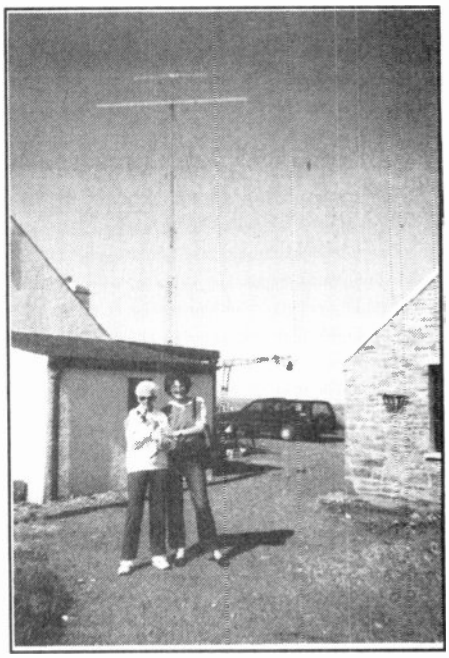
He showed me a new beam he was putting together — three thicknesses of aluminum tubing with a fiberglass core for each element! These were 40M elements. On the top would go a new trap Yagi for 20,15 and 10M. A series of ropes on the tower held up vertical elements for an 80M half-square, if I remember right, and also verticals for 160M. Running along on posts in several directions were Beverage antennas for DX on 160.

The house has a conservatory on the west side, a room about 20 by 40 ft., all glass, and engineered for 120 mph winds. At the time we were there the elements for the new antenna were stacked on the floor. Terri served us homemade scones with a slice of the local cheese while two Siamese cats and family dog made friends with us.

Clive's ham shack contained an FT-1000, an amplifier, and a computer for contesting and logging. I believe he told me he had some 53,000 QSO's in the log, and demonstrated it by asking me about hams in Flagstaff who might have worked him! I gave him the calls NN7A, and NG7S, and he immediately came up with QSO's, dates, time, and band.

When we went outside, he pointed out the club Field Day site on a peninsula in the bay, and he explained that their rules did not allow antennas over 30 ft. in height, so they ran verticals with the radials in the salt water!

Orkney has quite a long history — at the end of WWI the German fleet was scuttled in Scapa Flow, and during WWII, a German sub was able to sneak into the same bay and



Dot Schuchman (holding Duncan, the cat) and Terri Penna, with GM3POI's 100-ft. tower in the background.

torpedo the British battleship HMS *Royal Oak*. After the sinking, Churchill directed that barriers be placed between the islands to prevent future attacks. In addition, a number of old ships were sunk as part of the barriers and are still there to be seen.

Our visit to Orkney was one of the highlights of the trip because of the hospitality and friendship of our fellow ham and his wife. WR

Ham radio proves it's never too late to have a happy childhood!
—Schaumberg ARC

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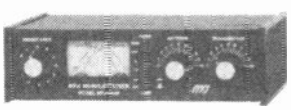

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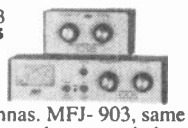

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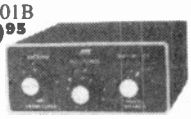

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The Six-Meter calling frequency controversy

KEN NEUBECK WB2AMU

For a number of years now, the SSB calling frequency of 50.125 MHz has served as the focal point for all Six Meter weak signal operation (both CW and SSB). The typical protocol for the use of this frequency was to monitor it for a regular basis and to call CQ. After making a contact on 50.125 MHz during a band opening, the proper procedure was for the operator to then move up the band. For the most part, this setup has worked well for the majority of Six Meter operators in North America. Unfortunately, there has been occasion where some stations tend to park on this frequency, subsequently jamming up the usefulness of this frequency during a band opening. In addition, there has been occasional abuse by bad operators in which shouting matches on the air have taken place.

This subject was of particular concern to several veteran Six Meter operators who met during the SMIRK (Six Meter International Radio Club) breakfast held at the 1996 Central States VHF conference in Minnesota. Many of these operators had lived through the last sunspot peak when the band saw activity from Europe and they had particular concern for the upcoming cycle, since there has been tremendous growth on Six Meters in Europe. In the past, there were incidents of intentional jamming on the DX calling frequency of 50.110 MHz and this situation can only become worse in the future with the expected increase of F2 band openings. A proposal came out of this meeting where the domestic calling frequency would be moved from 50.125 MHz to 50.200 MHz and the current DX window of 50.100 MHz to 50.125 MHz be expanded to the range of 50.100 MHz to 50.200 MHz. This proposal was adopted by SMIRK and the 50.200 MHz domestic calling frequency proposal was echoed in the World Above 50 MHz column by Emil Pocock, W3EP in *QST* magazine.

The proposal was subsequently discussed at a number of other VHF conferences with mixed results. At the Eastern VHF conference in 1996 it was pointed out that the Ten Meter band did not have a calling frequency and that hams naturally spread out on that band during an opening. All hams agreed that spreading out was required and some ways were needed to get hams to do this on Six Meters. Perhaps the idea that drew the most fire was the idea of a 100 KHz DX window. The idea of a very large DX window did not make sense as international DX on Six Meters occurs less than one percent of the time (mostly during the sunspot peak). Normally, a 25 MHz DX window would do the trick, but because the TV set color-burst harmonic falls on 50.113 MHz and because there are "frequency hogs," the range of 25 kHz suddenly seems smaller.

Another obstacle facing the proposal is that 50.125 MHz had become such a fixture for Six Meters, it seemed too late to make a frequency change, particularly with the large amount of U.S. stations that have been getting on the band in recent years. It is one thing to change the thinking of a few hundred hams but when the number is in the order of thousands throughout the North American continent, it becomes a bigger task to make changes.

I conducted an impartial survey during the summer 1997 Sporadic-E season from my home QTH in Long Island and nearby locations to see where stations were operating on the Six Meter band. The idea would be to see, after hearing the proposals, whether Six Meter operators would use 50.200 MHz as the domestic calling frequency and spread out. Initially, it was expected that many hams would still use the original calling frequency and then migrate up to 50.200 MHz by the end of the summer as the word got out.

The charts on the next page show the results of the monthly survey that I took from my home QTH. It details where I heard and worked SSB stations on Six Meters. The survey records the initial frequency that I worked the station prior to moving up the band to continue the contact. For example, if I initially worked the station on 50.125 MHz and then moved up to continue the contact, 50.125 MHz is the frequency data recorded on the charts. The survey was based on daily activity of the band but did not include contest activity such as the ARRL VHF contest, as stations typically spread out during those events. Also many Six Meter operators are not involved in contesting.

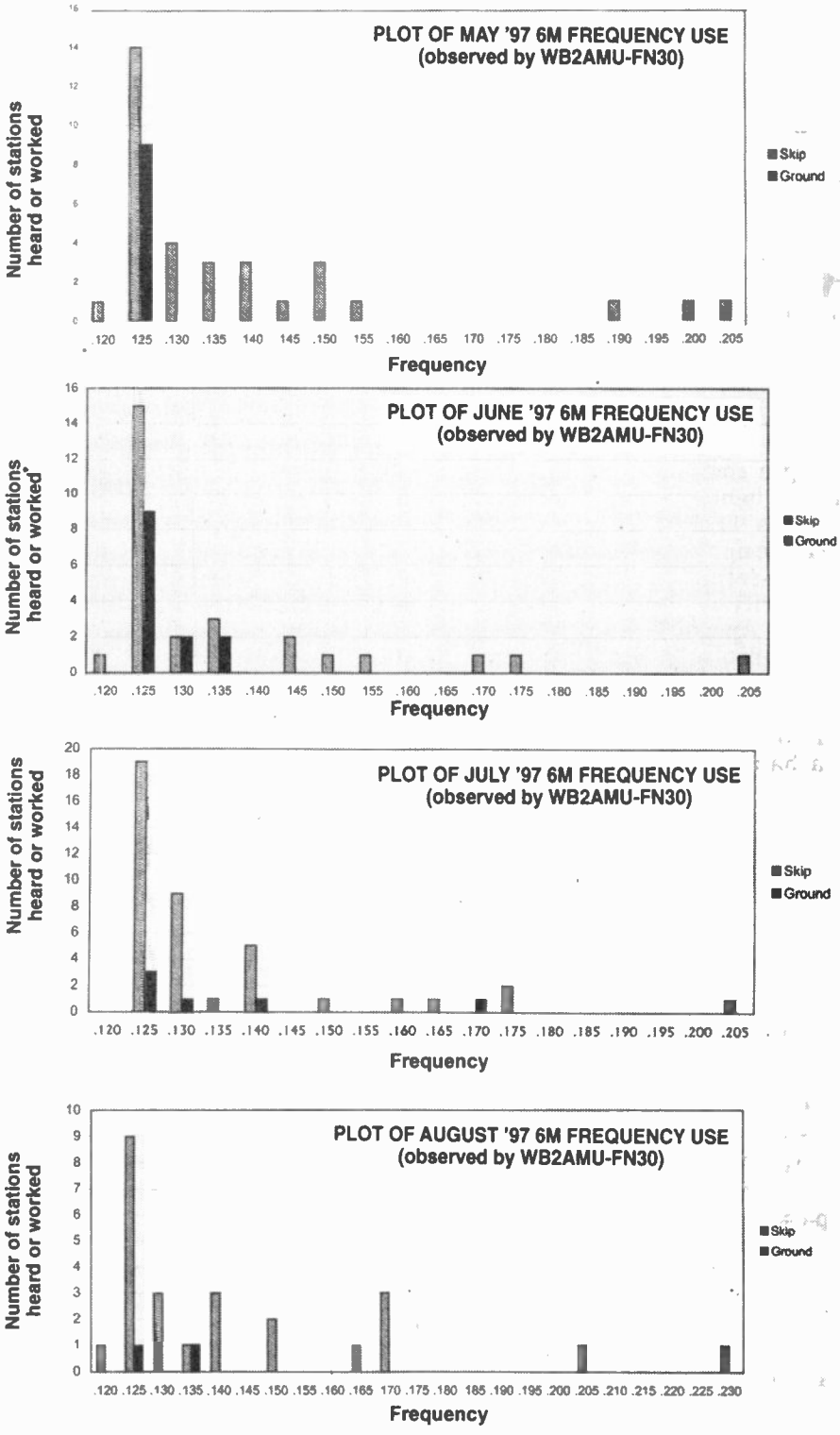
The results show that hams did indeed spread out more on the Six Meter band than in the past, although 50.125 MHz still remained as the starting point for most operators. The results achieved in August were similar to those in May. The results indicate no great movement from the calling frequency of 50.125 MHz to the proposed frequency of 50.200 MHz. There seemed to be a conscious effort by more Six Meter operators to spread out on the band as good operators in the past have done. These results basically reflect what was heard in the eastern US. I have heard from some Californian hams that both 50.200 MHz and 50.125 MHz were used as calling frequencies there and this aided in spreading out the increased amount of local activity in that state.

An incident occurred to me during the summer that indicated the type of abuse that could occur on the calling frequency of 50.125 MHz. I heard Clint Walker, W1LP, during one of his many maritime excursions to rare all-water grids. I called him when he called CQ and he came back to me. He told me that at the time he was traveling near the Bahamas. When he turned it back to me, my 10W signal was buried by a lid in New York City calling Clint. Clint came back and asked me to repeat my information, but again I got buried. After this occurred a couple of times, Clint announced that he was moving up the band. I was fortunate to find him around 50.155 MHz and we were able to complete our contact. The lid from New York City stayed on the calling frequency, still calling Clint, not realizing that he had moved. This example illustrates that there will always be stupid hams who ignore the correct use of the calling frequency and operating procedures. This small group makes things bad for the rest of us.

The 1997 summer Sporadic-E season was rather mediocre for the most part from my location. Some of the moderate openings saw a decent amount of spreading, particularly when an opening occurred during a contest. However, it was hard to see if overall the hams got the message. Well, at the end of the summer on 12 August, a tremendous opening took place from 4-9 p.m. for much of the Northeast, Midwest and Southeast part of the U.S. — the four-star opening I'd been waiting for all summer. I worked all stations using 10 Watts and a magmount vertical from my car, both mobile and parked. The spread of SSB activity was as low as 50.120 MHz to as high as 50.230 MHz. Very few hams stayed on the calling frequency of 50.125 MHz for long as the QRM was tremendous, so they moved up the band. Surprisingly, I did not hear anyone call CQ on 50.200 MHz, but I did hear many stations on both sides of this frequency. The activity was so great I couldn't make any observations regarding the annual Perseids meteor shower!

The observations I made during the summer and from the 12 August opening convinced me that 50.125 MHz still remains the primary focal point for weak signal activity on the Six Meter band. When the band is quiet, a call on 50.125 MHz will sometimes wake up hams that the band may actually be open! The use of 50.200 MHz helped in spreading out stations on the band this past summer and it should be considered a secondary calling frequency during high activity days. But since the results of the survey show that no consensus has been reached about whether the calling frequency will be changed, this setup will be what Six Meter operators will have to live with for the next sunspot peak (expected to begin in late 1998). If hams used the existing setup as it should be used, perhaps there would not have been much of a question in the first place about moving the calling frequency.

From the heavy use of the 50.125 MHz to 50.200 MHz region by domestic hams during this past summer, it would be hard to say that this frequency should be made exclusively a DX window. This is one consensus that seemed to have been clearly reached by the operators on the band and there seems to be no justification in making this particular change.



The point to drive home in all of this is that we should all spread out when the band is filled with activity. If you work a station on 50.125 MHz, you should both move up the band so that the frequency can be left clear. When the band is really crowded, try calling CQ higher up the band up to 50.200 MHz. If you are in a rare grid you can generally expect a pileup, so it's a wise idea to move up as high as possible so that you'll still be able to work stations, yet not mess up the area around the calling frequency. When the band is quiet, more liberties can be taken with 50.125 MHz so that passing stations can hear that there is some activity. All of this is really common sense, so the more that we practice it, the better results we all will achieve on the Magic Band! WR

Way down yonder in New Orleans ... at the International DX Convention

JOHN MINKE, N6JM

Created in 1992 by the Delta DX Association, the New Orleans International DX Convention is held annually in August at the Royal Sonesta Hotel on Bourbon Street in the French Quarter of New Orleans. And, the weather this year was perfect!

The Registration Desk opened at 1 p.m. Friday afternoon, 22 August, with DXers already lined up to have QSL cards checked by Bill Moore, NC1L, of the ARRL DXCC Desk.

Three programs were on the agenda for Friday afternoon. I missed out on the Navassa Island presentation by Richard Brown, W5AA, as I was having my QSL cards checked. (In addition to my annual update, I was a bit excited about finally applying for my 80-meter DXCC.)

Howland Island

The AH1A Howland Island operation video presentation was well put together. Howland Island is under the jurisdiction of the U.S. Fish & Wildlife Service, and accompanying the January 1993 DXpedition were two members from that office.

Mike McGirr, K9AJ, made the first contact from the island on 20 meters with Japan. The goal was to make at least 7,000 contacts per day. Everything went well during the DXpedition until departure, which was delayed for six days due to a storm.

The operation also included the *CQ* Worldwide 160-meter contest for which they collected 1,000 contacts. The multi-national DXpedition included Paul, F6EXV; Ian, G4LJF; Gino, I8ULL; Bob, K4UEE; Mike, K9AJ; Randy KØEU; Peter, ON6TT; Arie, PA3DUU; Phil, W9IXX; Walt, WØCP; and Burt, WØRLX.

St. Paul's Island

Vance LePierre, W5IJU, discussed his July 1995 St. Paul's Island DXpedition. Vance, licensed since 1960, and four others — Bob Stewart, KW2P; Bill Wallace, K4TVE, Murray Adams, WA4DAN; and Ron Oates, AA4VK made the trip.

St. Paul's Island, located 14 miles of Cape Breton, Nova Scotia, was reached by boat, the *Heidi M*, from Dingwall. St. Paul's Island is actually two islands. They operated from the the south island. The team collected some 11,629 contacts during their six days of operation. Like the Howland Island Dxpedition, this group was almost stranded on the island, but was able to leave ahead of the coming storm.

When a concerned RCAF helicopter flew by, they noticed the American flag on the antenna. They remarked that "The Yanks have landed on St. Paul's." And, yes the team did have permission to land from the Canadian Coast Guard.

That concluded the Friday sessions. From there with Gary Shapiro, NI6T, we raided a local oyster bar and downed oysters and beer. In the evening the Hospitality Suite was opened and was hosted by Carl Smith, N4AA, Editor of *QRZ DX*.

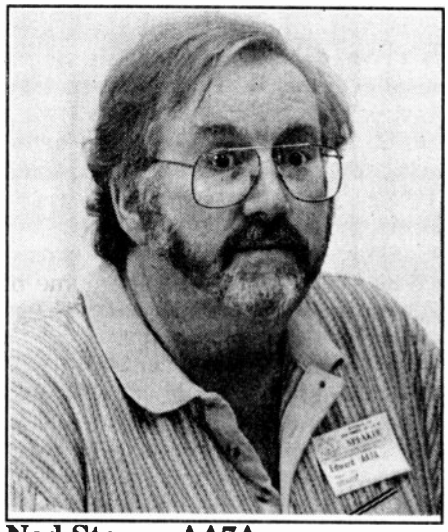
The convention was officially opened Saturday by Don Boudreau, W5FKX, the convention general chairman. Don introduced the officers of the Delta DX Association, sponsor of the convention. Visiting ARRL officials Rick Roderick, K5UR, Delta Division Director, and Jim Maxwell, W6CF, Pacific Division Vice Director were also introduced.

DXCC update

Bill Moore, NC1L, of the DXCC Desk, brought us up to date on the DXCC program. The Scarborough Reef (BS7H) DXpedition was terminated due to the arrest of some Chinese fisherman by the Philippine Navy for invasion into their waters. The Philippine court released them because the Philippines had no claim to Scarborough Reef. Bill said it is rumored that some North Korean (P5) activity is coming up. Bill then asked for a moment of silence for Jerry Branson, AA7BB, who recently became a Silent Key.

In response to a question on 160 meter QSL cards, Bill says those cards are taken to the DXCC Desk from field checking as 1.8 MHz could very well be confused with 18 MHz. Bill concluded with the remark that 33 applications were checked Friday afternoon.

Silvano Amenta, KB5GL, the president of the Delta DX Association, extended a warm Louisiana welcome to all the guests. He thanked all for their continued support of the convention.



Ned Sterns, AA7A

Propagation prediction

Ned Stearns, AA7A, spoke on Propagation Prediction for DXers. Ned, a systems engineer with Motorola, discussed the different ionization layers about the earth and which DXers find useful. The D layer, the lowest, is of little value to the DXer. The next is the E layer, followed by the F layer, the DXer's ally, which is divided into the F1 and F2 layers. Of the cycles in recent times Ned said the best was Cycle 19 which peaked in 1960.

The noise factor on the HF bands originates from three sources — galactic, atmospheric and man-made. Another factor was the propagation loss due to absorption in the D and E layers.

Propagation prediction tools Ned mentioned were software programs such as Propman by Rockwell Collins and ICECAP or VOACAP, by VOA, which is available free on the Internet.

Ned said the success of such DXpeditions as AHØW/KH4 and XZ1N was due to the use of propagation prediction charts. He said that the higher the better for the antenna as it would reduce the number of bounces to the end point.

As for the coming Cycle 23 predictions, Ned exptects it to be as good as Cycle 22.

Chichijima Island

Dr. Gary Jones, W5FI, (formerly W5VSZ), discussed his August 1996 operation from Chichijima Island. Gary, a professor of psychology at the University of Southern Mississippi, has been licensed since 1959. He availed himself of the opportunity to go to Japan with his wife, who was to be there on business. He applied for a 6-month license at a cost of $120.

The presentation was supported with computer-generated slides and videos. The only way to get to the island, the main island of the Ogasawara Islands, was by boat.

Gary operated from the home of Aki, JD1AMA, using his own radio which he took along. He made about 4,150 contacts using the call JD1/7J1AYK. He and his wife stayed at a Japanese-style B&B (cost, $60 per day per person). The breakdown of contacts indicated that about 34.7% were Europe, 32.9% Asia, and 30.9% North America. As for modes, 45% were CW, 43% SSB and 11% RTTY. Sixty percent of the contacts were on 20 meters.

Bob Schmeider, KK6EK, of Heard Island fame, discussed DXpeditiions and the Internet. Bob, a physicist, has been licensed since 1962, and pioneered the use of Internet in support of DXpeditions. It had been used on past DXpeditions, including that of the XRØY/XRØZ DXpedition to Easter Island. Bob said the second DXpedition to make use of the Internet was the M-V Island DXpedition. One benefit was you could actually see if you were "in the log."

In the future use of the Internet, you will know immediately that you are in the log, or at least five to six seconds later. Now wouldn't that be great to see such a video the same time as they are working you!

DXCC 2000

The morning's final presentation was the DXCC 2000 Project forum, presented by Rick Roderick, K5UR, Delta Division Director.

The DXCC presently has separate awards for the following categories: Mixed, CW, Phone, RTTY, and Satellite. All are endorsable and are included in the Honor Roll. There are also band endorsements (2, 6, 10, 40, 80 and 160 meters) but no Honor Roll recognition.

Five-band DXCC is also available with endorsements for 2, 6, 12, 17 and 160 meters, but not 30 meters.

In the DXCC 2000 program changes to the present rules, a Point 1 Country would be re-defined as a government recognized by the United Nations, is a member of the International Communications Union, and is a member of the International Amateur Radio Union. Only one of those three conditions need be met. The separation by water rule would be changed from 225 miles to 350 kilometers.

What would the new rules do to the present country list? Would this delete or add countries? The 47 countries now on the list that would be affected would be grandfathered into the list, and 4 or 5 new countries probably would be added.

The new program would have the same mode awards, where the deleted countries would count. However, future deletions will be withdrawn from the DXCC countries list. There will be band awards for all bands, 2 to 160 meters (except 30 meters), but deleted countries will not count. There will be no Honor Roll for the band awards.

Another interesting feature of DXCC 2000 is the DXCC 2000 Challenge. Dxers will collect one point per band country, where awards will be given for reaching 1,000, 1,500, 2,000, and 2,500 points.

You don't have to start over! You keep all of your credits that you have now. Older Dxers have taken many years to get where they are now and it wouldn't be fair to take that away. Presently, there are only about 40 field checkers for cards. There has been some talk about electronic confirmation for contacts. Rick said that Bill Kennamer, K5FUV, is looking into this.

An annual championships trophy will be awarded awarded to the leader of the pack, but this will be limited to one trophy per lifetime. Fees to cover up to 90% of the direct costs are being considered to fund the program. A final report will be due in January 1998. You may submit your comments to your DXAC representative prior to that date.

This concluded the Saturday morning portion of the convention. We'll break for lunch now, and continue with the rest of the report in the December issue. **WR**

(continued next month)

Now you hear it, now you don't

MARS CW ban remains

The on-again, off-again Department of Defense decision to ban MARS members from using the Morse code is on again after government officials decided that the policy banning use of the mode in any MARS communications will remain.

Making the announcement was Joseph Frizzell who heads up the MARS program. He says what he calls a "miscue" led to the erroneous announcement that led personnel to believe that CW would again be permitted for informal use on MARS frequencies.

Frizzell says he personally has no objections to the use of CW, but he must follow the policy dictates now in effect. That policy says the use of the Morse code on MARS circuits is forbidden and has been since 1 October 1995, as a result of a directive implemented by former Assistant Secretary of Defense Emmett Paige. Frizzell says that policy has not changed and that he does not see any chance of Morse again being permitted in the foreseeable future.

Based on the first announcement, some Navy and Marine Corps MARS members had resumed using Morse. They have now been told to put away their keys and to cease and desist from using the code.

It is no secret that MARS membership was on the decline after the ban on Morse was first instituted. It will be interesting to see if any mass exodus takes place as a result of the reinstatement of the total CW prohibition. *—via DoD, ARRL, others*

No accident

It was no accident that you received this issue of ***Worldradio***. If you are not yet a subscriber, please consider it an invitation to join.

— SPECIAL EVENTS —

Stu Rockafellow Amateur Radio Society
Special Event Station
"Remembering the Edmund Fitzgerald"

Whitefish Point

REMEMBERING THE *EDMUND FITZGERALD*

The Stu Rockafellow Amateur Radio Society will sponsor special event station W8NJH from 1300 UTC 8 November - 1700 UTC 10 November to commemorate the loss of the *Edmund Fitzgerald* from the Great Lakes Shipwreck Museum. The frequencies will be 7.250, 14.250, 21.350 and 28.350 MHz. A certificate will be given for each confirmed contact. Send your name, address and QSL to Dave Langston, KB8RAP, 1000 Town Center, Ste. 1200, Southfield, MI 48075.

THANKSGIVING COMMEMORATION

The Whitman Amateur Radio Club will once again be operating a Special Event station at historic Plimoth Plantation, Plymouth, MA, on Saturday and Sunday, 29 and 30 November. The club call, WA1NPO, will be used, and the suggested frequencies are; 3.970, 7.270, 14.270, 18.140, 21.370, 24.970, and 28.370 MHz, during the hours of 14:00-21:00 UTC each day. The stations will be set up on the beautiful, historical re-creation of the first successful English settlement in the New World, overlooking Cape Cod Bay.

A special QSL card will be sent to those amateurs and SWL's sending an SASE. A handsome 7½ x 10" special certificate with the *Mayflower II* in the background is also available for the event. All replies must be sent to: Whitman ARC, P.O. Box 48, Whitman, MA 02382.

Profiles in Amateur Radio: A heart and a helping hand

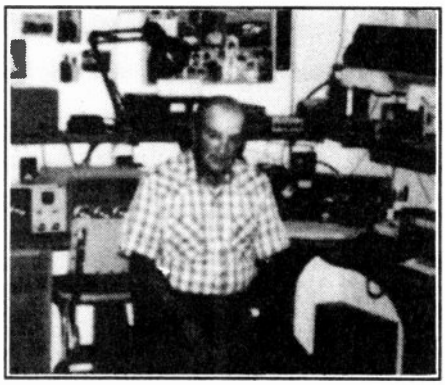
RALPH WILDER , WA5PFK

Leo Peil, WZ5H, always has time to reach out to people with that helping hand. He served our country in WWII, landing in Normandy, France, on Utah Beach on D-Day, 6 June 1944. Receiving a Honorable Discharge in December 1945, he headed home to his wife, Darla, and daughter, Vicky in Canton, Oklahoma.

Leo worked as a heavy equipment operator for 34 years, 25 of them with the Corp. of Engineers operating many kinds of heavy equipment.

Leo's father had always taught his sons to work hard and to earn their way, yet Leo always had time to reach out to help people. Leo has taught and helped teach several ham classes. In February and March of 1997 Leo had another class, ending up with 12 students, eight of whom were licensed as Techs, two as Tech plus, and two upgraded. Students drove from as far away as 70 miles (one way) to attend Leo's class.

Leo's hobbies besides teaching ham classes include fishing and camping. He's a member of ARRL,Wheatstraw Radio Club,and CARF, the Christian Amateur Radio Fellowship,10-10 International, ARRL and is W5YI VE-accredited. He is also a member of the American Legion, VFW, a two-cylinder John Deere Club, and Secretary of the Christian Church in Canton. WR



Leo Peil, WZ5H

THE BIG DK-DX

Don Johnson, W6AAQ's 3.5 — 30 MHz mobile antenna, manufactured by:

H. Stewart Designs

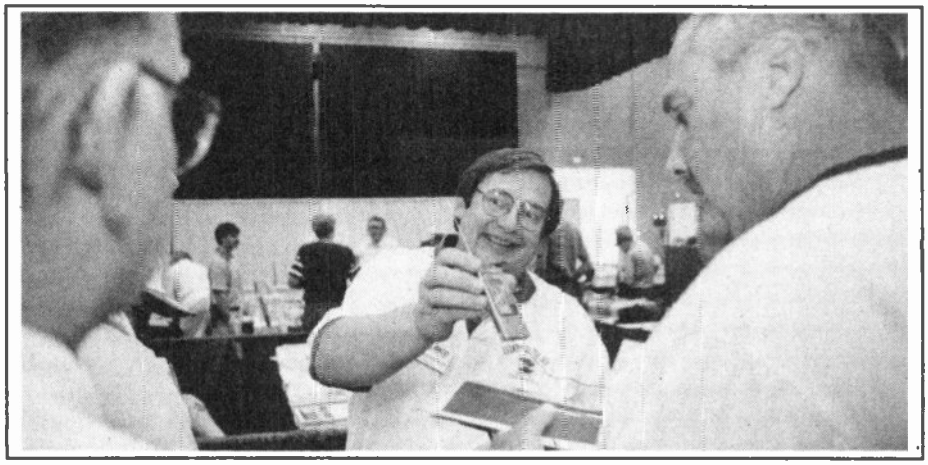
P.O. Box 643 • Oregon City, OR 97045

(503) 654-3350

See ***Worldradio,*** Oct. 1994 issue.

MFJ's 25th

MFJ Enterprises will celebrate twenty-five years of service to Amateur Radio this October. According to founder Martin Jue, K5FLU, the inspiration for his company came from a store his family owned in the Mississippi Delta. He learned early on that the customer is always right and if you lose one, you're bound to lose several. He adopted this philosophy when he started MFJ in Starksville, Mississippi, in 1972 and created the famed MFJ conditional one-year guarantee on all products in his line. As a result, MFJ has grown to become the largest manufacturer of Amateur Radio equipment in the United States, making Martin Jue a true American business success story. *—via press release*



Jeff Reinhardt, AA6JR, says about Alinco's tiny HT, "This is some radio!"

SW Division convention

Down by the Riverside —

ARMOND NOBLE, N6WR

There was an enthusiasm, a spirit and an energy that many attending the convention felt and commented about.

The 1997 ARRL Southwestern Division Convention was held in Riverside, CA, on 12-14 September. The Convention Center, newly refurbished, was modern and spacious. The adjacent hotel was a pleasant one with a "convention special" room rate that was appreciated.

The sponsoring organization, Inland Empire of Amateur Radio Organizations, obviously made a maximum effort. The amount, and wide subject matter of the forums was impressive. For a $15 admission fee you could choose from:

- ARRL Amateur Auxiliary/FCC — W6BF
- Satellite Workshop —KB1SF
- Planning for a Public Service Event —AA6JR
- Preparing for Assignments — KG6YS & N6JPO
- NTS in an Emergency —K6YR
- FCC's RF Rules —N6NB
- Travel Adventures via Ham Radio —K7JA
- Tesla Coil Demonstration — N6UXW
- National ARES Forum —K1CE
- Education Forum —WA1STO
- Introduction to Amateur Microwave —K6OW
- Spread Spectrum —K6KGS
- New Weapons for T-Hunts — KØOV
- Propagation Prediction —AA7A
- VHF/UHF Weak Signal —KO6SY
- Civil Agencies and Hams —N6FJX
- Education Through Communications —WB2JKJ
- Exploring Six Meters —AA6DD
- VHF-UHF Mountaintop Contesting —N6MI
- Club Activities That Work — KD6UVP/KC6ING/KC6TXB
- 1995 International DX Convention in Beijing, China —WU6D
- Egypt Travelogue —WA6BEJ
- Managing A Disaster —W5BYG
- Ham Radio In Schools —N6RPG
- Easy Amateur Microwave — WA6PAZ
- 10-10 International —W6LYJ/ K4CIH
- RTTY Modems: Past, Present and Future —W6IWO/K9GWT
- Packet BBS Operation —K6VE
- MARS for Non-MARS Members — K6IYK
- Ladies/Spouse Luncheon — WA6OPS
- ARES/RACES Interaction — KG6YS
- Simple Access to Ham Satellites — K7JA
- Disaster Preparedness For The Ham —KB6MYE
- APRS and Rose Parade —N6VTX
- Exploring The Internet —AC6EN
- Practical Mobile Installation — KK6YO
- Contesting/DX Forum —AA7A
- Your Place In Public Service Communications —KN6NB
- SAREX Forum —WA1STO
- Homebrew RF Power Amp Design and Construction —WB2WIK
- Spectrum Management & Frequency Coordination —K6IYK, N6YLA, W6QC
- Repeater Operations —N6TFS
- Public/Media Relations —AA6JR
- The Queen Mary,W6RO, Story — K6OSC
- Public Service Forum —KG6YS
- Living The Adventure—KA7ITT
- Amateur Television —WA6SVT
- Traffic Handling Tutorial —ADØA
- This is Newsline —WA6ITF
- Phase 3D Satellite Report — KB1SF
- ARRL Open Forum —WA6WZO
- DX Breakfast —K5VT
- Traffic Breakfast —K1CE, K6YR
- APRS —W6ZL
- Understanding GPS —WB6NOA
- North Pole Network —WA6OPS

There was also a Transmitter Hunt, VE exams, a Flea Market and more. Quite a lot of information for $15!

At the Saturday night Grand Banquet, Dave Bell, W6AQ (producer of the TV program L.A.P.D.), was MC with very humorous Amateur Radio and convention-related remarks.

The dinner speaker was astronaut Dr. Ron Sega, KC5ETH, who enrolled at the U. S. Air Force Academy in 1970. He showed slides and film of the history of the space program and mentioned specific items from space research that had benefited society. Videos presented the experiments conducted on his missions as well as shots of the Swiss Alps, Grand Canyon and Straits of Gibraltar as seen from a vehicle orbiting the earth every 90 minutes. Also shown was a TV news clip from

The very active, public-service-minded couple, April, WA6OPS and Joe, KØOV, Moell.

a visit he made to a school that he had talked to on Two Meters from space. In dramatic film, the launch, at Mach 25, on the way to MIR was shown.

Col. Sega, now Dean, College of Engineering and Applied Sciences at the University of Colorado, gave his projections as to what the space future may hold. At the conclusion of his talk he received a lengthy standing ovation.

Next year's SW Division Convention will be held in San Diego and in 1999, it will return again to the Queen Mary at Long Beach. WR

Awards

100 Nations Award

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

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

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

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

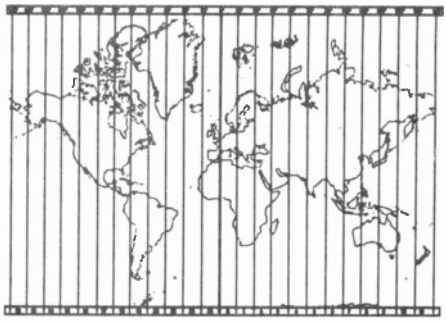
2. W-100-N, then, will be of perennial interest. The advantage to those stations having worked a national entity long absent from the air will be minimal.

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

Rules

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

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



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

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

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

6. The application shall include the following:

a. Letter requesting W-100-N.

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

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

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

7. All applications and requests shall be addressed to:

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

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

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

W-100-N nations list criteria

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

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

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

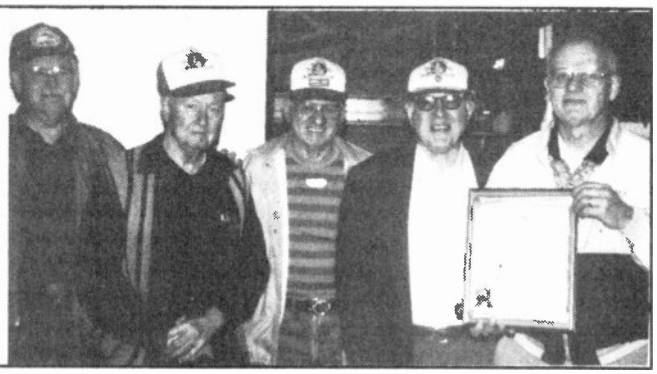
a. identifiable by a specific call sign prefix series allocation assigned to that entity by the International Telecommunications Union, or

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

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

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

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



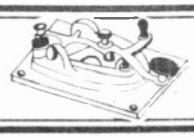
Bill Easton, W6UYD; Bill Hendrick, NS6D (sec/treas); Cliff Adams, K6ON; Paul Wolf, W6RLP (chapter president), and John Minke, N6JM (award recipient).

QCWA Chapter 169 honors N6JM

At a recent meeting, the QCWA Sacramento Valley Chapter #169 presented John F. W. Minke III, N6JM, the "DX World" editor of ***Worldradio*** magazine with a Meritorious Award Certificate for his longtime service to Amateur Radio.

The presentation was made by chapter president Paul L. Wolf, W6RLP, with about 40 others in attendance. — *Paul L. Wolf, W6RLP, President, Chapter 169*

Silent Keys



JACK O. MILLER, W9WYN

Avid radio amateur Jack O. Miller, licensed in 1936 as W9WYN and life Member of ARRL, IEEE (0754051), 10-10 Int'l (#06894) (Director 1991-1996), Member QCWA (17609), Signal Corps Regimental Association and others, died 28 June 1997. He is survived by his wife, Dorothy E., and niece, Karen Ann.

Born 8 February 1914, Jack started in the electrical business in 1936 with the Chicago Office of the sales representative of the old National Electric Products Company. Less than four years later he was transferred to the Kansas City area as one of their youngest district managers. During World War II Jack served as a Master Sergeant with 2nd Signal Service Battalion in charge of the unit's own first radio school and originated several innovative training methods for high-speed CW intercept operators. He later served in several radio station supervisory capacities and after discharge received two commendations for his contributions to the successful operations of the organization.

After the war he worked as a sales engineer for a Chicago electrical jobber, where he made several recommendations to the manufacturers they represented for improvements to, or additions of, products that were adopted by them. In 1956 he took charge of the sale of Aluminum Electrical Conduit and developed it into a national market. In 1962, he established Miller Aluminum Sales Company, specializing in the sale of same, which he operated until retiring in 1976. He was instrumental in convincing many electric utilities and other bus users to convert to aluminum.

May the signals of W9WYN continue their radiation into space for eternity. — *Dorothy Miller*

HARRY BUSH, KH6IR

Harry Bush, KH6IR, became a silent key 5 September 1996. Harry was, for many years, manager of McKay Radio in Honolulu. Very active with the Army MARS program in Hawaii, he served as Asst. Civilian State Director 1962-94. When he retired, he moved to Trinity, California, where he remained active in Amateur Radio. —*Arnold Samuels, KH6COY*

LEO THIEL, WB6IBI

Leo Thiel, WB6IBI, passed away 9 August. Born in Kenmare, North Dakota, 21 April 1912, Leo moved to San Francisco in 1946, where he worked as an electrician until his retirement from the Golden Gate Bridge District in 1978.

Leo received his license in 1963 in order to communicate with his son, Bob, who was living in Hawaii at the time. Leo became very active on 20 meters. He was an active member of Army MARS and spent many hours running phone patches. He was especially active in 1970, providing phone patches for people in Antarctica when his son, Bob, was there. — *Bob Thiel, WB6ZZC*

JAMES L. RUSSELL, W8BU

Veteran Amateur Radio operator Jim Russell, W8BU, of Rocky River, Ohio, died 15 August 1997. He was 98 and had been a ham for approximately 85 years.

Russell was said to be the first amateur west of the Allegheny Mountains to work Europe. He was an ARRL and QCWA member and served as a net control station for the Intercontinental Traffic Net. In his professional life, Russell was an attorney, a justice of the peace and the public safety director for Fairview Park, Ohio. He also dabbled in astronomy and telescope building. His late wife, Eila, was WA8EBS, and his brother, Dave, is N8DR. — *Jerry Murphy, K8YUW*

In Memoriam – a wife's tribute

WALLENE KOMENDA, KC7HYI

Bob Komenda, N7ZAB, died quietly in his sleep at home. He was an extraordinary individual. He had done it all and seen a little bit of just about everything in his 35 years behind the wheel of a cab in Seattle, Bremerton and Port Orchard, Washington. That's where I met him. We were married 11 August 1979 and honeymooned in Hawaii and at Disneyland in California.

Bob and I had been active in CB for some time before we met, so we had a feel for what a QSO was all about. Our introduction to Amateur Radio came quite by chance. On a visit to Radio Shack, we noticed two men standing at the door. The older man was holding an HT, and we listened while he told the younger man about Amateur Radio.

The older man was Tom Sanders, W6QJI, and we asked him what Amateur Radio was all about and how to become involved. He told us of books we could read and of classes offered by the Burley Amateur Club.

We bought the books, and Bob enrolled in the Novice-Tech class. In the fall of 1992, Bob got his Novice ticket and, in 1993, his general. He was hooked!

As I saw the certificates and QSLs pile up on the wall, I said, "Yes, I can do that." Shortly thereafter, I got my Tech license. In the years that followed, we had a wonderful, loving Amateur Radio friendship and marriage. Bob was instrumental in getting the club station on the air in the Burley, WA, post office building and in getting the club call, KC7LCW/W7JQ. In rapid succession, he worked WAS and DXCC for the club, often working until 3 and 4 a.m. chasing those elusive DX and state contacts on 40 meters. One of our high points was the chance to operate WW2END on board the USS *Missouri* on the 50th anniversary of the end of World War II. He taught me to operate his FT-767 GX.

In spite of some uncertainty regarding changing of channels, I won one of the Friday the 13th Repeater QSO Parties and placed second in another.

As his health failed rapidly, it became necessary for him to breathe oxygen continuously. Despite obvious discomfort, he continued his active participation in the club meetings and the Saturday sessions at the station. Finally, confined to a wheelchair, he operated the 1997 Field Day at the country QTH of Dan Reeves, KC7DRR. He said, "All I want to do is to make Field Day — I sure hope my name gets into the papers this time." My eyes filled with tears when I read the account of the Field Day in the *Port Orchard Independent*. His prayers had been answered. He passed away two weeks after Field Day.

As his health deteriorated, he knew his time was near. He wanted to enjoy his family and his many Amateur Radio friends, do a little fishing and share his catch with his friends. I finally had to ask him to stop fishing because the freezer was full.

Bob was a good man. In the 18 years of our marriage, we had two wonderful daughters, Justine and Robin. Bob had two other daughters by a former marriage, and he was able to spend some time with them before he died.

The Burley club has been wonderful in their support of me and my family. Bob will be deeply missed and remembered for the man that he was and, through the memory of his participation, as a truly fine member of the Amateur Radio community.

I will miss him, as will his family and uncounted numbers of the Amteur Radio community whose lives he touched. He asked that his ashes be spread at Bay Lake, where he fished, and at Ellimore Trail in the mountains where he hunted. In the presence of his family, we honored his last request.

He is no longer in pain and is resting at last. We love you Bob. Just keep on fishing in heaven. **WR**

If you'd like copies of ***Worldradio*** to pass out at a local hamfest, contact our editorial office 4-6 weeks prior to the hamfest.
(916) 457-3655

Off the air

More on knowing code

"Learning skills and the code," the August 1997 article by Dave Kelley, AI7R, was outstanding. He certainly covered the prominent points that can help those learning or improving their code skills. The same day I read Dave's article an excellent article coincidentally appeared on the front page of our local paper concerning learning skills. This item has a very strong correlation to learning Morse code.

Dr. Henry Holcomb, a psychiatrist who heads a Johns Hopkins University study group on how people remember, says that time itself is a very powerful component of learning. As one example, it was pointed out that after learning to ride a bike, it takes six hours to permanently store the memory in our brain. The researchers, after using a device that measures the blood flow in the brain, concluded that it takes five to six hours for the memory of a new skill to move from a temporary storage in the front of the brain to permanent storage in the rear.

If we keep code learning in mind, it is relevant that Dr. Holcomb stated that it would be better that our first practice session (in learning a skill) be followed by five hours of routine activity that required no new learning. Also through testing, it was discovered that unusually precise and rapid hand motor skills that could only be learned through practice, could be mastered only when followed by five hours of routine activity. It is also interesting to note that Dr. Holcomb pointed out that once we can place these skills in the rear memory portion of our brain, it is unlikely that we will ever forget them. Good examples are swimming and riding a bike.

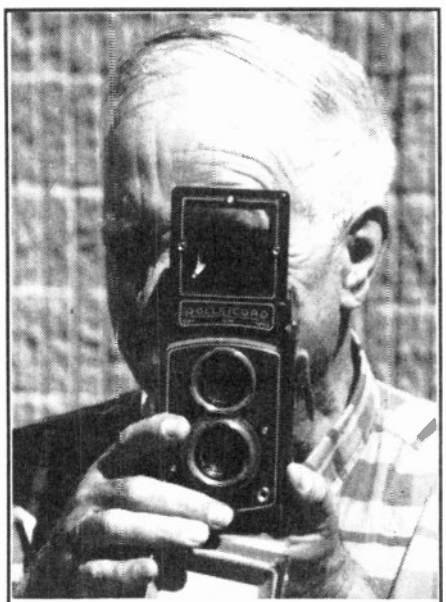
So the moral to all this is when learning code skills — practice, practice, practice, and do not let other learning skills interfere with your learning code. Give your brain sufficient time to encode that new skill.

DAVE VAN DER WEELE, WA3L
Trafford, PA

No-Code Novice

The "No-Code Novice" license — it may save Amateur Radio!

The ARRL recently proposed (*QST*, 3/97, p. 55) the abolishment of the Novice Amateur Radio license and the replacement of the Technician license with the entry level "Basic" no-code license, with full privileges above 30 MHz. The Basic examination, as proposed by ARRL, would delete present Element 2 questions on HF, since the Basic class licensee would not be able to operate on HF. As most new hams are entering via the no-code Technician level, and the Novice level has stagnated, this proposal seems logical, but there is a more logical, and beneficial entry level alternative — the "No-Code Novice" (NCN) license. This license would permit operation on 222 MHz with 25 watts, and 1270 MHz with 5 watts — period. These are two bands that we are in danger of losing if we don't use them, and so the influx of No-Code Novices would benefit Amateur Radio. Further, since power levels are restricted to below 50 watts PEP, the NCN licensee would be excluded from routine RF Safety evaluations. The questions relating to Element 2, Table NTO-1, "RF Exposure Limits," should be deleted from the NCN examination, i.e., Element 2, questions NOC05, 06; NOC09-14; NOC16-27; NOD06, 09; & NOE14-17. This exclusion should also be extended to Novice licensees by restricting HF power output to 50 watts PEP. Element 2 questions N1F02-6 & N1F09 should be deleted to reflect this HF power change. There would then be seven (7) license classes: No-Code Novice, Novice, Technician, Technician Plus, General, Advanced, & Extra. Element 2 question N1B10 should be deleted to reflect this increase in license classes. Upgrading from NCN to Novice by passing Element 1A will be popular again as soon as 10 meters opens. Amateur Radio will benefit with new life on the HF bands! Having taught Amateur Radio for seven years at Los Feliz Elementary School in Los Angeles, and seeing the kids pass the Novice written examination easily, but not the 5 wpm code test, I think the "No-Code Novice" examination's time has come! All these "inner-city" kids would be amateurs now, instead of rejects, and working on either more theory, or seriously pursuing the code. These same kids could never



Got a Rollei? Take a picture for *Worldradio!*

pass the more technically difficult Technician, or Basic, examination as an entry level point. They and their parents are now being frightened away from Amateur Radio at the suggestion of "dangerous" radiation levels and the routine RF radiation evaluation requirements in the present Novice and Technician examination questions. Let's keep Amateur Radio open and attractive to kids and their parents, as well as disabled persons who need a simple entry level — the "No-Code Novice"! Contact your ARRL Director (see *QST* magazine), and voice your support for the "No-Code Novice." It could be implemented immediately without making the present license manuals obsolete. Only the deletion of 33 Element 2 questions is required, leaving 450 questions to study for the NCN!

JOHN ABBOTT, K6YB
Newhall, CA

Licensing standards

I am a relatively new ham. I was one of the no-code inductees who was to breathe new life into what was often described by some of Amateur Radio's political establishment as a dying hobby. The vitality of Amateur Radio is rooted, again in my humble opinion, in the quality of the works and deeds of its members. A vital and growing radio hobby used to be and should be evidenced by innovation in equipment design and application, and in useful public service activity.

I was first licensed in 1991 as a Technician and a Technician I have remained. A generation ago, a Technician was often described as the Amateur Radio operator who was on the cutting edge, pushing the envelope.

They were the ones toying with the experimental high-speed digital technologies still in their infancy. They investigated the then-esoteric modes of propagation like sporadic-E, meteor scatter, aurora. They built, by hand, the specialized microwave equipment for super high frequencies that only companies like Raytheon had plumbed before. They pioneered fast scan ATV. Stacked arrays for moonbounce and satellite work were fashioned with care. They were the wizards and warlocks of Amateur Radio. It is true, with the type of operating they did, they didn't often use the Morse code.

What does today's Technician do for Amateur Radio? Well, at least we are still not using the code. Since I have been a ham, much of my operating time has been spent on VHF repeaters. There has always been some jamming and nonsense, especially in urban areas with a higher per capita concentration of users. There are operating practices and sexual and cultural prejudice that this reasonably prudent Amateur Radio operator finds offensive.

I am a No-Code Technician and I say that the Morse code requirement needs to be reinstated for all Amateur Radio license classes. License examinations need to include an essay component on good operating practices and perhaps even a verbal component. Many will feel that I am trying to raise barriers for entry into Amateur Radio. This is not true. In fact, I volunteer not to be grandfathered past these proposals. I think that the Morse code is an integral part of our heritage as amateur operators and should be preserved and cherished as a hallmark that sets us apart from the ever-increasing ranks of Citizen's Band, GMRS, Marine Radio, and the so-called Family Radio Service, on all of which one can hear many poor practices.

This is not about barriers to entry. Good operating practice is about adhering to an ideal that makes this hobby something to be looked up to, admired and respected by all.

BRIAN MILLAN, N2OFM
Brooklyn, NY

Saving the hobby

What will save and promote Amateur Radio without dumbing down the entry requirements further than has already been done?

While on that topic, pursuing the "value" of Morse code per se is useless. It has little value. It is fun and it is inexpensive and from my long years of experience, the best way to move radiograms. It's a great way (wearing cans) to converse without disturbing others. The traffic value is due to the human element being thoroughly involved.

Talking about using CW on Gilligan's Island is a waste of "reading space." The issue is just what Vince Biancomano has said from Day One of this debate. It has to do with the retention of what is now left of licensing integrity and difficulty, all other aspects of the tests having been simplified in the extreme, both in content and in the method of examination.

Of course some of us are sentimentalists and literally equate the hobby with the Morse code. We feel that if no testing is ever done to establish knowledge of that unusual modus operandi, then the incentive will disappear as its devotees gradually die or quit the hobby. We are right on that point and nobody has proved us wrong.

Those who have no use for code could not, of course, care less. That is understandable. One of my two late '40s "elmers" flunked the 13wpm and I aced the whole exam, including the written/drawn portion. I never held that against him. He was living proof of a dedicated ham who simply had a lousy knack for learning or using Morse. So be it. He definitely was in the minority in that regard and still is.

The disturbing aspects of the debate are:

1) the negative image it projects on those of us who are radio amateurs

2) the situations and FCC rulings which literally led to this debate

3) the visibility this has acquired via the Internet and via radio magazines

4) the fact, including the issues engaged in by my fellow FISTS member, Larry, of civility and mature, realistic thought.

The least we can do, gentlemen and ladies, is be civil. This and its sister newsgroup are laced with cussing and insults and creations of assinine scenarios evidently for the amusement of the participants.

This is NOT an amusing subject. It IS about the resurrection of a dying hobby. The editor of ***Worldradio*** posits that there are probably only about 200,000 active hams in the U.S. I would go a hit higher, but not much which says something, by the way, about why the ARRL has so few members... maybe they don't, in that context. Our hobby is in deep trouble and the time taken to construct points/counterpoints on these newsgroups is time not spent using our ham stations and/or acting as elmers.

If time is spent here, let's spend it pursuing the chief issues at hand: the aging of active hams; the merits of code testing in light of the dumbing down of testing which is now irreversible (is it?); history and addressing the chasm that has developed between Technician licensees and those who have upgraded to General or higher.

Let us be decent and if we really are concerned about Amateur Radio, let's spend some time on the air. I do a lot of that and speed-read the newsgroups for items that attract me. Trouble is, wading through the crossposts and the incivilities takes time and gives us all a terrible image to others. I write long messages. Sorry about that...

FRED ADSIT, NY2V
Syracuse, NY

Re: Avoid the Zapp!!

In reference to the above-mentioned article in your October issue, p. 13 — good advice from K7NPS but may I add this: since most ham shacks are in basements, it's advisable to keep a short piece of 2x12 lumber for a platform when working on that amplifier! The soles of your shoes offer little insulation, especially when damp or sweaty!!

JOHN McKINNEY, WØAP
Dannebrog, NE

Which tool will do the job?

I'm reading a lot about the rejection of CW these days. I've read that some countries no longer require CW in the licensing of radio operators. I suppose the mode is considered by some to be outdated and no longer useful. Did I read correctly? Has MARS given it up, too?

Let's examine a parallel here. Our navy, the finest in the world, has the most advanced position locating instrumentation in existence. Navigators aboard our naval vessels, using state-of-the-art equipment including orbiting satellites, can determine theirs and the position of other ships almost within inches anywhere on the planet. Why then, do naval regulations require that every ship in the navy carry a sextant aboard. A sextant! A sextant is a primitive gadget invented in 1704. Does our navy, who always wins in the end, know something the rest of us don't?

Let's use our imagination here. There's a disaster somewhere. Buildings have collapsed. Floods are everywhere. Power lines and transmitting towers are down. All cell phone services and portable radios are gone, maybe because batteries have run down. People are trapped in different places. Emergency crews, equipped and ready, don't know where to begin because there's nobody to talk to. They'll have to make a beginning somewhere.

Rescuers hear someone tapping on a pipe. Someone else recognizes the sounds are a code and the code directs them to where people are trapped. Another emergency crew sees a flashing light on a hillside. Maybe it's a beam from a flashlight or someone moving a piece of cardboard across a kerosene lantern. From the light, the rescuers soon learn who's there and what needs to be done. Other people talk to each other with automobile horns or loud whistling.

So, when truly disastrous emergencies happen, and they will, we're going to have to talk to each other before we can help. At this moment we won't know which signaling method we'll be able to use. We may be banging on pipes or whistling or interrupting sources of light or sounding automobile horns, but we can be sure of one thing....we'll be doing it all with CW!

BILL MCCRACKEN, W6IGN
Newark, CA

Lack of interest?

I strongly believe that it is the duty of all amateurs to participate in Field Day in some way to fulfill our obligation for having the use of the spectrum assigned to us and to show that we can, in fact, set up emergency communication if needed by our community.

In January I presented a detailed outline for Field Day preparations to the officers of our large club (over 70 members). My outline provided for monthly status reports, group leaders, and a specific timetable to get all the work done. The thrust was to have a number of people doing a small amount of work rather than a few people doing a lot of work.

My presentation included a statement that if I didn't get a reasonable participation from club officers members, I would not continue to manage the event.

The presentation to the club officers seem to have gone well but, when asked to sign up for the event, I received a favorable response from five new Techs, none of whom was a club officer. With only five out of 70 members indicating interest, I dropped the project and operated as a Class D station during Field Day.

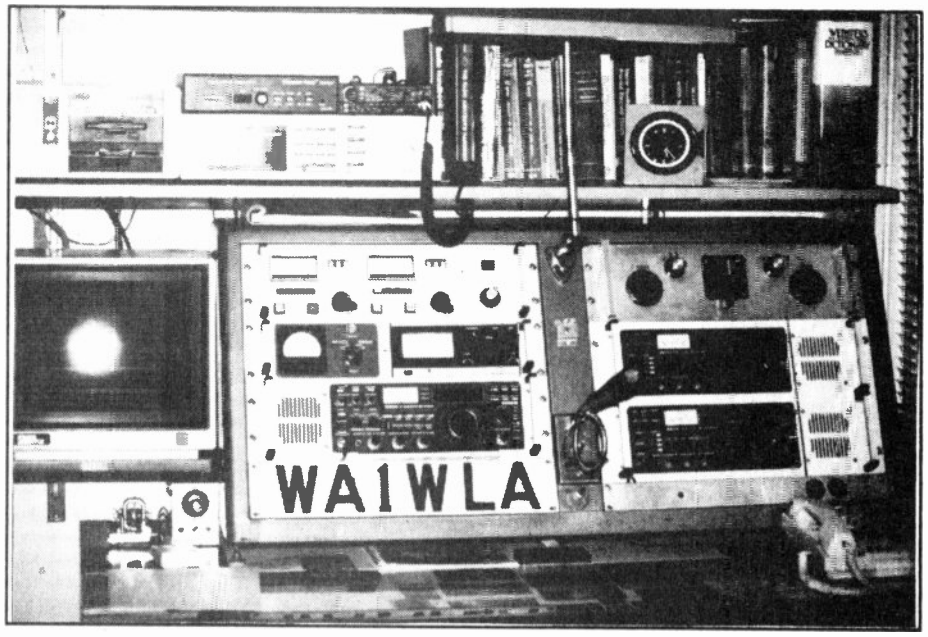
B. PRATT, W9ZC
Neenah, WI

Station Appearance

Constantine Thomas WA1WLA

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

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



My station is built into a console, like onboard ship. Starting from the left on the shelf above is a PC, stereo, CP1 on top of it, and a Kenwood TM 721A and books.

In the console left bay, upper left, is a homebrewed 8877 RF deck, which includes Pi El Vac caps Vac relay extensive metering digital band readout, and more.

Middle of the left bay, is a COLLINS watt/meter and a Tailtwister control box. Under that is the ICOM IC 751A.

On the right bay, upper right, you see a homebrewed antenna tuner with 5 inputs, and output switch to select through the tuner, bypass, dummy load, and 4:1 balun.

Under the antenna tuner is the ICOM IC 271A and ICOM IC 471A.

The little box on the left under the monitor is a homebrewed remote antenna switch selector box.

The homebrewed power supplies are mounted on the right side of the console on the bottom.

The 13.8 volt supply is good for 90 amps.

The HV supply for the 8877 is 3700 volts and drops to 3500 volts under full load. **WR**

Amateur "Hi"

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

LARRY COPPALA, KD4ZD

When I finally passed my Novice Code test I came in last in my group, but I passed it. Little did I know what was ahead.

I already had a rig so I quickly threw up an end-fed wire to operate Novice CW on 40 and 80M.

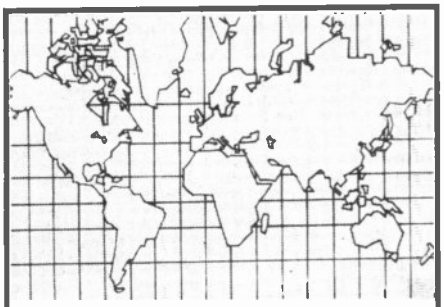
After about a week I appeared before my wife with tears in my eyes. "Whatever is the matter?" she asked.

I replied, "I don't know how, but everyone I work on CW knows I was the last in my Novice class to pass the code requirement.

"How do you know that?" she said.

"Because every QSO I have, when I call CQ, get an answer, send my information then turn it back for their info, everyone comes back with, "So lid, cpy ur info."

It was ten years before I figured it out. Needless to say, I'm back on CW more these days, now that I know they are saying, "Solid cpy." **WR**

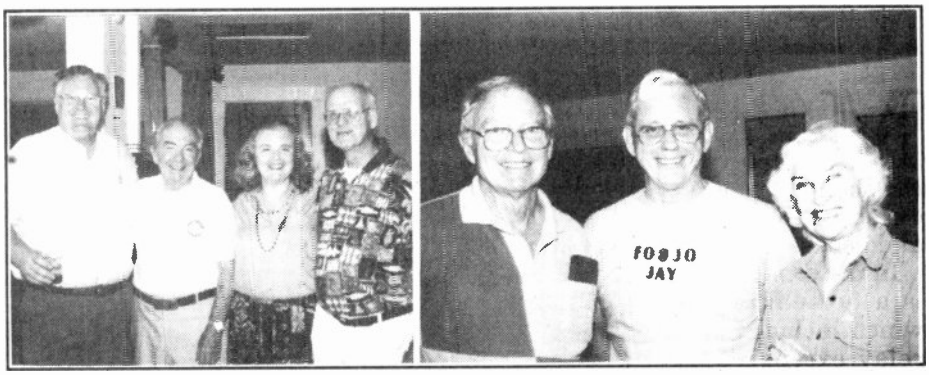


DX WORLD

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

DX Gathering

On Wednesday evening, 30 July, Jan, K6HHD, and Jay, W6GO, O'Brien, hosted a local get-together for Carl, WB4ZNH, and Martha, WN4FVU, Henson. Most Dxers are aware of Carl and Martha, who gave many a deserving DXer a new one from several of the African countries. They were visiting the West Coast from their home in western Michigan.



Pictured on the left, among those present at the gathering at the O'Briens' were Carl Henson, WB4ZNH, Norm Brooks, K6FO, Martha Henson, WN4FVU and John Minke, N6JM. In the photograph on the right are Bill Hamlin, K6UO, Jay O'Brien, W6GO, and Billie Menz, KB6PTD.

Brick Menz, NT6M and Jan O'Brien, K6HHD (holding K1TTY?)

Spratly Islands (1S)

Although the DXCC Countries List shows the prefix for the Spratlys to be 1S, which is unofficial, all of the recent activity has been with Malaysian calls. Several countries make claim to the islands, resulting in various prefixes. The old 1S1A and 1S1DX calls of the 1970s were calls chosen by the DXpedition teams.

A German DXpedition team to the Spratlys resulted in death after they were fired upon by a hostile occupant claiming ownership. From the recent visits by single individuals you would think that DXpedition was just a bad dream. But no, it actually happened.

Bob Schenck, N2OO, Bob Hamilton, NØRN (formerly KØIYF), and Jani Kusmulyama, YBØUS, were active from the Spratlys 14-18 August, signing 9M6OO/P. They operated two complete stations on 10 through 40 meters with CW and SSB.

Pekka Ahlqvist, OH2YY, operated from Layang Layang 19-22 August and handed out SSB contacts to many.

This winter there will be a major effort to satisfy any need for the Spratlys. Mainly members of the Chiltern DX Club, the group will operate from Layang Layang Island (Swallow Reef) in February. This is the same DXpedition group mentioned here last month.

If you haven't yet worked the Spratlys and miss the one in February, then it's time to re-evaluate your operating style. Getting in line for one of those "that's a good contact" will never make a real DXer out of you.

Libya (5A)

Les Bannon, WF5E, recently received a letter from Abubaker Alzway, the operator at the Libyan club station, 5A1A. He said 5A1A is the only station in that country and has been working SSB only since July 1995. Any other operation is a pirate operation and they have no permission to operate.

QSL cards were returned for the call 5AØA as they were no good. He also said that the operator named Joe from the Czech Embassy in Tripoli does not have permission to operate as of the time of this writing, which was early August.

The call 5A27, used last year during the 27th Anniversary of the Alfath September Revolution, is also valid.

At the end of August there was an Austrian group that was to operate through 7 September in the country signing with 5A28. Refer to the QSL Routes for QSL requests.

Togo (5V)

The Voo-Doo Contest Group announces their entry as 5V7A in the *CQ* Worldwide DX Contest this coming November. The entry will be classed as a "multi-multi" with 11 team members operating eight one-kilowatt stations and the best of the line antennas.

The dates of this contest are 29-30 November. Even though you may not be a contester here is a chance to pick up a new one. With the arrangement they have on the bands they will work everyone who calls them. Aside from the contest, the 11 team members may be activating their own individual Togo calls,

which are included in this month's QSL routes.

Western Samoa (5W)

Perry Christensen, WH6XY, is presently in Western Samoa signing with 5W1PC. He works mainly SSB on 15, 17 and 20 meters. Perry, a schoolteacher there, will be active until his departure in November.

Uganda (5X)

Peter Casier, 5X1T, and known to most of us as ON6TT, says, "Things are moving here in Uganda. We have now a very active core of hams." Presently, the list includes: Peter, 5X1T; Paul, 5X4F; Mario, 5X1C; Joe, 5X1P; and Mats, 5X1Z. Steve Bauer, DJ1US, is awaiting his license and most likely will have received it by now.

Peter says half of these people work at the U.N. World Food Programme and some are moving into the "big gun" class as Mats, 5X1Z, now has a 3-element yagi for 10, 15 and 20 meters. Peter just installed a Hy-gain TH11, an 11-element log-periodic array, which has helped greatly for 10 and 12 meter contacts with stateside stations.

Of his activity since March, Peter says he has made about 11,000 contacts through mid-August, despite a heavy work load and having his family there with him. Of that number, 500 contacts were on RTTY.

Peter also mentions that Paul, 5X4F, is set up for 160 meters. Look for Paul near 1.824 MHz at 30 minutes before sunrise. That's his sunrise, not yours. Sunrise in Uganda is 0346 UTC on 30 September. If he is not sleeping in he may be on the band 2300 to 2400 UTC.

With these active DXers there, soon Uganda will be considered garden-variety DX. They know how to cope with pileups.

Oman (A4)

According to *DX News Sheet*, Chris, SP5EXA (formerly A71CW), has arrived in Oman and will be there for five years. He is still waiting for a license as of the end of August.

The Ohio/Penn DX Bulletin reports that the Royal Omani Amateur Radio Society is to celebrate its 25th anniversary (Silver Jubilee) by appending their calls with /SJ through the end of the year. They will also operate a special event station A43XXV during the period 17-21 December.

Cameroon (TJ)

Cecil Williams, NW8F, the QSL manager for Mark, TJ1US, reports he is presently on the air Fridays only and will be on Saturdays at a later date. Mark's schedule is as follows:

1800-2100 UTC	14.085 MHz	RTTY
2100-2130 UTC	10.104 MHz	CW
2130-2200 UTC	14.050 MHz	CW
0200-0400 UTC	7.020 MHz	CW
0400-0500 UTC	3.510 MHz	CW

Nothing was said about SSB activity. As for 160 meters he has no antenna. Anyone interested in helping Mark get on the band with an antenna should contact his QSL manager at his e-mail address: nw8f@juno.com Looks like copper wire and coaxial cable is hard to come by over there.

Macquarie Island (VKØ)

Tom Stokes, VKØTS, is very active from Macquarie Island. He often joins in with the Pacific gathering on 14.222 MHz hosted by Jim Smith, VK9NS, on Norfolk Island. Look for him beginning around 0400 UTC. Note that this is a controlled net and you will have to get on a list and wait your turn to work him. Jim usually takes his list earlier than that and if you despise list operations then look elsewhere. Tom will operate CW upon request.

Tom sometimes shows on 40 meters near 7.075 MHz around 1100 UTC working Japan, Australia and New Zealand. I understand he does not have the facilities for listening up in the American PHONE band when operating there.

On 75 meters Tom visits 3.798 MHz and has worked many of the deserving DXers on the West Coast who can manage to avoid their beauty rest.

Tom and his QSL Manager, Simon Trotter, VK1AUS, are in daily communication via radio or e-mail. Anyone needing more information on Tom's activities can contact Simon at his e-mail address: vk1aus@netinfo.com.au Simon has released a schedule of Tom's operating times as follows:

Thursday	0930-1045	7.070 or 7.075 MHz
Sunday	1000-	3.570 & 3.798 MHz
Monday	0930-1030	3.570 & 3.798 MHz
Tuesday	0400-0445	14.222 MHz

Tom can work both CW and SSB on most bands. However, the problem with working any other bands than what is indicated is that he has to go change the link in a box 500 meters from the main radio room. This is a real problem right now as it is winter on the island and it is a total white out most of the time.

IOTA

Danjo Archipelago (AS-056) will be the scene of activity 21 through 23 November by Yuki Deguchi, operating as JI6KVR/6. This one is needed by many of the IOTA chasers.

The Daily DX says that Irianuz, YC9NBR, has been active from Timor Island (OC-148) on 15 meters near 21.275 MHz between 1000 and 1400 UTC. Most activity from Indonesian stations is on this band and 40 meters. Calls with the YC prefix will not be found on 20 meters. Long time DXers will recall that Timor was once a separate DXCC country, Portuguese Timor (CR8).

There are many IOTA island groups activated during August, many of these by European Dxers on holiday, as the activity drops off during the winter. Here is a selection of what was on:

AF-018 Pantelleria Island	IT9JOF/IH9
AF-019 Lampedusa Island	IG9/IK2QEI
AF-032 Zanzibar	5H1FS
AN-006 Galindez Island	EM1HO
AS-008 Izu Archipelago	JQ1ALQ/1
AS-012 Amakus Island	JI6KVR/6
AS-015 Pinang Island	9M2KT
AS-017 Okinawa Island	JR6VDU
AS-018 Sakhalin Island	UAØFAI
AS-026 Mara Island	HLØC/4
AS-040 Goto Islands	JK4XKN/6
AS-051 Spratly Islands	9M6OO/P
AS-053 Phuket Island	HSØ/IK4MRH
AS-060 Chungsan Island	HLØZ/4
AS-074 Ketam Island	9M2OM/P
AS-075 Taipa Island	XX9TKX
AS-084 Ch'uja Island	HLØZ/4
AS-094 Hainan Island	BD7YA
AS-097 Pisang Island	9M2OM/P
AS-117 Mishima	JA4GXS/4
AS-129 Dangan Island	BD7JA/7
EU-009 Orkney Islands	GMØHTG
EU-010 Lewis Island	GMØKCY
EU-011 Isles of Scilly	G3RPC
EU-017 Lipari Islands	ID9/IK4HLQ
EU-020 Gotland Island	SM1BIQ
EU-023 Comino Island	9H3XV
EU-028 Elba Island	IA5/IK1VCI
EU-029 Aebelo Island	OZ/DJ2JRM

EU-030 Bornholm Island	OZ/DF6QN
EU-036 Hitra Island	LA8LA
EU-037 Oland Island	SM7DLZ
EU-038 Texel Island	PA2JJB
EU-040 Belinguia Island	CQ1I
EU-041 Maddalena Archipelago	IMØ/IK4HLQ
EU-042 Pellworm Island	DL4FCH/P
EU-045 Ventotene Island	IB0JN
EU-046 Ringvasoey Island	LA1CI
EU-048 Belle Isle	F5IRH/P
EU-050 Tremiti Islands	IL7/IK2PZG
EU-051 Ustica Island	IE9/IT9AUP
EU-052 Korfu Island	SV8/DL3MD/P
EU-054 Egadi Islands	IF9/IK8WTM
EU-055 Karmoy Island	LA4CM
EU-056 Haroy Island	LA/DK4UN/P
EU-057 Ruegen Island	DKØDJF
EU-061 Songvar Island	LA/DK4UN/P
EU-062 Donna Island	LA4GY
EU-064 Pilier Island	F6OYU/P
EU-067 Mykonos Island	SV1QN/8
EU-069 Columbretes Grande Isl	ED5HQ
EU-074 Ile Brehat	TM4B
EU-075 Poros Island	SV1TP/P
EU-076 Lofoten Islands	LA/F5YJ/P
EU-079 Gurshoy Island	LA/DL2ATR/P
EU-084 Roslagen Island	SMØOIG/P
EU-089 Corvo Island	CU9B
EU-091 Sant Andrea Island	IJ7/IK7XNF
EU-106 St Tudwal's West Isl	GW4KCT/P
EU-109 Farne Island	M/PA3GIO/P
EU-112 Shiant Islands	GM6UW/P
EU-115 Irish Coastal Islands	EI7GK/P
EU-120 Lundy Island	GØANA/P
EU-121 Gola Isle	EJ7GK
EU-122 Rathlin Island	GB2MRI
EU-123 Lady Isle	GSØAYR/P
EU-124 Angelsey Island	GWØMOI
EU-125 Romo Island	OZ1DYI/P
EU-127 Duene Island	DL8OBC/P
EU-128 Fehmarn Island	DL6HBH/A
EU-131 La Certosa Island	IK3TTY/P
EU-132 Wolin Island	SQ1EUD/1
EU-133 Kotlin Island	R1ASP
EU-136 Pag Island	9A/DL2VFK
EU-142 Mouro Island	EA1BD/P
EU-144 Cirella Island	ID8/IK8BIZ
EU-157 Cezembre Island	F6HOP/P
EU-166 Asinelli Island	IT9HBT/P
EU-167 Pessegueiro Island	CT1CJJ/P
NA-010 Cape Breton Island	VE1LL
NA-014 Whitehead Island	VE9MY/P
NA-019 Kodiak Island	K7ZZ/KL7
NA-020 Aves Island	4MØI
NA-026 Fire Island	W2GSB
NA-031 Rhode Island group	AA1AC
NA-036 Vancouver Island	VE7GDJ
NA-037 Shemya Island	KL1SLE
NA-041 Mitkof Island	N6HRG/KL7
NA-046 Nantucket Island	W1UF
NA-047 Baffin Island	VE8TA
NA-055 Vinalhaven Island	AK1L
NA-057 Bahia Island	HR6XX
NA-062 Florida Keys	KC4SUS
NA-065 Orcas Island	W7AWA
NA-066 Santa Catalina Is.	K6KB
NA-067 Ocracoke Island	WB4SRH
NA-075 Saltspring Island	K9PPY/VE7
NA-110 South Carolina group	AA4V/P
NA-111 New Jersey group	N2OB
NA-112 Topsail Island	N4VRR
NA-118 Green Island	N6VV/VE7
NA-138 Amelia Island	W5IJU
NA-140 Eastern Neck Is.	KF2ON/M
NA-147 Carriacou Island	J38AI
NA-198 Newfoundland Coastal	KB3OM/VO

DX Prediction — November 1997

Maximum usable frequecy from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 939, Vienna, VA 22183.) The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa—Kenya/Nairobi, Asia—Japan/Tokyo, Oceania—Australia/Melbourne, Europe—Germany/Frankfurt, and South America—Brazil/Rio de Janeiro. Chance of contact as determined by path loss is indicated as bold *MUF for good, plain MUF for fair, and in parentheses for poor. UTC in hours.

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(14)*	9	***14**	*(9)*	***14**
10	*(13)*	9	14	*(9)*	14
12	24	9	13	*(15)*	***26**
14	29	12	***22**	17	***29**
16	31	*(11)*	19	*(16)*	***32**
18	***31**	*(11)*	*(17)*	*(11)*	***33**
20	25	*(14)*	24	*(10)*	***32**
22	***21**	*(19)*	28	10	***28**
24	***17**	*(16)*	27	9	***20**
2	***16**	*(11)*	18	9	***17**
4	***15**	*(10)*	*(16)*	9	***16**
6	*(14)*	*(10)*	*(15)*	9	***15**

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(11)*	12	***15**	*(9)*	14
12	*(11)*	11	***14**	*(9)*	*(13)*
14	*(19)*	11	***14**	*(15)*	27
16	*(23)*	12	***19**	*(15)*	31
18	24	*(11)*	*(17)*	*(11)*	***33**
20	24	*(14)*	23	*(10)*	***33**
22	21	23	27	*(9)*	32
24	***18**	25	30	9	***28**
2	14	21	28	9	***19**
4	***12**	15	19	9	***17**
6	*(12)*	13	17	9	***15**
8	*(11)*	***12**	***16**	*(9)*	***14**

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	*(14)*	9	*(14)*	***9**	***14**
9	*(13)*	9	***14**	*(9)*	***14**
11	25	9	13	16	24
13	30	10	***25**	19	***28**
15	32	*(9)*	21	17	***31**
17	***32**	*(9)*	*(17)*	14	***32**
19	***28**	*(9)*	*(21)*	*(11)*	***33**
21	***23**	*(16)*	*(26)*	10	***28**
23	***18**	*(16)*	27	9	***21**
1	***16**	*(11)*	*(18)*	9	***18**
3	***15**	*(10)*	*(16)*	9	***16**
5	***14**	*(10)*	*(15)*	9	***15**

OC-006 Tasmania	VK7RO
OC-021 Java Island	YB2BRW
OC-022 Bali Island	YC9BU
OC-029 Majuro Island	V73TX
OC-034 Is. of New Guinea	YC9WZJ
OC-042 Luzon Island	4F3CV
OC-055 French Frigate Shoals	N4BQW/KH6
OC-070 Ambor Island	YC8VHU
OC-088 Island of Borneo	YC7KNV
OC-129 Cebu Island	DU7MHA
OC-137 Bribie Island	VK4LV
OC-143 Sumatra Island	YC6PUP
OC-147 Iran Jaya Coastal	YB8BJK/9
OC-209 Talaud Island	YC8TZR
SA-018 Chiloe Island	CE7OXZ
SA-023 Bahia State North	PY6JJ
SA-026 Campeche Island	PR5L
SA-080 Tinhare Island	ZY6XC

Ray Gerrard, G3NOM, presently in West Malaysia signing as 9M2OM, recently operated portable from some local islands. Ray made 385 contacts with the deserving IOTA DXers from Pangkor Island (AS-072) during the IOTA Contest and 411 contacts from Ketam Island (AS-074) during two days in the early part of August.

The ED5HQ/EF5HQ DXpedition to Columbretes Island (EU-069) collected about 7,000 contacts during their stay on the island. Their effort resulted in many an IOTA chaser working a new one, including me. Allowing for printing time, the cards should be in the mail soon.

Please be aware that the 4MØI Aves Island Dxpedition operation by Luis Romagni, YV5ENI, may or may not be the Aves Island DXCC country. Many felt he was operating from Las Aves Island (SA-051) off the coast of Venezuela. The DXCC country of Aves Island is in North America and has an IOTA reference of NA-020.

Paul Ferguson, K5ESW, asked him which island he was operating from. Luis replied with the island near Puerto Rico. This is the DXCC island, but according to recent information, a DXpedition to that location would not occur before 1999. During later contacts the operator stated his IOTA to be NA-020, which is the DXCC country of Aves Island.

So there!

The Chinese IOTA DXpedition to Dan-Gan Island (AS-129) collected more than 2,000 contacts during their short stay on the island. Unfortunately, none were made with North or South America. This was a brand new IOTA island.

If you are new to collecting IOTA islands don't forget to credit yourself with some very easy ones. Such would be Long Island (NA-026), New York, where a very large percentage of the east coast DXers reside. This also includes Staten Island, but not Manhattan Island. Don't forget to count the Hawaiian Islands (OC-019). If you have WAS you obviously have that one.

Norm Wilson, N6JV, informs me that some individuals consider IOTA to be an SSB-only affair. Norm informed them otherwise, as he prefers CW. In fact, Norm's IOTA certificate is for CW only. So, check your QSL cards as all modes and all bands count for IOTA.

IOTA Credits

New IOTA reference numbers have been assigned to the following groups based on the calls used in these recent operations. Letters in parentheses are the reference in your *IOTA Directory*:

AS-128	3W4EZD	Mekong Delta West	gp(c)
OC-221	YC8YR	Kai Islands	(j)
OC-222	YC8YZ/P	Obi Islands	(m)

The IOTA Committee has received validation material and has approved the following operations:

AS-117	JH4FBV/4	Innoshima May 1997
AS-125	HS50A	Koh Chang May 1997
EU-111	GB6MI	Monach Islands May 1997
OC-049	A35WA	Tongatapu Is. Feb/Mar 1997
OC-064	A35WA	Vava'u Island Feb/Mar 1997
OC-169	A35WA	Ha'apai Island Mar 1997
OC-221	YC8YR	Kai Islands
OC-222	YC8YZ/P	Tapat Island Jun 1997

Is IOTA DX?

I ran across some interesting comments on the VE7TCP DX Reflector recently. The following by Mike Crownover, AD5A, explains it well.

"Just what is the flavor of DX? If you were to research and discover what it took to achieve a high IOTA count you would understand a lot more about DXing for your efforts. IOTA DXpeditions don't typically operate with beams and linears, but rather ground planes and barefoot. To do well in this arena you must possess a keen understanding of propagation. You will need a quality station to pull out weak signals. Many of these operations are much less than 24 hours and while some of the operators are skilled DXpeditioners, most of the operators aren't world class DXers, nor do they want to be.

"I worked 9M2OM from a rare Malaysian island. He had a ground plane and a 100 watts, the A index was 16 and there was only about a 30 minute window to work him. Many of the IOTA guys were there to work him, not just me, because they understood where and when to be listening. Not to downplay DXCC, which I infer is the flavor of DX that you refer to, but how much skill does it take to show up on 14.195 MHz and work a guy running 2 kW, a tri-bander, who has sponsorship and operates for 12 straight days. If you are patient, you will work them. With IOTA, if you miss an opening, typically you don't work the station.

"Admittedly, this is probably an overstatement, but I think you will get the point. DX is DX, not necessarily DXCC. I am only two countries shy of the DXCC Honor Roll. I have earned 5BDXCC, but I find DXing for islands to be the tougher challenge. There are over 1100 islands to work.

"Different strokes for different folks, but I hope we don't define DX by the DXCC award."

SSIDXG

Tony DePrato, WA4JQS, announces that the South Sandwich Island DX Group (SSIDXG) is now incorporated as a non-profit DX group in Oregon and all donations are non-taxable.

The group has the following DXers as the board of directors: Luis Chartarifsky, XE1L; Terry Dubson, K6JL (formerly W6MKB); Gary Jones, W5FI (formerly W5VSZ); Sam Brown, WA4IUM; and Tony DePrato, WA4JQS. Jerry Branson, AA6BB, was also a member of the board, but became a Silent Key on 17 August.

The newest member to the SSIDXG is Dr. Frank Weigelt, NØDX, of the College of Medicine at the University of Iowa. He will assist in fund raising operations for the upcoming Bouvet DXpedition.

Jerry Branson, AA6BB

Jerry Branson, AA6BB, died at his home in Junction City, Oregon, Sunday morning, 17 August 1997.

Jerry and his wife, Joanie, KA6V, were well known in the DX circles, mainly in their services as QSL managers for many of the Dxpeditions. Joanie died several years ago. They also participated in the W7PHO Family Hour.

Here at ***Worldradio*** they were early supporters, both being awarded our Worked 100 Nations Award when it was first introduced in 1978.

Tony DePrato, WA4JQS, of the South Sandwich Island DXpedition Group, has announced the formation of a scholarship fund in Jerry's name. The fund, formed jointly with the Midway-Kure DX Foundation, is "The Jerry Branson Memorial Scholarship" and will be awarded to entering freshmen who have distinguished themselves in DXing achievement. Tax-deductable donations are requested of the DX community worldwide which can be made payable to the WVARC, c/o The Consulate of Finland, P.O. Box 1036 Sun City, AZ 85372-1032.

Antique QSLs

VP7NG was the call used by the Potomac Valley Radio Club Dxpedition to the Bahama Islands. Bill Schuchman, W7YS, who provided this card, thinks this may have been the first postwar excursion of the many, many for the deserving DXer for years to come. This March 1948 DXpedition was organized by Bob Denniston, W9NXW,

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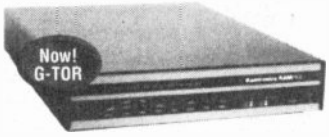

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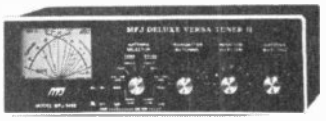

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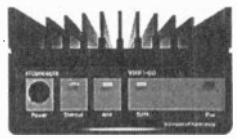

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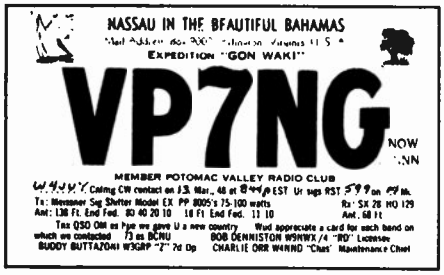
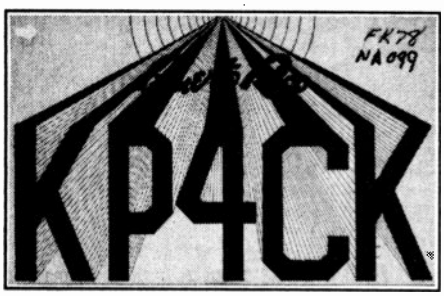


a charter member of the PVRC. Bob would later become the President of the American Radio Relay League and sign with WØDX, now VP2VI.

Bill notes the listing of the 11-meter band on the card. No, they didn't work CBers. That band at one time belonged to us until the FCC thought it best to give it away to unlicensed types. The Meissner Model EX Signal Shifter belonged to Bill, who did not accompany the group. Bill said it was brand new. Bill worked the DXpedition, signing with his old call W4JUY. PVRC is presently celebrating its 50th anniversary with members all over the U.S.



The second card was submitted by Gerry Skinner, K4LVZ, for his contact with Felix Rodriguez, KP4CK, of Puerto Rico. It was the first of many contacts that he had with Felix. The contact was made 18 December 1960 on 50 MHz during the heyday of 6 meters. Felix was using a stacked 8-element beam on a 27-foot boom.

There was a slight error in our September column where we incorrectly gave Al Miller the call of WE7KC. Although Al is a snowbird, his call is really VE7KC. Al has an Arizona call, but it isn't a WE7. "W" is a long way away from "V" on the keyboard, so I don't know what happened!

QSL Information

Art Hubert, N2AU, informs me that he has assumed the QSL responsibilities for 7Z5OO for all operations from the beginning. He also will be handling QSL chores for ZX2X starting with the *CQ* contests in 1976.

Chris Sauvageot, DL5NAM, says an air-mail letter to the U.S. from Germany costs 2.00 DM. Presently, the bank charge for $1.00 U.S. is approximately 1.80 DM. Therefore, please include two green stamps instead of the normal one green stamp — $1.00 U.S. is not enough. However, a single IRC will still cover a return air-mail letter, and the U.S. post office doesn't charge that much for an IRC. Chris says requests accompanied with a single green stamp will be answered via the bureau.

Alan, VK4AAR, advises those who purchase IRCs to be sure the post office places the official imprint on the left-hand side at the time of sale. IRCs without the official stamp are really invalid, as there is no way to prove that they were not stolen prior to issue. Some post offices may accept these unstamped IRCs for return postage, as they are unaware of the requirement.

Also, some QSL managers may also accept the non-validated IRCs as they pass them on as secondhand IRCs. These secondhand IRCs, whether they are validated or not, can be had at a much cheaper rate than when purchased at your local post office. They're valid until redeemed. However, U.S. amateurs should not redeem IRCs that were issued from a U.S. post office other than their own.

Regarding the VKØIR Heard Island QSL cards, there is no backlog of cards to be sent. If you haven't received your card (provided you sent for one), you should send an e-mail to k4jdj@norfolk.infi.net with the following details: your call and postal return address, details of the contact (date/time/band/mode/report), and the date you mailed your card. If you do not have e-mail provisions, then find someone who does, or resubmit via the normal route.

Some Hams are cheap!

Frank Smith, AHØW, recently published some comments on the *DX Reflector* regarding QSL requests for last year's Midway operation. Following are some of his comments: "As with past operations where I've been involved, it seems like there's always a handful of QSLers, and it's usually the same people time in and time out, who attempt to prove that 'Hams are cheap.'

"It would seem that for American hams, a 32-cent stamp should be affordable, especially when guys are out there purchasing big towers, arrays, big rigs and Alphas, etc. It's these same guys who think they are being clever when they place the return 32-cent stamp just about anywhere on the return SASE except where it's supposed to be...possibly so that the U.S. postal service's cancellation stamping equipment will miss their 32-cent stamp? In some cases, it's the foreign hams who do the same thing. In some of these cases, however, if we judge that an honest mistake is involved, we will hand-cancel the stamps and send the card out.

"Again, there are repeat offenders, one in particular being a guy who is a known contester who lives in Connecticut. He seems to like putting the stamp just below the upper right hand corner. There's no excuse for American hams who do this. After all, we're taught in elementary schools here that the stamps must be placed in the upper right-hand corner. Pretty simple!

"We're even seeing several stamps that have been used before! The steam and re-glue job in most cases is shabby work. Some don't even bother to remove the paper it was glued to before, leaving layers of paper between the stamps and the envelope!

"I've taken several of these envelopes to the U.S. Postmaster at a major postal center in the Phoenix area. Guess what? According to the PM, this is called "postal fraud" and it happens quite often. The PM explained to me, however, that even though the offender is the end user, the legal onus is on the sender, or myself or my QSL manager who happens to be mailing the envelope in question. Therefore, the PM explained, we're being asked to commit postal fraud every time this happens.

"So the policy for the cards that I personally handle as well as those our QSL manager handles is that such cards will not be honored. As many of you know, KH7U and I are heading up a team DXpedition to Kure in the near future, and the QSL policy will be the same. Further, repeat offenders are simply being removed from the logs — in fact, I've discussed this with the

ARRL, and they agree that we have every right to do this for this reason.

"I have privately spoken with other QSL managers, and collectively, we've agreed that as a minimum, such cards will not be honored.

"It certainly is tempting to list these repeat offenders publically, and we may do so after the Kure operation. Hopefully, instead, this message will help clear this matter up.

"Let's keep DXing a matter of honesty and integrity all the way. There's a whole category of sleaze in this hobby that includes getting someone else to orchestrate a "DX" QSO, trading blank QSL cards, calling CQ from a fake location, having your friends on the West Coast put your call sign in the Pacific pileups when you live in W1- and W2-land, spoonfed RST exchanges, cheating with postage stamps, sending in altered QSL cards to the League, attempting to purchase a QSL card when you never worked the station, etc. So, please, guys, let's keep it all aboveboard. Nothing is worth compromising your ethics and integrity. Is there any pride or sense of accomplishment if this is the way you get your operating awards?

"Fortunately, these offenders are in the minority, so please excuse me if I'm 'preaching to the choir' here."

QSL Routes

The following QSL routes are correct to the best of our knowledge and these routes come from many sources. Any corrections would be appreciated.

3D2AL –7M3VAL
3D2PN –OH5UQ
3D2RW –ZL1AMO
3DAØCA –W4DR
3DA5A –JH7FQK
3E1DX –KU9C
3E6V –HP2CWB (2X3)
3E8C –HP2CWB (2X3)
3F1P –HP2CWB (2X3)
3F6V –HP2CWB (2X3)
3G4B –CE4ETZ
3V8BB –JF2EZA (5)
3ZØAIR –SP7LZD
4F3CV –HB9CXZ
4K8F –UA9AB
4L1DX –OZ1HPS
4L4CC –RV1CC
4L5O –TA7A
4MØI –YV5ENI
4M5I –I2CBM
4N0S –YU7JDE
4S7SW –ON6TZ
4U1UN –W6TER
4U1WB –KK4HD
5A28 –OE2GRP (2)
5B4/G3LNS –G3LNS
5HØT –K3TW
5H1CW –WB4KAX (6)
5H1FS –I4UFH
5H1TW –K3TW
5H3TW –K3TW
5N0T –F2YT
5R8FK –NY3N
5V7A –GM4AGL
5V7BG –N7BG
5V7BV –W6RGG
5V7FA –G4FAM
5V7JL –K7GE
5V7MB –N7MB
5V7MF –KC7V
5V7PN –K7PN
5V7RF –GM3YTS
5V7VT –K5VT
5V7ZM –G3ZEM
5X1P –G3MRC
5X1T –ON5NT
5X1Z –SM7PKK (7)
5X4F –K3SW
6K97KB –HLØCBD
7N2ATO –HL5CL
7P8BO –W4YBO
7P8/OE2VEL –OE2GEN
7Q7CE –IN3VZE
7Q7EH –AA9HD (1)
7Q7SB –AB4IQ
7S2AT –SK2AT
7S6KY –SK6KY
7X2RO –OM3CGN
7Z5OO –N2AU
8P6BE –KU9C
8P6CV –KU9C
8P6DA –KU9C
8P6MY –WA4JTK
8P9HT –K4BAI
8P9IR –DJ1TO
8P9IU –DL7UTO
8P9Z –K4BAI
8Q7HY –JK1FNN
8Q7MS –JF3ELH
8SL6TSR –SK6AW
9A/DL6LZM/P –DL6LZM
9A/HA3JBH –A3JB
9A11ELS –9A2AA
9A5ØD –9A1BHI
9A7C –KA9WON
9A9ØCBD –9A3UF
9G1YR –G4XTA
9HØA –LA2TO
9H3UN –DL4HBB
9H3XV –DL8GCL
9J2BO –W6ORD
9K2GS –WB6JME
9K2MU –WA4JTK
9K2QQ –AA6BB
9K2RR –KU9C
9K6POW –9K2RA
9M2EU –JA2EJI
9M2OM –GØCMM
9M2TO –JAØDMV
9M6HIL –N2OO
9M6PO –OH2BH
9N1BV –JA1PBV
9N1RHM –KV5V
9Q5BQ –HB9AMO
9Q5HX –IK2MRZ
9U5DX –F2VX
9V1ZB –JL3WSL
9X/RW3AH –RW3AH
9X4WW –ON5NT
A22CT –KA3WUB
A35DB –W7SNH
A35KB –SM5CQT
A35MJ –KS7D
A45XL –G4VUO
A61AJ –K3LP/AA6DC(8)
A61AQ –N1DG
A61AS –YO3FRI
AH7X –JP1NWZ
AH8A –AC7DX
AP2AP –JA1EZM
AP5ØWAP –IK4ZGY
BOØM –BV2KI
BV9O –BV8BC
BXØCQ –BV8BC
BY1QH –K9FD
BZ4DHI –I1YRL
C6AJR –WB8GEX
CL3FL –CO3CL (2)
CL8VG –CO8RCG
CL8VP –CO8RCG
CN18DKH –CN8MK
CO3ZD –CT1ESO
CO4BM –CT1ESO
CO7KR –DL5DCA
CO8HF –CT1ESO
CQ1C –CT2GFK
CQ1I –CT1FMX
CQ2I –CT1EEB
CS7UW –CT4UW
CT1CJJ/P –CT1CJJ
CT1FPQ –W2MF
CU2/DL3KBV –DL3KBV
CU2/DL4XS –DL4XS
CU3ØC –CU3AN
CU8L –CU3EJ
CU9B –CU3AV
CU9C –CU3AN
CYØNCD –VA3NCD
CY7TUB –VE7NA
CY9SS –VY2SS
D2BB –EA4BB
D2EB –I3LLH
D68TW –K3TW
DAØHRO –DL2KUA
DH2JD/HI3 –OE7MWL
DLØSY/P –DK5LF
DL4OCL/P –DL4OCL
DL6MHW/P–DL6MHW
DL8OBC/P –DL8OBC
DU1/W1DV –KO7V
DU7CC –SMØCNS
EA1ADP/PE–A1AAA
EA5RKX –EA5OL
EA7CRL/PE–A7CRL
EA8KG –EA8KJ
ED1ISC –EA1EPB
ED1ISG –EA1EPB
ED1MC –EA1NK (SSB)
ED1MC –EA1DD (CW)
ED1OCV –EA1AAA
ED5HQ –EA5HQ
ED5SDX –EA5CVN
ED6EIM –EA6VC
ED7LAM –Bureau
ED7SPI –EA7PY
ED7TXM –EA7URM
ED8BYR –EA8BYR
EG1ISG –EA1EPB
EJ1D –EI5HD
EJ2HY –EI2HY
EJ2I –EI5HD
EJ2IB –EI2IB
EM1HO –I2PJA
EP2MKD –UA6HCW
ER27A –ER1DA
EW2CR –NF2K
EW3LB –W3HNK
EXØV –N6FF/KL7H
EY1ZA –W3HNK
EY5AM –DF3OL
EY8XX –GW3CDP
F/EA3NY –EA5OL
F/LX6A/P –LX2AA
F/LX8RBJ/P–LX2AA
F/ON6NN –ON5FP
F/ON4BDS/P –ON5BDS
F6KHK/P –F5IUU
F6KTL/P –F6CKH
F6OYU/P –F5XL
FG/EA3CB –EA3CB
FG5EY –F6EYB
FG5HR –F6BUM
FH/DF2SSD–F2SS
FH/IK4NQW/P –IK4NQW
FK5DX –WB2RAJ (1)
FK5M –F6AJA
FK8GJ –F6CXJ
FK8GM –WB2RAJ (1)
FK8HC –VK4FW
FO0WAE –AA4MW
FO5BI –F6HSI
FO5PV –F6BCX
FP5AA –K2RW
FP5KE/P –FP5CJ
FS5PL –NØJT/ KFØUI
FT5ZG –F5RQQ
FW5IW –OH5UQ
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GB3RMI –GI3FFF
GD6YB/P –G3SWH
GM3IZD/P –G3IZD
GM3USL/P –GMØKVI
GM4/DHF/M –G4DHF
GM4SID/P –GM4SID
GM5VG/P –GM3UTQ
GSØAYR/P –GMØJHF
GU6D –G3SJJ
GU7D –G3SJJ
GW4KCT/P –G4KCT
GW7A –GØDBE
GW7V –GWØGEI
GW8FIS/P –G4KCT
H44TQO –SM4NLL
H86V –HP2CWB (2X3)
H96V –HP2CWB (2X3)
HBØ/SP2FOV –SP2FOV
HBØ/DL2SBY –DL2SBY
HB5CC –HB9BCK
HFØPOL –SP3FYM
HF1GB –SP2BIK
HLØZ/4 –DS4CNB
HL2IUA –HL2KZF
HL3IWD –HL1IWD
HL5KY –W3HNK
HO6V –HP2CWB (2X3)
HP1XBI –F6AJA
HP6V –HP2CWB (2X3)
HR6XX –CX3CE
HSØAC –HS7AHV
HS2CRU –DL2FDK
HS6CMT/3 –JA7FYF
IBØONU –IØYKN
IBØ/IZ7ATN –IZ7ATN
ID8/IZ8AZV –IK8WEJ
ID8/IZ8BGY –IK8WEJ
IF9/IK8WTM –IK8WTM
IG9A –IV3TAN
IG9R –IV3TAN
IG9T –IV3TAN
IG9W –IV3TAN
II8S –IK2IWU
IJ7/IK7XIV –IK7XIV
IL3VIA –IK3VIA
IL3/IK2PZG –IK2PZG
IL3/OE8XJK –OE8XJK
IMØJMA –ISØJMA
IMØ/ISØVBH –ISØVBH
J2ØTW –K3TW
J28YC –F6EJI
J37K –W8KKF
J38AH –IV3TMV
J38AI –IV3TMV
J41WCA –SV1BSX
J48ISL –SV2AEL
J48LSV –SV8DTD
J48W –SV1CIB
J6/PA3BBP –PA3ERC
J6/PA3ERC –PA3ERC
J6/PA3EWP–PA3ERC
J75T –DL6LAU
J77FT –DL7FT
JD1/JG8NQJ –JA8CJY
JH3DYG/1 –JH3DYG
JI6KVR –EA5KB
JT1FAG –JA1FXZ
JW/SM7NAS –SM7NAS
JW4W1A –LA9DFA
JW5NM –LA5NM
JW6RHA –LA6RHA
JW9DFA –LA9DFA
JY8B –DL5MBY
JY8WA –DK3GI
JY9QJ –DL5MBY
K3MQH/KP2 –K3MQH
K3UOC/PJ8 –PA3ERC
K3UOC/YV –N2AU
KG4KD –W4WX/WT4K
KG4ML –WB6VGI
KG4WD –W4WX/WT4K
KHØAC –K7ZA
KL1SLE –WL7KY
KL7/W6IXP–W6IXP
KP2/KD4D –KD4D
L44D –LU4DFH
L7ØFM –LU4FM
LT1H –LU1HLH
LX6ØRL –LX1TI
LX9DIG –LX1MK
M7A –G4ZFE
M7D –G3LZQ
M7F –G3PMR
M7G –G1AHM
M7N –G3WOI
M7S –MØAGQ
M7T –G3XTT
MD/PA3GIO/P –PA3GIO
MJØAWR –K2WR
MUØASP –F5SHQ
MW7Z –Bureau
N2PQE/KHØ–JE2HCJ
N4BQW/KH6–WA4FFW
N6VV/KL7 –N6VV
N7QXQ/HR6 –W7TSQ
NL7P –WB4BSJ
NN5ØCIA –KB4EFP
OD5/9K2MU –WA4JTK
OD5PN –LX1NO
OHØKMG –OH2KMG
OHØMDR/1–OH1MDR
OHØMMF –OH3KCB
OHØMYF/6 –OH6YF
OHØTA –OH2TA
OHØ/SMØAJV –SM6HJZ
OH2JA/P –OH2IW
OT6P –ON6AH
OY/SM6RXS–SQ6CWP
OY4TN –OY6FRA
OY6A –DL1MGB
P29VR –W7LFA
P4ØTT –WF1B
P4ØXM –DL3XM/ DL8WXM
P42V –AI6V
PA3EVJ –VE3MR
PJ5AA –N2AU
PJ8AD –KA9N
PJ8H –N2AU
PR5L –PP5LL
PYØFA –PS7KM
PYØFF –W9VA
PYØFK –PS7KM
PYØFKL –PS7KM
PYØRK –PS7KM
PYØSK –PS7KM
PYØSP –PS7KM
PYØSR –PS7KM
PYØTG –PS7KM
PYØTK –PS7KM
PYØTR –PS7KM
R1ANF –DL5EBE
R1ANZ –RU1ZC
R1ASP –RA1AD
R1DIG –OH5JRT
R1FJL –JA3AFR
R1FJR –F5PYI
R3RRC –RW3GW
RAØFA –WK6C/AB6KE
RA2FBC –DJ1OJ
RIØTA –RA3DEJ
RK1B/1 –RV1AC
RS9O –RW9OWM
RZØLWA –UAØMF
SØRASD –EA2JG
S5ØO –S59VM
S79MAD –GW4WVO
SK7DX –SM7PKK
SM/DK5RK –DK5RK
SN7L –SP7PGK
SO1DIG –DL3BQA
SPØSAS –SP5ZDH
SP4JOY –DK3GI
SV1BRL/8 –SV1BRL
SV5/HAØHW/P –HAØHW
SV8/IK7WPH/P –IK7XNF
T48RCT –SKØUX
T88CK –HB9BCK
T9A –K2PF
T93M –K2PF
T94DD –K2PF
T94DX –DL1FDV
T95A –K2PF
T97M –K2PF
T99MT –K3PF
TAØ/IK3GES/P –IK3GES
TA1/RU9WW –RW9WA
TA2DS/Ø –WA3HUP
TA2LM –TA2IR
TA2ZW –OK1TN
TA3ZI –DL8OBC
TF/KZ1L –KZ1L

TJ1HP –F6FNU
TK7I –F5JYD
TL8MR –F6FNU
TMØK –F5BSB
TMØM –ON5FP
TMØP –F6BFH
TMØPX –F5BZB
TMØTN –F6KSM
TMØTRS –F6KEQ
TMØUN –F6KNN
TMØZK –F5OZK
TM1C –F6CTT
TM1K –F5MXH
TM1OOL –F6KWP
TM1OTA –F6KBK
TM2X –F2VX
TM4B –F1MUT
TM5FAR –F5PVX
TM5FER –F6KQK
TM8P –F5PYI
TO7IQ –F5JYD
TP1ØCE –F6FQK
TT8FC –EA4ASK
TT8JMW –WA4KKY
TT8JWM –WA4KKY
TT8LJP –F5TRD
TT8/WA4KKY
–Bureau (4)
TU2XZ –W3HC/W3HCW
TU5A –W8AEF
TY1IJ –DK8ZD
TZ6JA –JA3EMU
UAØAZ –W3HNK
UAØSJ –UWØST
UEØADI/P –UA6MF
UN7JX –IK2QPR
UN7QF/7 –W8JY
UN7QF/7 –W8JY
UT7ØU –UT5UDX/UT3UA
V26AK –N2TK/WB2P
V26B –WT3Q
V26CW –NM9H
V26E –AB2E
V26R –KA2AEV
V26RN –K5NJ/KR2J
V26SR –N2SR/KY2T
V26TS –K3MM/KF3P
V26U –W2UDT/WA2UDT
V31JP –K8JP
V47CA –VE3BW
V73AR –JA3OIN
V73GT –WF5T
V73NH –JA3OIN
V73TX –JA3OIN
VIØANARE
–VK4ARB
VKØTS –VK1AUS (2)
VK2IOM –VK2BEX
VK4YN –VK4FW
VK6ISL –VK6LC
VK9LL –JH4RHF
VK9WM –VK4FW
VK9WY –VK4FW
VP2EXM –DL3XM
VP2EZI –JH4EZI
VP2MGG –WB2YQH
VP5JM –W3HNK
VP8CTR –DL5EBE
VQ9SS –N6SS
VQ9VK –AA1OJ
VR2KF –JH1OGX
VU2TJW –K3TW
VU2TLO –OM6MO
VU2TS –I1YRL
W3CF/KP2 –KK3S
WH2Q –JI1DLZ
WH6AW/KH2
–VK4FW
X5SO –YU1KN
XE1/JA1QXY
–JA1HGY
XE1L –WA3HUP
XJ9GM –VE2CWI
XL2MJS –VE2MJS
XT2DP –WB2YQH
XT2JF –N5DRV
XV7TH –SK7AX
XX9TKX –7K3XEI
XX9X –KU9C
XZ1N –W1XT
YB1XUR –YC1XUR
YB3SPS –YB5NOF (2)
YB52RI –YBØBEH
YI1HK –SM3DBU
YI1US –WA3HUP
YL2GN –IØWDX
YN6WFM –JA6VU
YUØHQ –YT1WW
YU9A –YU1FW
YV1GYA –YV1OB
Z21KM –F6FNU
Z3ØSVP –Z32KV
Z32DS –DJØLZ
Z32FD –DJØLZ
Z32XA –NN6C
Z38/OH3MIG
–OH3GZ
ZA1AJ –OK2ZV
ZA1MH –Z32KV
ZA2A –OH3GZ
ZB2AAA –HB9AAA
ZB2FX –G3RFX
ZD7HI –N2AU
ZD7WRG –WA2JUN
ZD9BV –W4FRU
ZD9IL –ZS5BBO (2)
ZF2LA –K9LA
ZK1AAT –KQ2I
ZV412JA –PZ7AA
ZW1ØØBH –PY4AA
ZW2E –PY2YW
ZW5LL –PP5LL
ZW5W –PP5LL
ZW7KM –PS7KM
ZX2X –N2AU
ZYØFA –PS7KM
ZYØFK –PS7KM
ZYØFMC –PS7KM
ZYØFMN –PS7KM
ZYØFRG –PS7KM
ZYØFRT –PS7KM
ZYØMNF –PS7KM
ZYØRK –PS7KM
ZYØSK –PS7KM
ZYØSP –PS7KM
ZYØSR –PS7KM
ZYØSS –PS7KM
ZYØSW –PS7KM
ZYØSY –PS7KM
ZYØTG –PS7KM
ZYØTK –PS7KM
ZYØTR –PS7KM
ZY6XC –PY7XC
ZZ2Z –AC7DX

4F2DX —Dutch DX Group, P.O. Box 232, NL-7670 AE Vriezenveen, NETHERLANDS
5B4AFQ —Manos, P.O. Box 6758, Limasol, CYPRUS
7P8AM —Marian Vermeij, P.O. Box 949, Maseru 100, LESOTHO
7P8CV —Christian Vermeij, P.O. Box 949, Maseru 100, LESOTHO
7P8RP —Rob Vermeij, P.O. Box 949, Maseru 100, LESOTHO
8R1LA —Louis Austin, P.O. Box 101394, Georgetown, GUYANA
9H3ZZ —Gregg Calkin, P.O. Box 1345, Ottawa, ON K1P 5R4, CANADA
BMØBV —P.O. Box 73, Taipei 100, TAIWAN
BUØDX —P.O. Box 73, Taipei 100, TAIWAN
BWØTW —P.O. Box 73, Taipei 100, TAIWAN
BXØTW —P.O. Box 73, Taipei 100, TAIWAN
BY2HIT —Harbin Institute of Technology Ham Club, P.O. Box 73, Harbin, CHINA
CO3FL —Jose Carlos Leon Ortega, P.O. Box 59, C.P. 33600, Guira de Melena, Habana, CUBA
CT3HF —Duarte, P.O. Box 40, P-9126 Canico, Madeira Islands, PORTUGAL
CU5AM —Jose Manuel Silva Silveira, P.O. Box 10, P-9800 Velas, Azore Islands, PORTUGAL
DL1FDV —Mario Lovric, Hagebuttenweg 4, 61231 Bad Nauheim, GERMANY
DS5ALT —Mansoo Kim, 1135, Gaya-Eup, Haman-Kun, Kyungnam 637-800, KOREA
DS5TUF —Yeun Sook Park, P.O. Box 16, Dalseo, Taegu 704-600, KOREA
DS5URW —Kim Dong-Sik, 647-16 Jukdo-2 Dong, Pohang 791-052, KOREA
DU3BBY —Robert Del Rosario, P.O. Box 52890, Angeles City MPO 2009, PHILIPPINES
EKØW —Ken, P.O. Box22, 375002 Jerewan, ARMENIA
EK6GC —Robert Grigorian, P.O. Box 25, 3758562 Chaarentsavan, ARMENIA
EW6GB —Andy Hatkevich, 95-28, ul Lenine, 211950 Disna, BELARUS
EW6YB —Irina Hatkevich, 95-28, ul Lenine, 211950 Disna, BELARUS
HJØRMR —P.O. Box 5461, San Andreas Island, COLOMBIA
HLØBDU/4 —Byung Kook Hwang, Donga University, San 840, Hadandong, Sahaku, Pusan 604-714, KOREA
HLØC/4 —Hanyang University Amateur Radio Station, 17 Hangdang Seongdong, Seoul, KOREA
HP2CWB —Jose NG Lee, Direct Distribution Ltd, PTY-201, P.O. Box 02-5275, Miami, FL 33102-5275 (see Note 3).
JT1BL —P.O. Box 602, Ulan Bator 44, MONGOLIA
JY5HX —P.O. Box 182700, Amman, JORDAN
OE2GRP —P.O. Box 200, A-5202 Neumarkt a.W., AUSTRIA
VK1AUS —Simon Trotter, P.O. Box 2063, Kambah Village, ACT 2902, AUSTRALIA
XX9AU —P.O. Box 6018, MACAU
YB5NOF —John Daluas, P.O. Box 194 CPA, Ciputat 15401, Jakarta, INDONESIA
YC9NBR —Irianuz, P.O. Box 1021, 85000 Kupang, Timor, INDONESIA
YI1SEA —Amir, P.O. Box 55077, Baghdad, IRAQ
ZS5BBO —Edwin Musto, P.O. Box 211032, Bluff 4036, SOUTH AFRICA

NOTES:

1. This manager requires QSL requests to be sent direct only. Please do not send requests to the manager via the bureau system.
2. Refer to the above addresses for this manager's address.
3. As this is a maildrop only, please provide an s.a.e. with a greenstamp. Do not affix U.S. postage as it will be useless from Panama.
4. Please use the W4 QSL Bureau as the address in the *Callbook* is incorrect.
5. This route applies for the operation in August 1997 only.
6. The operator at 5H1CW has been giving his QSL route via WB4KAX. There is no listing for this call in any of the latest listings of calls.
7. The address for this route has been given in a previous issue. Do not use the *Callbook* address.
8. This route applies for the period 22 November to 2 December 1997 only.

Thanks to the following contributors for this month's column: CO3FL, DL5NAM, EA5ZI, G3NOM, HP2CWB, I1JQJ, ON6TT, VK1AUS, N2AU, WF3E, WA4JQS, K4LVZ, K5ESW, W5OXR, KH6BZF, N6JV, W7CF, W7YS, AHØW, Northern Arizona DX Association (W7YS), *Juliet Alpha Cluster* (JE1OMO), *WebCluster* (OH2BUA), *425 DX News* (I1JQJ), *DX News Letter* (DJ5AV), *The OPDX Bulletin* (KB8NW), *Internet DX Mailing List* (VE7TCP), *The Low Band Monitor* (KØCS), *Island/DX News* (W5IJU), *The Daily DX* (W3UR), *QRZ DX* (N4AA), and *DX News Sheet* (G4BUE).

DXCC 2000

There has been much rumbling about the future of DXCC lately. Soon the new program DXCC 2000 will be with us. I'm really excited! It's not a "start over" program and we older DXers will retain what we have worked — nothing is thrown away. Additional awards are coming and, now there is the DXCC 2000 Challenge that encourages multiband activity. See you in the pileups! de John, N6JM. WR

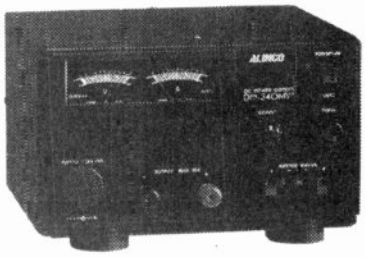
ARRL Amateur Extra class certificate discontinued

The Amateur Extra class certificate that has been available through the ARRL Awards Branch has been discontinued. Some stock remains, and applications will be accepted while blank certificates last. —*via ARRL*

POWER & PERFORMANCE

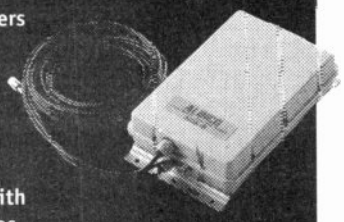
Power...

Powerful, **affordable** and adjustable to suit your needs, the new Alinco **DM-340MVT** power supply is a functional, compact and attractive addition to your ham shack or workbench.



- **Adjustable voltage output, 0 ~ 15 volts DC**
- **Compact size and weight**
- **Up to 35 amps surge output, 30 amps continuous**
- **Dual meters included at no extra cost**
- **Convenient front-panel connectors and controls, including binding posts, spring clips and cigar lighter terminal, on-off switch and front panel fuse access**
- **Use for HF, VHF-UHF mobile/base transceivers, TNC, HT, laptop computer, cellular phone or workbench projects, including those that require 5 VDC or any other voltage within the range of the adjustable output.**
- **Affordable Quality - A great performer at an Alinco price, backed by a 1 year warranty.**

EDX-2 Auto Antenna Tuner



- Tunes 160-10 Meters (40 foot wire antenna required for 160M, 9.8 foot minimum for others)
- Fully integrated with Alinco DX-70 radios
- Weather resistant housing, can be mounted outdoors
- Comes with 16 feet of coax and control cable (cables may be extended)
- Maximum input: 200 watts
- Perfect for mobile, marine, home or portable use
- MSRP under $350

HF + 6 Meter Performance

The Alinco DX-70T and DX-70TH continue to earn solid reviews from operators around the world. In the "shack", on the road, in the field or on the water, DX-70 radios deliver terrific performance *at a price that puts a quality radio within your reach.* The DX-70 stands alone as the value leader in HF + 6 Meter mobile radios!

- **100 memories**
- **General coverage receiver 150KHz ~ 30 MHz and 50 MHz ~54 MHz**
- **Detachable faceplate, remote mounting kit available**
- **SSB, CW, AM, FM and Digital Modes, including 6 Meters**
- **Speech Processor, standard**
- **Separate antenna terminals for HF and 6M**
- **Selectable RF Gain and AGC**
- **CTCSS encode for 10M and 6M FM repeaters**
- **Narrow Filter, standard**
- **Selectable scan Modes**
- **Auto Power Off**
- **Multi-function control simplifies operation**

- **Full QSK, semi or automatic break in**
- **Quick offset for "split" operations**
- **DX-70TH features 100 watts output on HF and 6M**
- **DX-70T outputs 100 watts HF, 10 watts on 6M, MSRP under $1000!**

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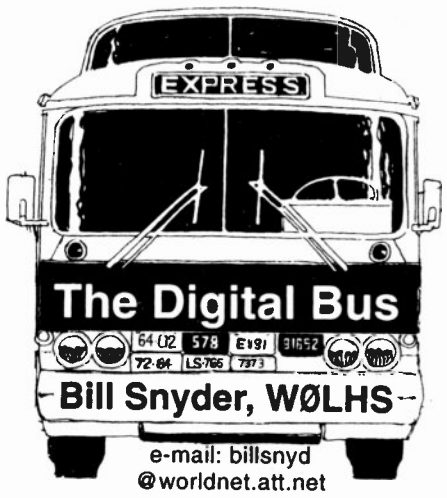
Specifications are subject to change without notice or obligation. Performance specifications only apply to amateur bands. Permits required for MARS/CAP use. Prices mentioned are MSRP. Dealer prices may vary.

Ask your dealer about Alinco's 2-year extended warranty program



e-mail: billsnyd
@worldnet.att.net

In North Dakota we have mosquitos during the summer months, and they can be quite a pain when I work in my back yard garden during the biting season. Therefore I usually let the weeds grow when the little buggers reach the peak of the their population on the wing. But the mosquitos in North Dakota ain't anything like those malaria carrying bugs we had to put up with in New Guinea during World War II.

How a little itty-bitty bug like a mosquito could cause interruption of army communications is the subject of this harangue.

When, in April 1944, we invaded Dutch New Guinea, which was the western half of the large Pacific island, we landed first at Tanamara Bay, which was close to some Japanese-held airports. I was the radio officer for the signal battalion supporting U.S. Army I Corps, which was the task force headquarters for the large amphibious operation.

For this operation my radio platoon had two new trucks with a custom-made office holding a 500-watt transmitter and two first-class receiving positions. Both were arranged in the neatest CW operating set-up I had ever seen. The truck towed a trailer with a 10 KW generator for a power source. Mounted on the rear of the truck cabin, which was high enough and roomy enough so two operators could stand up in it, was a whip antenna. The whole outfit was made in Australia, and my operators were excited to have the privilege of working in such a nice "shack." These two mobile trucks were a far cry from the SCR-299 huts that fit in the back of a two and one-half GI truck; they were great!

Because we were the task force headquarters for the invasion, the two new trucks were used on manual CW circuits, one back to Sixth Army and the other to General MacArthur's GHQ in Australia. Although we had land-line Teletype machines, we did not have radio TTY circuits at our level of military power. Every thing was manual CW, so we had 66 high-speed Morse Code operators who were all trained to copy the code on a typewriter. I will say they were all very good soldiers, and excellent radio men.

When I saw the terrain maps and the aerial photos of the plan for landing at Tanamara Bay, I said to the G-2, the intelligence officer for I Corps, "We shouldn't be landing there, the beachhead area is nothing but a sago swamp! We'll never be able to get all our vehicles with radios operating because the navy will dump everybody onto the beach, which is only about a half mile long and about 100 yards wide, and there's nothing but trees and water behind it." I had been in the Amphibious Engineers for a year and a half previously, and I was very familiar with amphibious tactics. The G-2 assured me that roads would be built rapidly enough to take care of getting across the swamp and onto dry land after the infantry captured the beach head area.

Our D-day mission was to set up our radios on the beachhead and immediately open HF circuits to all our troops, the navy, and also back to army headquarters. The whole amphibious operation made a dry run landing on the friendly shores of Papua New Guinea, and then backed off and headed for the real shooting war invasion.

After the naval bombardment blasted the beachhead, the infantry regiment waded ashore and then waded through the sago swamp. Almost immediately the Navy vessels started unloading vehicles on the beach.

Just as I suspected, it was a gridlock traffic jam. Soon there was no sand to unload any more vehicles on, and there were more ships coming in to unload. It was a mess! We managed to get our new Australian radio trucks ashore quite early in the traffic jam, so we were piled on the beach like a New York taxi and truck stampede after a World Series game.

My operators got our stations on the air with the whip antennas, but most of the Corps command staff spent the night on board a command ship. There was practically no place to set up a corps headquarters.

Our signal group spent the night praying we wouldn't get bombed or shelled, and the mosquitos wouldn't give us malaria.

The engineers who had said they would build the roads for egress from the swamp all worked like beavers with three sets of teeth, but the job was more than anyone bargained for, and so Lieutenant General Robert Eichelberger decided to back off and go around about 40 miles to Hollandia town harbor, which was the other objective of the army pincer move. That area had been secured by one of our other army divisions. So we pulled out — but we had to leave some of our supply and construction trucks for nearly 30 days. It was that kind of gridlock jam.

What about the mosquitos? Well, when we landed on the Hollandia side and moved inland toward the airstrips, we set up our first headquarters camp. A few hours after dark another outfit moved in close to us, got panicked at night noises and started shooting at anything that made noise. It might have been mosquitos, but the bullets were going through our campsite. Luckily they didn't hit the new radio trucks, although our radio operators bailed out for foxholes the minute the shooting first started.

The next day General Eichelberger began moving his corps headquarters to the shore of Lake Sentani, a long skinny lake that stretched for a number of miles. We leapfrogged our radio trucks to a high ground treeless plateau about a mile from the lake shore where corps HQ was being set up. It was our security policy that we remoted our transmitters about a mile or so from the message center at the command post. Military practice dictates such a distance to keep artillery from zeroing on radio station transmitters by direction finding methods.

To connect the transmitter and receiving operating positions together we had one of our wire construction companies string a ten-pair cable between the two sites in the jungle. They completed the job

by just stringing the cable on the ground as fast as they could by lugging it straight through the jungle. We had prepared keying relays and plugging arrangements so we could get on the air quickly.

In no time at all, our CW circuits began handling thousands of coded traffic groups through 16 active nets.

It was only a few days after the military success of the Hollandia invasion when the general deemed the whole area secured, and then his staff settled down on planning more island invasions on our trip to Japan to end the war.

To protect the troops from mosquitos because we were in a very active malaria area, the medics started spraying all the swamp areas with mosquito-killing chemicals. To do so, they hired local New Guinea natives who knew the territory and were more or less immune to the diseases and hazards of tramping through the jungle. So one big truckload of natives was sent out to areas near soldier camps to cut the brush and spray the bug-killer chemicals.

Well, you guessed it, our keying cable, which was just dropped on the ground, was in danger. The New Guinea helpers, in their zeal to kill mosquitos, chopped the brush by swinging machetes. Bingo! One of the machete-wielders slashed our ten-pair cable. All our 16 radio circuits went dead with one swoop. Panic hit the message center. We had planned another cable using an alternate route as a safety, but it had been delayed. The route selected was over rougher terrain, and it had been placed on a low priority due to lack of manpower at that moment.

We were off the air for quite a bit of time until we had our cable splicers start down the entire length of the one mile of cable and find the break. When the crew got there they patched the cable and it still didn't work. Yes, the natives, when they were swinging their machetes in the grass, had managed to slice the cable in two places.

It wasn't too long before we put in the alternate route, and then made it standard operating procedure to check the continuity of both routes daily.

Later, on the Philippine Island of Luzon, we first laid our cables by tossing them alongside roads, but we soon learned that army tanks did nasty things to cables with their treads, so we hired a bunch of local Filipinos to cut bamboo poles and help us get the cables off the ground by stringing them up on the poles by using field wire as guy wires.

EAVESDROPPINGS

The following were taken from a column printed in March of 1987, a little over ten years ago. Ten years have made a lot of changes in the world of RTTY, and these tidbits are from that mode.

GOOD BYE CYCLE 21, HELLO CYCLE 22, WOOPS, HELLO CYCLE 21 AGAIN. . . TAXES ARE BAD WHEN YOU HAVE TO PAY THEM, GOOD WHEN IT'S YOUR NEIGHBOR WHO GETS HIT INSTEAD OF YOU. . . THE ANTENNA IS ONLY FOUR INCHES OFF THE GROUND. . . THE SAGE HERE IS 86. . . I WONDER IF THE VOYAGER'S FLIGHT PLAN WAS MORE THAN ONE PAGE. . . THIS PROGRAM LIKES TO EAT LETTERS IF I TYPE TOO FAST. . . I HAVE THE BACK OF THE BEAM AIMED AWAY FROM YOU, I HOPE THIS MAKES A DIFFERENCE IN MY SIGNAL STRENGTH. . . I HAVE A LOT OF HOBBIES, SOME KEEP ME BUSY AND SOME KEEP ME BROKE. . . THE RIG WENT BACK TO THE MAKER AFTER IT TURNED INTO A VEGETABLE. . . THE BAND IS CHANGING UP OR DOWN, I REALLY DON'T KNOW WHICH WAY. . . SUGGEST ALL HAMS IN THE EASTERN HALF OF THE USA TURN THEIR BEAMS WEST AND THOSE IN THE WEST AIM THEIRS EAST, THEN WE CAN HAVE A GIANT FACE-OFF.

If you wish to contact me, my e-mail address is billsnyd@worldnet.att.net. 73 de Bill Snyder, 1514 12th ST S, Fargo, ND 58103-4134. DIT DIT. **WR**

Nets! Nets! Nets!

Tell ***Worldradio*** about your net, and then let us tell our readers about you! What time do you get together, and on what days of the week? What is the frequencey where you meet? Is there a regular net control station or is there someone in particular we should listen for?

Is there a special reason that you get together, or a favorite topic that keeps up your interest? Let us know! We'll tell our readers what you'd like them to know about your net.

FM, Repeaters Repeaters Repeaters & VHF

Bill Pasternak, WA6ITF
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e-mail only up to 50 kilobytes can also be sent to wa6itf@juno.com

When A Coordinator Fails–Part II

In September we brought you an in-depth look at the collapse of what was once one of the nation's most respected repeater coordination councils, the Tri-State Repeater Council, that for many years served the needs of hams in Northern New Jersey, Southern New York (including the Metro New York City area) and Connecticut. Quite a bit has happened since we first reported this story.

At first the news seemed good. I soon saw a posting by a ham who said he represented a repeater coordination group in an adjoining area. He said in part: "...T.S.A.R.C. isn't dead, but at the moment they aren't really operating at normal capacity either. They are in a reorganization phase, and, although they've had problems in the past, I think they'll do OK once things start moving again."

It was not long before other hams in the geographic area formerly served by T.S.A.R.C. began challenging this statement. One who formerly served with T.S.A.R.C wrote to me directly to confirm the demise of the group. He stated in part: "...T.S.A.R.C., for all practical purposes, is dead, the victim, as you pointed out, of gross apathy by the people it serves (repeater owners). Once a repeater owner has his/her coordination papers, their interest level drops to nil and they disappear until they have a problem (interference from another repeater). People complain, but getting them to volunteer in this area is next to impossible. So, I am just holding on to coordination documents until either another local group forms or an outside group takes over."

He went on to say that the membership checks received for the past two years have not been cashed; that there is no treasury, no incorporation and no tax identification number. The latter two were allowed to expire.

"The bank signature cards were never transferred to the new treasurer, so we're stuck with the checks and don't know what to do with them. There's no money to send them back," he said.

Not that T.S.A.R.C. died without the very few who cared trying to keep it alive. An e-mail from a ham named Roland Stiner, NK2U, said a meeting in July attracted only 15 people. Roland had worked out a plan to resurrect T.S.A.R.C. with an ARRL-appointed lawyer (Steve White) who is with the ARCC. He said, "Three things needed to happen at this meeting — to elect new officers, to collect $200 for the incorporation (which the lawyer was going to do for us at cost) and to ratify the current T.S.A.R.C. constitution. The 14 other people in attendance refused to elect new officers (currently there are NONE), refused to collect $200 and refused to ratify the current T.S.A.R.C. constitution.

"They balked at the constitution (which is not perfect, but which served us for many years.) What they didn't like in particular was the quorum requirements and who could be a member. I tried in vain to persuade them that the constitution could be fixed at a later date, that the business of T.S.A.R.C. should get going again.

"I was overruled and we went home empty-handed. There was a 'committee' set up to revamp the constitution and a pledge to meet again in September."

The committee held an open T.S.A.R.C. membership meeting 20 September. Only 15 attendees were at the meeting (possibly due to confusion about the meeting's location), but Stan Coffield, N2NKI was elected president along with a new secretary and treasurer, and the July-rejected constitution was approved. Unfortunately, there are close to 300 repeater owners operating machines in that region, many of whom are miffed at not having received a personal invitation to the attend the meeting. Many do not seem interested in attempting to achieve frequency coordination in the area. One repeater owner near the "Big Apple" told me: "I prefer to fight it out with any new repeater that might set up shop on my frequencies."

Rules a repeater licensee can't make

A ham in the Northwest recently wrote the following note to the *Repeater Owners Reflector*: "We have a situation here with a person who owns a 2M repeater which is linked with a system that covers many areas in three states.

The new owner put the repeater on a hill that provides fair coverage (at best) about two years ago. The owner and control operators complain when anyone monitors their repeater with a remote base. They (or the owner himself) call the owners of remote bases listening to this repeater and threaten lawsuits and FCC retribution for re-transmitting "his" system.

The owner claims it's illegal to re-transmit another amateur station on a repeater without that person's permission and says civil action will be taken. He says the primary issue is that his call sign is being re-transmitted without his permission, which is the part making it illegal.

He also states the transmission of his signal on another system interferes with the commerce of his repeater in a non-commercial sense

and would be the basis for a lawsuit that he would win. He insists the other systems linked to his repeater are not breaking the law because he has authorized them to re-transmit his call sign, but that the people using 2 meters to activate remote receivers to listen to his system are breaking the law by doing it on 2 meters. When asked why it is not illegal to activate a patch from 2 meters he says, "That's something different, you don't understand." In addition, he claims all repeater CW IDing must be done at 16 wpm! The ham posting the foregoing also asked the following questions. I will endeavor to answer them.

1. Is it illegal to use a remote base to listen to another amateur station and hear that call sign of that station while listening?

Answer: No it is not illegal. In fact is 100% legal for anyone, anywhere — licensed radio amateur or non-amateur member of the general public to listen to any Amateur Service station using any means available. Simply said, all Amateur Radio (Part 97) and Citizens Radio (Part 95) communications are totally exempt from any of the secrecy provisions of the Communications Act of 1934 (as amended) or the far more recent Electronic Communications Privacy Act. In fact, when authors of the latter tried to include Amateur Radio autopatch calls and HF phone patching under the terms of telecommunications privacy, hams across the nation rose up in righteous indignation. The committee members were bombarded with phone calls, telegrams, letters and hundreds of thousands of QSL cards. All said "leave Amateur Radio autopatch and phone patch alone!" Admittedly the authors of the legislation could not understand why anyone, even a bunch of crazy Amateur Radio operators, would want their personal phone calls open to public scrutiny, but nonetheless they opted to let hams have their way. They dropped both Amateur Radio and Class D Citizens radio from the prohibitions, much to the chagrin of the Cellular Telecommunications Information Association, which fought bitterly to keep all telephone communications included. A CTIA representative whom I interviewed told me very candidly that CTIA cared very little about what amateurs might want for their service. They believed radio amateurs had to be protected from themselves and that's why the CTIA would never back away from its demand that we be included.

Simply said, no repeater owner can set personally written and highly arbitrary rules as to who can or cannot monitor his repeater from a remote receiver, nor can he dictate by what means. Only the FCC can implement rules and they have chosen not to set any in this area.

2. Is it illegal to have an IDer faster than 16 wpm?

Answer: Section 97.119 of the FCC rules state that 20 wpm is the top limit to ID. Anything from 1-20 wpm is permitted, but there is a good reason why repeater owners use the higher speeds. More on repeater ID systems later.

3. Is someone listening to his repeater from a remote base interfering with the non-commercial commerce of his repeater?

Answer: There is no such thing as "non-commercial commerce." The synonyms for commerce are "business" and "trade." Both indicate for-profit operations. Use of "commerce" here indicates operating an amateur station for profit. Since he cannot operate a repeater in the Amateur Service on a for-profit basis, it makes the issue irrelevant. I suspect the repeater owner possibly mixed up the word "commerce" with "communication." Substituting "communications" for "commerce" makes the question read: "Is someone listening to his repeater from a remote base interfering with the non-commercial communications of his repeater?" Here again the answer is no because he has absolutely no legal grounds to determine who may listen to his repeater or what means those people may use to monitor transmissions. Remember what we said earlier about all Amateur Radio communications being exempted from the "Secrecy of Communications" clauses of the Communications Act? Because of this there is no such thing as "secret Amateur Radio communications" except in the mind of a few hams who may have had too much exposure to microwave energy. The bottom line is that any repeater operates in the public eye. As such neither an owner nor user has anything to say regarding who else may monitor repeater transmissions, the type of receiving equipment to be used or where that equipment is located. If a repeater owner tried to sue a person for monitoring the transmissions of his system he almost assuredly would be laughed out of court.

4. Is it illegal to have a person's call sign be heard through a remote base receiver without their permission?

Answer: Again, Amateur Radio transmissions are specifically exempted from all laws governing secrecy of communications. In essence, every word any ham says over any Amateur Radio station falls into the public domain. As such, no ham has any control over who can hear his

or her call sign. Nor can a repeater owner put in place any arbitrary rule to the contrary.

5. Is it illegal to activate a link from 2 meters?

Answer: Since the repeater owner in question refuses to give you an answer, I will. Any Auxiliary Link must be activated from bands 222 MHz and above. No link can be activated on the 2-meter band. See Sections 97.201 and 97.205 of the FCC rules for a more in-depth explanation. Whose ID is this anyway? I can understand the desire by the previously mentioned repeater licensee and his minimum 16 wpm CW IDer decree — even if he can't force others to abide by it. The reason repeaters have IDers — mainly CW IDers, is because the FCC says that they have to be there. It's not there to let users know what repeater they are on; rather, an IDer lets the FCC know whose system it is. Informing users, and/or potential users is merely a byproduct. To me, CW IDers have always been exceedingly annoying even if Uncle Charlie did require them. I prefer high-quality but low-level/low-deviation voice IDs, preferably an ID using the voice of some well-known local or national personality. Such an ID gives a repeater a distinct public image, much as a jingle might be identified with a commercial AM or FM broadcast entity.

A Sporadic-E season to remember

It was the E season that refused to die! So said Dave Bernhardt, N7DB, grid-square CN85, in Boring, Oregon. Dave wrote that remark to the *VHF Reflector* early last August. He was referring to what many worldwide are calling the best VHF DX season of the past four decades — a season that, for some who could remember, rivaled the famed "Summer of '59!"

Dave's experience was similar to many other hams who have shed their HF SSB/CW and 2-meter FM ties, and had the patience to wait out Mother Nature on frequencies above 50.000 MHz. It mattered not where you were or what mode you operated, if the bands above 50.000 MHz were open, there was DX to work — lots and lots of rare, and sometimes exotic, DX.

Texas repeater link on the internet

We recently received a note from Toby Driscoll, N5SIM, telling us that an interlink serving Texas' Rio Grande Valley is now also "on line" using internet phone. The Rio Link Network made its connection to internet audio via KC5NLO repeater. The Rio Link covers most of the lower Rio Grande Valley from north of Raymondville to South Padre Island and Brownsville on west to Mission, Texas. If you have any questions as to what they are doing, please call Toby Driscoll, 956/702-7938, but keep in mind that he is in Central USA time. You can also e-mail Toby at n5sim@aol.com

NNJ packet node offers advanced services

With an increased interest in VHF digital communications resulting from the advent of newer APRS applications, having on-air deviation and signal strength testing capabilities would make adjusting one's TNC something that could be done in "arm chair" mode from your shack. Thanks to the technical expertise of Lou Gaul, K2YHY, and Bob Andersen, K2BJG, the Sussex County New York Amateur Radio Club's node stack makes this a reality.

Located at 1400 feet above mean sea level, high among the Appalachian Mountains and within the confines of grid square FN21oe in Northern New Jersey, this piece of technology sits waiting to hear your signal, measure its strength, and give you a deviation report all from one packet emission. All you have to do is be within "ear shot" of the node. If you're in the area, here's how to use it. Tune your radio to 144.990 MHz. Connect to NNJW or N2ERH-2. At the command prompt, type "MH <Enter>". A list of the last 15 stations heard will fill your screen. Included in the list are deviation and signal strength reports. To minimize your emission's overdeviation, adjust your TNC to read 4.0 kHz. Check your TNC manual for adjustment directions. Information on interpreting the signal strength report can be obtained via e-mail or via packet radio at n2ttp @n2erh —*(submitted by Deb McKay, N2TTP, Sussex County SKYWARN Coordinator via the Hudson Division Loop Newsletter)*

Congrats to K4MOB

A word of congratulations to Wayne Williams, K4MOB, of Colfax North Carolina. The fall 1997 edition marked Wayne's 20th year as editor of the Southeastern Repeater Associations' *Repeater Journal*. What makes Wayne's accomplishment so unique is that we are not talking about a one-page mimeographed club newsletter. Since its inception in 1977, the *Repeater Journal* has been a full-size, full color regional Amateur Radio magazine. It is dedicated to providing information about FM and repeaters to people living in the many states served by SERA and since its inception, K4MOB has been at the helm. —*via Newsline*

From our home to yours, a Happy Thanksgiving, 1997. de WA6ITF WR

Visit Your Local RADIO CLUB

For information on how to get your club listed in "Visit Your Local Radio Club," plus receive many other benefits, write to:
Club Liaison,
Worldradio,
2120 28th St.,
Sacramento, CA 95858

ARIZONA

Arizona Repeater Association. P.O. Box 35758, Phoenix, AZ 85069-5758. Operates 20 VHF & UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., APS Bldg., 21st Ave. & W. Cheryl, Phoenix. Info: (602) 849-0851. 9/98

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. K7RDG/R 146.76(-) rptr. PL162.2. 5/98

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

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

CALIFORNIA

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

Beach Cities Wireless Society. P.O. Box 4016, San Clemente, CA 92674. Meets 2nd Thurs./monthly, 7:30 p.m., Ole Hansen Beach Club, 105 W. Avenida Pico, San Clemente. Rptr. 146.025(+) PL 110.9. 7/98

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 1st Wed./monthly, 7 p.m., Portola Com. Cntr., 45480 Portola, Palm Desert. Info: Bill Dews, (760) 346-8611. Net Thurs. 7 p.m. 146.025(+) PL 107.2. 5/98

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

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium, 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs., 7:30 p.m. 5/98

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

Fullerton Radio Club, Inc., W6ULI. P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Ctr., 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975(-). Info: Bob Hastings, K6PHE (714) 990-9203. 7/98

Garlic Valley Amateur Radio Club (GVARC). Meets last Sat./monthly, 8:30 a.m., Gavilan Restaurant near Monterey exit, hwy 101, Gilroy, CA. Info: Hal, AC6LK, (408) 779-7787. Net Tues., 7:30 p.m. Club rptr. K6THR, 147.825(-). 9/98

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 145.85(-). Meets: 3rd Fri./monthly, 8 p.m. at 1528 Esplanade, Rm. 101, Chico. 10/98

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). For info: LARK Secretary, P.O. Box 3190, Livermore, CA 94551-3190. (510) 846-6513. 1/98

Marin Amateur Radio Club (MARC). W6SG. Box 151231, San Rafael, CA 94915-1231. Meets 1st Fri./7:30 p.m., Kaiser Hosp., Bldg. 2, Terra Linda, CA. (except July & Dec.; contact Membership Chair., Pete Wolford, N6IYU, 924-1578). Sun. AM Club at Red Cross, San Rafael. 9/98

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

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 8 p.m., Our Savior's Lutheran Church, 1035 Carol Ln., Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 7/98

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

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

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

River City A.R.C.S. Meets 1st Tues./monthly, 7 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. For info contact Lyle, AA6DJ, (916) 483-3293. 9/98

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net at noon on rptr. W6AK/R 146.91(-). Steve Cates, KC6TEV, (916) 391-7341 or Les Ballinger, WA6EQQ, (916) 393-4775. 1/98

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

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

Shasta Cascade Amateur Radio Society, (SCARS). 2124 Airstrip Rd., Redding, CA 96003. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 10/98

Sierra Foothills ARC. 1222 San Simeon Dr., Roseville, CA 95661-5365. Meets 2nd Fri./monthly, 7:30 p.m., Auburn Library (Beecher Rm.), 350 Nevada St. Thurs. nets 7:30 p.m. 145.430(-) PL 94.8, 7 p.m., Fri. 28.415. 3/98

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 7/98

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

This month ... The Peoria Area Amateur Club of Peoria, Il, has won an MFJ Antenna Analyzer to share with its members. The club's name was selected at random from our "Visit Your Local Radio Club" listing.

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

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

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

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

Trinity Country ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County School Adm. Bldg. in Weaverville, 7:30 p.m., Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. 10/98

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th St. San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.—5 p.m. 7/98

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

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

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley Sch. Dist. office, 17210 Oak St., Fountain Valley, CA. 145.440(-) PL 136.5. For info: Jane, KD6ODV, (714) 531-6707 10/98

Westside Amateur Radio Club. P.O. Box 11092, Marina del Rey, CA 90295. Meets 3rd Thurs./monthly, 7:30 p.m., Red Cross Bldg., 1450 11th St., Santa Monica, CA. Net every Tues., 8 p.m., 146.67(-). Voice mail: (310) 917-1100. 6/98

Willits Amateur Radio Society, (WARS). 1712A South Main St., Ste. 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. (northwest of Willits). Talk-in: 145.13(-), PL 103.5. 9/98

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Denny's Restaurant, 4120 Chiles Rd., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 10/98

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

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., 3852 Prime Place, New Port Richey. WA4GDN rptrs. 146.67(-) & 145.33(-), serving all of Pasco County. 10/98

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

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

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

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

GEORGIA

Dalton Amateur Radio Club, Inc., (DARC). P.O. Box 143, Dalton, GA 30722-0143. Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Harold Jones, N4OTC, 706/673-2291. 3/98

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721-1938. Meets 2nd Tue./monthly, 7 p.m., Army Reserve Center, 470 W. Lanikaula St., Hilo. Talk-in on 146.88(-). Lunch, 11 a.m. Fridays, Pizza Hut, Puainako Twn. Ctr. 7/98

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

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-) PL 107.2/224.10/224.18/443.75 PL 114.8. Ham help line: (773) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 7/98

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

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 7/98

Hamfesters Radio Club, W9AA. P.O. Box 42792, Evergreen Park, IL 60805. Meets 1st Fri./monthly, 8 p.m., Crestwood Civ. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.410 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.65 MHz. Info: (312) 974-3291. 1/98

Peoria Area Amateur Radio Club, (PAARC). P.O. Box 3508, Peoria, IL 61612-3508. Meets 2nd Fri./monthly, Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Voice mail: (309) 692-3378. Rptrs: 147.075(+) & 146.85(-). 6/98

Schaumburg ARC. P.O. Box 68251, Schaumburg, Illinois. Meets 3rd Thurs./monthly, 7 p.m., Rec. Center, Bode and Springinsguth Roads. (630) 612-9446. http://members.aol.com/sarcradio 10/98

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

LOUISIANA

Baton Rouge ARC. Meets last Tue./monthly, 7 p.m., Catholic HS cafeteria, 855 Hearthstone Dr., Baton Rouge, LA. Info: Norma Ramey, WD5GFD, (504) 654-6087. Club rptr. 146.79(-). 10/98

MAINE

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

MASSACHUSETTS

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

Wellesley Amateur Radio Society. Meets 3rd Thur./monthly, 7:30 p.m., Wellesley Police Station, Washington St., Rt. 16, Wellesley, MA. Talk-in 147.030(+). Info: G. Driscoll, NV1T, (617) 444-2686. 12/97

MICHIGAN

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

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

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

MINNESOTA

Viking Amateur Radio Society (VARS). Meets last Tues./monthly, 7:30 p.m., basement EOC, Waseca, MN. Call-in 146.94(-). 10/98

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. mtg. 8 a.m., Country Inn, SE cor. W. Sunset, Valle Verde, Henderson NV. Club info: Jim Frye, NW7O, (702) 456-5396 or Bill Scarborough, WA6ASI, (702) 269-9551. 8/98

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

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

Sierra Nevada Amateur Radio Society (SNARS). P.O. Box 7727, Reno, NV 89510-7727. Meets 2nd Sat./monthly, 0800, The Continental Garden Restaurant, 1885 S. Virginia St. (at Plumb). 146.61(-) PL 123. Contact Swede Ohlson, (702) 852-2402. 1/98

NEW HAMPSHIRE

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

Port City Amateur Radio Club, (PCARC), W1WQM. P.O. Box 1587, Portsmouth, NH 03802. Meets 1st Wed./monthly (Sept.-June), The Edgewood Ctr., 928 So. St., Portsmouth. Rptr. 146.805(-) PL 127.3. 7/98

NEW JERSEY

Bergen Amateur Radio Association, (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 146.79(-) 9 p.m. Wed. 6/98

South Jersey Radio Assoc., (SJRA), K2AA. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed), Bloomfield Fire Hall in Pennsauken, NJ. Talk-in: 145.29(-) rptr. 8/98

NEW YORK

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

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

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

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

The Radio Club of J.H.S. 22, N.Y.C., Inc. WB2JKJ. P.O. Box 1052, New York, NY 10002. 24-hr. hotline: (516) 674-4072. Fax: (516) 674-9600. Non-profit org. using Ham Radio to enhance the education of youngsters, nationwide. Join us — "Classroom Net," 7.238 MHz, 7 a.m. E.S.T. PSE QSL! 10/98

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

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

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.865(-), 440.150(+). 10/98

NORTH CAROLINA

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Phone: (704) 888-4815. 5/98

SOUTH CAROLINA

Sumter Amateur Radio Assoc., Inc. (SARA) P.O. Box 193, Sumter, SC 29151-0193. Meets 3rd Mon./monthly, 7 p.m. Central Carolina Tech. College, Rm. 102, 506 N. Guignard Dr. Contact: Dee, NØZTV,(803)499-6315.E-mail: deebrown@sumter.net. Talk-in 147.015. 9/98

OHIO

Ashtabula County ARC. Ken Stenback, W8KS (964-7316). County Justice Ctr., Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County rptr., 146.715(-). 10/98

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

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

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

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

Western Reserve Radio Assoc. P.O. Box 81252, Cleveland, OH 44181-0252. Meets 2nd Wed./monthly, 7:30 p.m., Jenkins Communications Cntr., Main St., Olmsted Falls, OH. Info: B. Beckman, N8LXY, Pres., 146.73(-), 444.900(+) MHz. 7/98

OREGON

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

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thurs./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. 147.06(+) MHz. Info: (541) 389-7194. 7/98

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

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Courthouse, Rm. 310, Roseburg, OR. Info: W5PII/R 146.90(-) or (541) 673-1310. 6/98

PENNSYLVANIA

Mercer County Amateur Radio Club, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 145.01. 3/98

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

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

TEXAS

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

VIRGINIA

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

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

WASHINGTON

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

WEST VIRGINIA

Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., United Nat'l Bank of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. For info: D. Tennant, N8ZYB, Rt. 1, Box 188, Mt. Alto, WV 25264. 7/98

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

Lorraine S. Matthew, N4ZCF
MARS Call AAA9PR
E-mail: LoriMatt@aol.com

In a recent Chief's Net, Chief Army MARS Robert Sutton referred to Air Force and Army MARS teamwork. There have been several noteworthy examples of such teamwork in this column previously and the cooperation and friendship does continue.

Mr. Edward Paul Jones/AFN4VN, an Air Force MARS member, attended the Texas Army MARS conference in order to present an Air Force MARS award to three Army MARS members. These members, according to Mr. Jones, have done more toward enhancing interservice interoperability than any other Army MARS members that he knows about in his region.

The three award recipients were Mr. Arthur Wertz/AAA9SK, Mr. Gary Anderson/AAR6AC, and Mr. James Lee/AAV6UX all members of Texas Army MARS.

One of the major objectives of the encouragement of interservice interoperability was to avoid each service having to develop assets individually, thus duplicating time, effort, and expense. These three Army MARS members worked closely with Air Force MARS in order to coordinate the assets and operations of both MARS groups.

Mr. Wertz received his award for his work in modifying the Army MARS membership database program for Air Force use. This was no small task and his work gained the praise of Mr. Ray Collins, Chief Air Force MARS.

Mr. Anderson received his award for a variety of actions. He provides the interchange of messages that affect all three MARS programs. He provides a link between the digital message centers in the region. He, along with others, has also provided computer parts that would normally be considered obsolete so that computers can be assembled for MARS members who are on limited incomes. This increases the digital assets and capabilities for both service MARS organizations.

Mr. Lee received his award for his work with an Air Force MARS member, AFA4FY, in taking a commercial VHF repeater and reworking it to operate on Air Force MARS repeater frequencies.

Mr. Jones went on further to say that they deserve the awards for actions above and beyond normal duties and assistance to the United States Air Force.

It is my understanding that this type of cooperation is occurring in many parts of the nation and will continue to grow as more and more interoperability is authorized.

Another example of such interservice support is exemplified by the actions of James Cavanagh/AAA3VA, the Virginia State Army MARS Director. Because of rumors and queries that have occurred all over the country and, specifically, his experience at the Manassas (VA) Hamfest, he created a poster for display at future hamfests.

Upon my inquiry, he wrote to me saying, "I wrote this after an amateur came up to the MARS booth at the June hamfest and said, 'Oh, is MARS still active? Someone told me Air Force MARS was gone.'

"I paraphrased Mark Twain and told him that 'reports of its demise were greatly exaggerated.'

"The text was written by me and checked with Bill Conaway, AFA2VA, the Virginia AF State MARS Director. The final form of the text follows below.

"73, Jack Cavanagh,AAA3VA SMD VA"

Air Force MARS Rumor Control

Air Force MARS is alive and well. At the current time Air Force MARS is not accepting any new applications. When normal attrition brings the membership below 2000 members, new applications for membership will be accepted.

This moratorium was brought about by the general downsizing of the Federal Government. The full time staffs that run the MARS programs for all three services have been cut.

It is estimated that the Air Force MARS moratorium could be lifted as early as Fiscal Year 1998 and hopefully no later than Fiscal Year 1999.

None of the MARS services are "dead" nor are they likely to be declared DOA at any point. Indeed, missions are being added to the roles that each of them carry.

The latest Army MARS news involves the change in the position of Western Area Director. Effective 11 August 97, Suzanne Ollano- Mayer became Western Area Director for Army MARS. Her territorial responsibility encompasses all of the states west of the Mississippi and Ohio River basins. This is a vast area with markedly varying terrains, people, and potential problems. Suzanne has a wide range of communications experience and has previously held many positions within the telecommunications field over the past 15 years, including assignments in long-haul telecommunications, three years in Germany with the 5th Signal Command, the Defense Communications Agency–Europe, and a number of other assignments to include direct coordination with units for maintaining the Defense Communications Systems (DCS) equipment and transmission links. She has also served as a project operations officer. It is expected that Ms. Ollano-Mayer will serve Army MARS effectively throughout the future years.

With the intrusion of commercial entities into the radio spectra, the question often remains about why MARS services continue to use radio as a basic means of communication. We could be using (and do) e-mail, fax, digital modes, and many others. All of these, however, are connected to wires or other physical equipment. All of these are single sender-recipient in nature. Radio allows many people to be given information simultaneously, saving valuable time in all cases. In EVERY major emergency, all of the communications media except radio have been so impacted by necessary traffic that they have become unusable. Radio remains the sole instrument of communication which cannot be so impacted. The three service MARS programs are not about to give up on radio no matter what the propagation does. There are enough operators at varying distances that information can be successfully relayed no matter what the conditions are at any one point.

Thus working together, the MARS organizations go forward Proud, Professional, and Ready. WR

Search And Rescue Communications

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E-mail: jw@desnews.com

I hate it when that happens! A couple of months ago I extolled the virtues of using a DC remote setup for a mission communications application. I should NOT have said that DC remotes are common and that such lines are easily obtained from your local telephone company. WOW! Did you ever educate me. It had been some years since I had set up a DC remote and, while they're used within a building or on a company site, they're out of vogue. Telephone companies don't easily provide DC circuits unless you're willing to pay a high installation cost.

If I'd thought about it, I would have known that the current remote technology uses sub-audible signaling. In essence, a sub-audible tone is sent that, when decoded at the transmitter, triggers the push-to-talk circuit. I should have known better because one of the last company projects for me was a pager system that used one sub-audible tone to trigger a voice paging transmitter and a second tone to activate the digital paging transmitter. My thanks to many of you who wrote to tell me that technology, indeed marches on. My thanks to others of you who sent me additional ideas and schematics on DC remote applications and public service.

The bottom line remains that a DC remote is very applicable in a mission base or public service event where you may need to put a simple control device at an administrative location and put the radio equipment somewhere. The signal operates over a single pair of small wires and can quickly be set up. From the responses I received, many of you will add this to your inventory of mission base options.

Thinking Cap

In the current issue of the National Association for Search and Rescue's *Response* magazine, Ken Phillips presents an excellent article on helicopter safety issues. Ken's an SAR coordinator at Grand Canyon National Park where a great many rescues involve choppers. His article focuses on risk assessment, education and training, pre-planning, and operations as critical issues of chopper use.

With the increased use of choppers for search, rescue, and medical use, I would recommend you obtain a copy of his article. NASAR can be contacted at 4500 Southgate Place, Suite 100, Chantilly, VA 20151. What I want to do is take writer's privilege with a chart in his article that listed twelve aviation questions that "could save your life." I've taken eleven of his points and removed the references to aviation and I believe they could be posted at ANY event. The points are Ken's, the comments are mine.

1. Is this necessary? (Is what I'm doing necessary to this event and contributing to a safe outcome?)

2. Who is in charge? (A single person must be calling the shots. If you're not that person, refrain from giving orders outside your scope of authority.)

3. Are all hazards identified and have you made them known? (Does your communication or operations plan encourage a "look around" AND that any hazards are identified and communicated, especially from shift to shift?)

4. Should you stop the operation due to: Communications, weather, lack of personnel, lack of training? (If it's not safe, STOP!)

5. Is there a better way to do it? (Sometimes the quick pace of the event seems to prevent a short pause to consider safety. If you're moving too fast to think before acting, you're putting yourself and possibly others at risk.)

6. Are you driven by an overwhelming sense of urgency? (I refer to this as "Mission Fever." Be aware of what is motivating you. If you are simply caught up in the moment, it's time to take a break and plant your feet back on firm ground.)

7. Can you justify your actions? (If you can't, something is terribly wrong with what you're doing.)

8. Do you have an escape route? (Whether you're in a communications room or aboard an aircraft, consider carefully how you would get safely out in case a problem develops. From an aircraft perspective, this includes always having an alternate landing area.)

9. Are any rules being broken? (Rules are generally good things and are in place for a purpose. Breaking them may be your "cowboy" way of doing things, but often needlessly endangers others.)

10. Are communications getting tense? (I can always tell when something big is happening on any voice channel. The voices get tense and the sense of urgency increases. Sometimes it's good, sometimes it isn't. When it's tense, it's a red flag that you need to make a situational assessment.)

11. Are you deviating from the assigned operation? (Again, are you being the rogue cowboy, or do you have permission? The worst thing a search coordinator needs is to have assignments changed in the field. If the need arises, get permission first.)

Most of the above is simply common sense, but it's the little things that have the potential to cause you big problems. You could take the above items and use them for a meeting night discussion or use them in the critique of a recent event. Be careful! There's seldom a need to push beyond safe limits.

CERT

I also want to put in a plug for a program that's happening in many communities. It's called CERT, short for Community Emergency Response Team. The idea originated in

California as an effort to give basic emergency training to citizens in the event of large-scale disasters. Essentially in a disaster, most public service agencies would be overwhelmed and unable to respond to every call for help. The CERT concept is that each neighborhood would have a group of trained citizens able to assist in their local area.

The CERT folk are trained in basic first aid skills, disaster management, search and rescue, and recovery. Some of the training is in needs assessment so that when a public agency such as a fire department arrives in an area, the citizen team can provide an urgency list. This saves time in doing assessments and routes needed services directly to the most important areas.

CERT is going strong in the Salt Lake area with classes starting regularly. CERT involves a seven-week course usually taught by your local fire department. Each week for two hours, volunteers are instructed in emergency skills and then get a chance to practice under the instructors' supervision. In our last class, we learned to put out small fires and learned fire safety.

I decided to take the course after my neighbor signed up and wanted company. Two of my kids are also taking the course and they're excited to be learning these skills. CERT is now sponsored by the Federal Emergency Management Agency; they've published a great training manual and volunteers are provided (at least in our area) with a vest and hard hat with CERT inscribed. I applaud FEMA for this super effort to get citizens trained. From the reactions in the local class, this is well received and will be invaluable when our locale shakes when the earthquake hits.

The idea is for neighborhood self-sufficiency so the need is not critical for communications. Locally the fire department is encouraging the various CERT volunteers to identify an ARES station, if possible, so damage assessments and urgent needs can be passed via Amateur Radio circuits. I presume they've noticed all that aluminum hovering above my house as several CERT people have mentioned "the house on the corner" as their communications link. I've yet to raise my hand in class and tell them I live there.

If the disaster prevented me from getting to an assigned ARES role at an EOC or another on-scene location, I would work with the CERT volunteers in my neighborhood. It's a worthwhile effort and I encourage you to attend a CERT course or at least determine if there is such a team in your neighborhood and become their comm link. You could find out if CERT is active in your area by calling your local fire department or emergency management office.

Telephone Simulator

Here's another idea for communications at a search command post or within a complex event communications center — your own telephone system. There are commercial products available that allow you to "simulate" a central telephone office switch. You connect standard telephones to the device and you can call other phones also connected to the switch. I could see where several phones could be placed in operations, planning, command, logistics, and communications. You'd simply dial the extension and it would ring and function like your phone at home. With some dual-line phones you could conference a couple of lines together as well.

In the January 1996 issue of *Electronics Now*, there is a project featured called the "Party Line." This allows you to connect six telephones (or modems or FAX machines) and call among them. You can also do a group call and connect all six in a party line. The article touts this commercial line simulator as a way to test telephones and modems and perhaps as an in-house intercom. I believe it would make a dandy way to hook up a field command post or search mission base. One could quickly string some telephone wire with modular connectors and put some phones in service. These would ring and dial like regular phones, so the training issue would be ideal.

It's pretty complex and not the kind of thing you build in an hour or so from spare parts. Some of the chips contain programming (this goodie does Caller ID!) and the circuit board is quite complicated. But it's still something you could tackle and do. You can obtain parts and a circuit board from Digital Products Company, 134 Windstar Circle, Folsom, CA 95630. Their phone is 916/985-8460. The cost for the whole kit is just under $200 but way under an $800 or better cost for a commercial simulator.

I've just ordered one for my own amusement and the people at Digital Products are great to talk with. They'll also trouble-shoot a completed kit for a reasonable price. If you've done your best and are careful while putting it together they'll help if you can't get it working. Even though the article was almost two years old, the kits are popular and they still get inquiries. If it's something that works for you and you have some old phones around (you can also get them from yard sales), give them a call.

Lighting

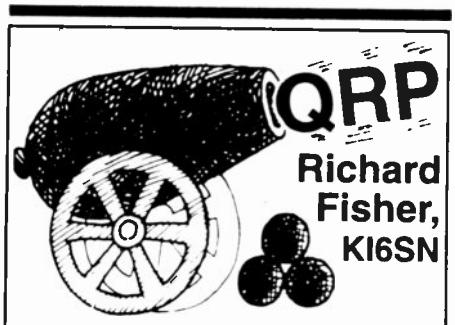
Field operations usually go better when well lit. I hate working in the dark (I saw that evil grin). One keen idea is using light stands used for construction work. Prices are dropping and you can often find them at yard sales or in pawn shops. I found a dual light (500W halogen lamps) unit with switches on each lamp that stands atop a tripod base and is extendable to about seven feet. The support is lightweight, painted bright yellow, and folds to a carryable size.

If you have a portable generator (and you should) and do any field exercises, do it in the light! These lights are much brighter than 12-volt DC lamps and are easy to set up. You might need to brace them in wind, and the one I found was even watertight in case of rain.

Be aware that the halogen lamps get very hot, so allow some cooling time before you put them away after use. These lights are also great for backyard parties or around the house when the power quits and you're using your generator.

Until next month, keep safe, keep well-lit, and keep ready to assist. Best wishes from Salt Lake City! WR

WOW, I CAN'T KEEP UP WITH ALL THIS MODERN TECHNOLOGY !



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Flights of QRP fancy

As QRP contests go, the Adventure Radio Society's inaugural "Flight of the Bumblebees" in late July ranked as one of the more unusual apiarian sprints ever. It sure had the QRP community buzzing.

The society, formed in May 1996 to encourage spartan Amateur Radio operation from beautiful locations reached by human power, sent 50 "bumblebees" packing into the field for a four-hour Sunday afternoon chase. QRPers everywhere could work one another for points, but extra credit was awarded to operators making contact with any of the portable/QRP "bees."

The 50 operators were to use their own power — hike, climb, bicycle, canoe, boat — to their operating location. "Bees" buzzed to sites across the United States and Canada. They landed atop places like High Mountain near Wayne, NJ, and Pocono Summit, PA; Kennesaw Mountain National Battlefield near Atlanta, the banks of San Francisco Bay and Hawaiian Islands.

As one of the "bees," I made a 14-mile roundtrip mountain-bike trek to Jurupa Regional Park on the banks of the Santa Ana River in Southern California. After nestling a lightweight QRP CW station for 20 and 40 meters in a stand of four tall trees, I had a ball. Only a visit from a pack of wild dogs made the adrenaline at KI6SN/BB pump faster than making low-power contacts with QRPers all over the western United States.

"Bumblebee" reports from the trail brought forth many tales of trial, tribulation and elation. The story of a 24.5-mile solo canoe trip taken by John Cumming, VE3JC, of Delaware, Ontario, Canada, captures the essence of what many of us felt as we set out for a bit of adventure on 27 July:

"The way it started out, I suspected it might be a 'weekend in hell,' " Cumming wrote. "Rain and threats of thunderstorms prevented an early departure, but by 1430Z Saturday my wife had delivered me to the Middlemiss Bridge and I was on my way. The Thames River meanders 163 miles through southwestern Ontario. I had not paddled this section before, but I had the (topographic) maps and knew that there were four bridges between my entry point and the conservation area where I planned to camp. What could possibly go wrong?

"Three hours later — still under overcast skies — I reach the first bridge! Examining the map, from my calculations I learn that I may not get to my destination until after dark. The thought of navigating the river, trying to find the conservation area, and pitching a tent in the dark in a thunderstorm fills me with anxiety.

"Two hours pass and I make the second bridge. Bends in the river seem a bit different than on the map — now I'm confused and anxious.

"I'm wishing I'd brought more drinking water in case I have to set up camp before the conservation area. Did I mention the hordes of deer flies that were making it impossible to maintain steady paddling?

"To make a long story not quite so long, I'm delighted to reach the third bridge in very quick time, and ecstatic — but still very confused — when eight hours after I began, my destination comes into view. What happened to the fourth bridge?

"Apparently one of the bridges which still shows on the topo map was removed some time ago. They must have done a good job, because I don't recall seeing any remnants of the footings.

"This missing bridge really mixed me up and made me worry unnecessarily. However, I did enjoy the countryside and spotted three deer, many hawks and blue herons and one bird specie I'd never seen before.

"So, I haul my gear and the canoe up to the camping area, get my tent pitched and brew a hot cup of coffee on the single-burner stove. I am the only person in the camping area — anticipating a good night's sleep in complete solitude and a pleasant morning raising antennas.

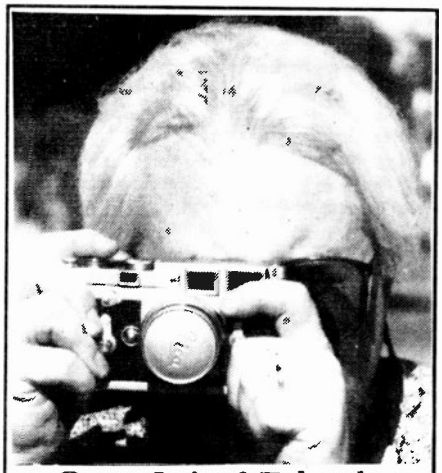
"Then I see a familiar van coming down the road. It's my brother Peter and his family, plus my brother Stephen from the Northwest Territory who had flown in that morning. They've decided to camp and share in my 'bumblebee' expedition. We have a wonderful campfire under what is now a clear, star-lit sky.

"After a great breakfast Sunday morning, Stephen helps me with the wrist rocket, and climbs up a tree or two, until we finally have the 450-ohm ladder line-fed dipole up at a respectable height — about 35 feet — oriented east/west. The QRP+ (transceiver) and tuner are ready to go. Signals aren't all that strong on 20 meters. And 15 meters seems dead.

"But I did manage 46 QSOs (in the contest), mainly on 20 meters, but a few on 15 and 40. Fellow 'bumblebees' were scarce — I worked only five. Is there a multiplier for insect bites?"

Cumming made 7 contacts on 40-meters, 34 on 20 meters and 5 on 15 meters for 85 QSO points. He worked six other "bumblebees" for a total score of 1,530.

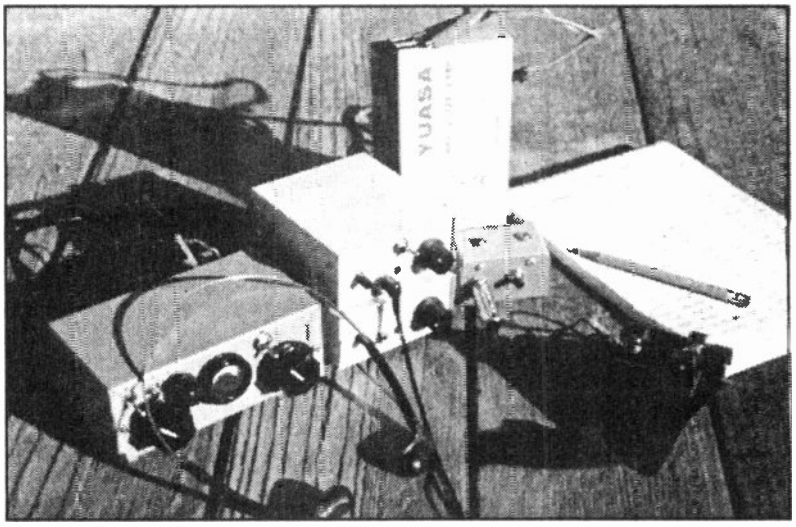
Perhaps he spoke for all of us "bees," though, in summing up his



Got a Leica? Take the lens cap off and take a picture for *Worldradio!*

experience: "If I had not made a single contact, it would still have been a great weekend."

For further information on the "Flight of the Bumblebees" and the Adventure Radio Society, visit the organization's Internet web page at http://www.nat world.com/ars



KI6SN/BB's portable station during the "Flight of the Bumblebees" included, from left, a small homebrew Z-match tuner, a pair of Wilderness Radio SST QRP transceivers, TiCK-2 electronic keyer, Paddlette key paddle, and 2 aH gel-cell battery.

Three named to QRP Hall of Fame

In ceremonies at the 1997 Dayton Hamvention, QRP Amateur Radio Club International inducted three more operators into its QRP Hall of Fame.

Doug Hendricks, KI6DS, cofounder of the Northern California QRP Club; Dick Pascoe, GØBPS, cofounder of Kanga Products, the British QRP kit company; and Mike Czuhajewski, WA8MCQ, president of QRP ARCI, were named as 1997 inductees.

The trio joins 1992 inductees Doug DeMaw, W1FB; the Rev. George Dobbs, G3RJV; Roy Lewallen, W7EL; and Randy Rand, AA2U; and 1996 inductees Brice Anderson, W9PNE; George Burt, GM3OXX; Tom Davis, K8IF; Wes Hayward, W7ZOI; Rick Littlefield, K1BQT; C.F. Rockey, W9SCH; and Adrian Weiss, WØRSP.

QRP banquet's horn of plenty

Pete Meier, WK8S, chairman of the QRP ARCI Banquet at the Dayton Hamvention, says the success of this year's affair was due in large measure to the contributing vendors that support the event. "These folks really help our hobby and certainly made the banquet a success with their generosity," Meier wrote.

They include: the Michigan QRP Club, QRP ARCI, Kanga US/UK, Small Wonder Labs, NorCal QRP Club, EMTECH, Colorado QRP Club, Whiterook Products, Milestone Technologies, Embedded Research, LDG Electronics, S&S Engineering, Almost All Digital Electronics, The Vibroplex Co., Phoenix Products, NorthWest QRP Club, MFJ Enterprises, Buckeye Electronics, Wilderness Radio, Vern Wright (W6MMA), Joe Everhart (N2CX), St. Louis QRP Society, Sunlight Energy Systems, Jade Products, and TR-LOG.

'QRP' callsigns

The FCC's Vanity program has prompted several regional QRP organizations to apply for special callsigns reflecting their passion for low power operation.

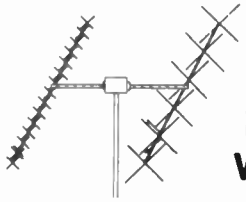
Since the suffix QRP — an internationally-recognized "Q" signal — is not issued by the FCC, the U.S. QRP community has opted to work the letters Q, R and P into the calls in other ways. Here are some of the organizations and their club callsigns: Minnesota QRP Society, WQØRP; Knightlites QRP Society, WQ4RP; Arizona ScQRPions, NQ7RP; Michigan QRP Club, Chapter II, WQ8RP; Indiana QRP Club, WQ9RP; and the Byron-Bergen Amateur Microwave Systems, NQ2RP.

QRP survey time (again)

Data is now being gathered for the '97-'98 ***Worldradio*** QRP Organization Survey, a roundup of national, international and regional QRP clubs published in the ***Worldradio*** QRP column each January.

If your QRP organization has not been contacted for its annual update, or if you've never been listed in the roundup, please contact me via e-mail, postcard or letter. Write: Richard Fisher, KI6SN, 1940 Wetherly St., Riverside, CA 92506; e-mail: KI6SN@aol.com

Amateur Satellites



Terry Douds, WB8CKI

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Hello, everyone! Lots of news this month and, unfortunately, not all of it is information we had hoped to hear.

First, P3D... I'd hoped to be able to pass along information concerning an upcoming liftoff, but unfortunately. it isn't to be the case. At the AMSAT-UK Symposium in July, the Phase 3D Project Manager (and AMSAT-DL President), Dr. Karl Meinzer, DJ4ZO, reported that a meeting was held on 16 July in Marburg, Germany. Attending besides Dr. Meinzer, were Werner Haus, DJ5KQ, AMSAT-DL Vice President, and officials of the European Space Agency. The meeting's purpose was to discuss the launch schedule for the Ariane 502 launch, which P3D was scheduled to go up on.

At this meeting, the ESA officials reiterated their intent to launch P-502 at the end of September and said that the launch campaign for this flight has already begun. They stated that, as part of this launch campaign, the Phase 3-D spacecraft must arrive in Kourou by 10 August.

Earlier, ESA had informed AMSAT that, following analysis of data from the Ariane 501 flight they had significantly increased their estimates for the acceleration and vibration environments which spacecraft riding on Ariane 509 are expected to encounter. As a result of this new information, AMSAT began re-evaluating the structural capabilities of the Phase 3-D spaceframe. As a part of this effort, an independent structural engineer was brought in to review the spacecraft's design and construction. His conclusions were recently presented to Dr. Meinzer and AMSAT-NA people. His report stated that, in order to be confident of surviving these increased launch environments, a number of modifications must be made to the spacecraft. Since that report was presented, substantial effort has been taking place at the Phase 3-D Integration Laboratory in Orlando, Florida, to manufacture and install the recommended structural parts necessary to increase the spacecraft's vibration and acceleration capability.

At the Marburg meeting, Dr. Meinzer made it clear to the ESA officials that this work, made necessary by ESA's new environmental information, would prevent AMSAT from delivering the spacecraft to Kourou by the specified 10 August date. Thus, it was the conclusion of the meeting that, as a result of these ESA specification changes, the Phase 3-D schedule and that of ESA for Ariane 502 were no longer compatible. Consequently, unless something changes, which ESA does not presently contemplate, Phase 3-D will not be able to be launched on Ariane 502. Furthermore, in order to maintain the planned mass characteristics of the Ariane 502 vehicle, AMSAT must supply a mass simulator representing the Phase 3-D spacecraft to be sent aloft on the flight. This had to be in Kourou by 5 September.

Despite this very bad news. Dr. Meinzer and other AMSAT officials expressed some degree of confidence the Phase 3D may yet fly on Ariane 502. They based this on a number of activities taking place in the preparation of the launch vehicle that, they believed, could cause a slip in the currently published ESA schedule. The ESA officials attending the Marburg meeting said that if a slip should occur, which they did not contemplate at that time, which would result in the two schedules again becoming compatible, efforts would be made to substitute the Phase 3-D spacecraft for the mass simulator. Therefore AMSAT kept on working toward completing the necessary structural modifications to the spacecraft and conducting environmental testing.

This initial announcement brought out a cry of dismay from many people who really did not understand the scope of the announcement. AMSAT is truly an international organizatian. Although the situation is disappointing, it is not without precedent Often in an active engineering project, situations arise that must be dealt with as the project nears completion. It was always in the AMSAT contract with ESA that if we could not be ready for launch, regardless of whose fault it was, we would have to launch the mass simulator (a large piece of concrete the size and weight of the completed bird). This does not mean we will not go up — just not on Ariane 502. At press time, I had not heard anything new about a new launch date, but all of us active in the satellite program hope that there will be an announcement soon. The AMSAT-DL team handles the nego-

tiations with ESA, and they will let us know when they receive any information.

Meanwhile, in Orlando, the integration teams have been working in extremely high gear. Teams from Germany, Belgium, Slovenia, Hungary, Japan, and the Czech Republic joined the American team on 18 August, working 15- to 18-hour days to get the new structural assemblies into the bird, and then re-installing the various gear that needed to be removed to complete the new modifications. As this was occuring, new modules were integrated (the 2.4 GHz and 24 GHz equipment, and the RUDAK digital experiment), along with installation of the momentum wheels (used to stabilize the attitude of the satellite once in space) and other specialized equipment.

At this point, all we can do is wait, but the integration teams are working their posteriors off, and we all owe them a huge debt of gratitude — they haven't given up hope, and neither should we — we may have to wait a bit longer, but it will be worth it in the end.

In the meantime, what do we do? There are still bunches of Low Earth Orbiting (LEO) satellites available for your pickings daily, and AO-10 still seems to be holding its own (as long as there is sun on the bird — the batteries are long gone). AO-10 will be reentering "eclipse" mode soon though, where we get very bad operating conditions for about three months — then it returns with vigor!

MIR has also been in the news again with more problems upon problems on board. Throughout the various crises, including the loss of the solar panels on the Spektr module, the 2-meter gear was kept operating. Mike Foale, KB5UAC, the American astronaut aboard the space station (thru mid-September) has stated many times that the gear was a real morale booster, and helped to pass varied information when other methods did not work! A great deal has been learned from all of the problems that have been encountered on the vessel, and hopefully it will help to benefit us as well in terms of communications on a regular basis with space.

Still, as of my deadline RS-16 was not in full operation, but we keep hoping for use soon. Once the controllers open up the transponder, we will have a new Mode A satellite for all of us to use.

Well, I'm rapidly running out of room for another month — I hope that I may have the opportunity to meet many of you in Toronto at the AMSAT Annual Meeting 17-19 October at the Delta Airport Hotel — it promises to be an exciting event. As always, if I can answer any questions, drop me a note via e-mail or snail mail. Have fun, and hope to see you on the birds! WR

Meteor scatter tests

PHILIP GEBHARDT, VA3ACK

Have you ever bounced a signal off the moon? Have you ever bounced a signal off a *meteor*? That is exactly what the Ontario DX Association (ODXA) will be doing on 10 meters every Saturday and Sunday during the early morning hours this October and November.

Meteors can reflect radio signals. When a meteor burns up, high in the E layer of the ionosphere, they produce a streak of light that is usually visible. What is not seen is an ionized trail that reflects radio signals. It is this ionized trail that the ODXA will be testing.

These tests consist of a separate transmitting and receiving site to listen for the reflected signals. This involves putting AM, CW and SSB signals on 29.050 MHz. CW will be used most often during the early morning test periods, 5 a.m.-7a.m. EST.

The reflected signals are characterized by a rapid rise and a short duration, usually with an amplitude equal to a local station and very similar to levels encountered in sporadic-E propagation. Because this all happens in the E layer, signals can be reflected over 3200 miles, and with DX on 10 meters being so poor, meteor scatter can be a way to make contacts all over North America.

If you are up early Saturday and Sunday in October and November, tune in on 29.050MHz, and listen for the call sign VE3ACK; reports will be welcomed from anyone who hears the signal. —*The Canadian Amateur*

AMSAT P3D launch delay official

AMSAT's Phase 3D Amateur Radio satellite will not be launched aboard the 30 September Ariane 502 booster and AMSAT has begun negotiations for a new launch opportunity with the European Space Agency.

The Phase 3D payload could not meet the late-September launch deadline because ESA provided last-minute new data that forced AMSAT to structurally modify the Phase 3D spaceframe to bring it up to new mechanical standards. Making the changes put Phase 3D out of sync with the Ariane 502 launch schedule, and will add $25,000 to the satellite's pre-launch cost.

AMSAT is talking with various other unnamed launch agencies. At the moment options are fluid but there is a good possibility of a launch in as little as five or six months time. —*via GB2RS, AMSAT-UK*

The Youth Forum

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Newsline Young Ham of the Year Award

If perchance you read the back cover of the September 1997 issue of ***Worldradio*** magazine, you will know that I am the recipient of the Newsline Young Ham of the Year Award. I am honored to have received such a prestigious award, and would like to thank the following people who made it possible: Kevin Karamanos, WD6DIH, fromYaesu; Dick Ross, K2MGA, from *CQ* magazine; Bill Pasternak, WA6ITF, from Newsline; Scotty Neustadter, W4WW, the Huntsville Alabama Hamfest Chairman; the ARRL; Jay Miller, WA5WIN, the great individual who nominated me for this award; Joe Knight, W5PDY; Don Grab, K5BIS; my grandfather, Ed, W5RMY; Lou Ann Keogh, KB6HP, ***Worldradio*** editor; Pat and Jan Mileshosky, my parents; and everybody else in between whom I did not mention. Thank you everybody!!! It is an honor.

On 1 January 1998 nominations will be accepted for the 1998 Newsline Young of the Year Award, which is sponsored by *Newsline*, Yaesu, and *CQ* Magazine. The purpose of this national award is to recognize an Amateur Radio operator, age 18 or younger, for their commitment to make Amateur Radio a better hobby. The nomination forms can be obtained from *Newsline* by sending a self-addressed stamped envelope requesting the 1998 Young Ham of the Year nomination forms to *Newsline*, P.O. Box 660937, Arcadia, CA 91066, or by pointing your web browser to the Amateur Radio Newsline Home Page at http://www.arnewsline.org

As stated above, this award recognizes an individual who has worked for the betterment of Amateur Radio. Holding an Amateur Extra class ticket at the age of 11 is impressive, but does not necessarily benefit Amateur Radio. Being involved in clubs, organizations and recruiting others to the hobby surely does.

I urge every young person reading this column to become active by joining an Amateur Radio club and an ARES or RACES group, by participating in Field Day, transmitter hunts, nets, and any of the countless other things that Amateur Radio has to offer. I would also like to urge one and all to upgrade, perhaps all the way to Amateur Extra, even if it means having to pass the CW tests, which are not hard at all. Invite your friends to the hobby, and help them earn their license. By doing these things, we will enjoy and strengthen this hobby even more, and when we become older, we will motivate young people, like ourselves, to do the same. These are the things the award judges are looking for!

This is a very prestigious honor, and I encourage and challenge every young ham to strive for this award. Once you receive the rules and nomination form, ask another amateur who knows you well to nominate you. Good luck in pursuing this honor!

Amateur Radio at Jamboree a Success!!!

This past July and August, over 35,000 Scouts and Scouters from the United States and 31 countries traveled to Ft. A.P. Hill, Virginia, for a week of fun-filled activities; and Amateur Radio was part of it! In my July 1997 column, I reported that Amateur Radio station K2BSA would be operating from the Jamboree from 80 meters to 70 centimeters, using modes from CW to ATV and even satellites. The station consisted of one HF transceiver each for 80 meters, 40 meters, 20 meters, and 15 meters, a 2-meter packet station, a VHF/UHF satellite radio, 440 MHz ATV transceivers and more! Over 2,000 QSOs were made, including 65 countries during the Jamboree! Worked All States was achieved by day four, and over a dozen satellite QSOs were made, including a special scheduled QSO with Mike Foale aboard Russian space station Mir. The K2BSA 2M Jamboree repeater made passing weather reports and emergency traffic possible, and it gave Scouters from all over the world the chance to meet each other on the air. Thousands of visitors stopped by the station to learn about our great hobby, and to get on the air to see who they could contact.

Amateur Radio license examinations were also offered at the Jamboree. At least 177 people took the examinations to become a ham, or to upgrade.Twenty-seven people passed their Technician test, and one person passed their Novice examination. Five amateurs passed their examinations to upgrade to a higher license. Examinations were held every day of the Jamboree, which is the reason why so many people wanted to be tested! Even people who hardly knew anything about Amateur Radio took the tests because they were so convenient to take.

I was thoroughly impressed with Mike Brown, WB2JWD, Phil Leinhauser, KE3VQ, and every person on the K2BSA staff for the fantastic work they put into the station to make it so successful and popular. Thanks, everybody. We look forward to seeing you at the next Boy Scout National Jamboree in 2001.

I am curious to see how active young amateurs are in Amateur Radio. Please write or e-mail me and tell me how involved you are in Amateur Radio! Whether it is just running a net or participating in a club or contest, I would like to know! Also, if you have any particular subjects you would like me to write about in future columns, please send them to me as well.

This column marks my first year as the Youth Forum columnist. I am having a great time writing for ***Worldradio*** magazine, and hope you enjoy reading this column.

Even though it's a bit early, I'd like to wish you and your family a fun, safe, and happy Holiday Season.

Until next time, 73.

Brian, N5ZGT **WR**

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

COUNTY HUNTER

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County Hunting from England

It's hard enough for some of us to imagine contacting all 3076 counties from within the USA, but imagine attempting to contact all counties from outside the USA. It would be pretty tough, don't you think? Well, believe it or not, DX stations are hunting US counties, and several of them have contacted all counties. Amateurs from Israel, Jamaica, Portugal, Germany, England, Scotland, Wales, Switzerland, Honduras, Italy, Austria, Belgium, Brazil, Sweden, Canada, Australia, Argentina, and New Zealand have contacted all 3076 counties. Rudi, HB9RG, from Switzerland, is very active on the county hunters net and has contacted all counties three times. The most well-known county hunter from outside the US is Eddie Scholes, G4KHG. Eddie was nominated this year as the County Hunter of the Year at the annual mobile Amateur Radio awards club (MARAC) convention in Orlando, Florida, and although he wasn't selected as the winner, Eddie felt very honored to be nominated. Here's the rest of the story...

Eddie Scholes, G4KHG

Eddie, aka G4 King Henry George, was first licensed in 1980, but didn't start county hunting until 1983. Eddie stumbled upon the county hunters when he met Frank Cassidy, G4HBI, who told Eddie he only worked USA stations. Eddie was convinced that Frank had a "real" problem. But that fateful meeting on 14.336 MHz (the county hunter's net frequency) has led to an unsurpassed love for county hunting and his county hunter friends on the net: something Eddie refers to as "losing his marbles." Along with losing his marbles, Eddie loses quite a bit of time on the net, usually from 1400-2300 UTC when propagation is good.

Completing the USA-CA in 1987 was a "real" pleasure for Eddie — partly because he could breathe a sigh of relief for finishing, and mostly because his last county was Real County, Texas. It was Eddie's QSL manager, Bob, N5DGQ, who operated mobile from the last county. Needless to say, Eddie did not have real difficulty getting a QSL out of Bob. Eddie's USA-CA award is #536 endorsed Mixed and dated 28 Mar '87.

Eddie now has contacted all counties four times and is closing in on the 5th time around (ironically, a fellow county hunter still working on his 1st time asked me on 2 meters recently, "What human gene is it that causes someone to hunt counties five times?"). G4KHG received his second time award #88, 12 Feb '90; his 3rd time #40, 1 Feb '92; and his 4th time #31, 6 Jun '94. Eddie also received the Master County Hunter Award (Bingo) #115, 16 Aug '96 and has the Big Rig Award #49 for contacting Tim, N9DEH, in 502 counties in 43 states while Tim was driving his 18-wheeler. Imagine, all these accomplishments from Europe!

Eddie wasn't always a radio operator and does have other interests. Eddie worked at Winstanley College (a small college of 850 16-18 year old men and women) and taught Latin, Greek, Ancient History and Archaeology during his teaching career. He taught there for 22 years until his retirement in 1988, at age 50. One of the perks was the club station, G4WCR, next to his classroom.

Apart from Amateur Radio, Eddie does enjoy listening to classical music, especially Brahms and Mahler. He also enjoys breaks in his caravan trailer in his beautiful Lake District where the hill-working is glorious. At home, Eddie finds gardening quite enjoyable, especially growingflowers.

Eddie Scholes, G4KHG, at his shack in Liverpool, England.

Back to hamming, Eddie also enjoys DXing and has 330 countries confirmed, only lacking Pakistan (A5), North Korea (P5), and Rotuma (3D2). Most of Eddie's contacts are on SSB, but he also enjoys CW. He finds the DX cluster packet radio network very interestng and worthwhile. His favorite QSL card is his contact with His Majesty, King Hussein of Jordan, JY1.

You don't typically think of DX county hunters as mobiles giving out counties, but Eddie has made four trips to the states since beginning county hunting...all of which were to visit the MARAC annual conventions and always involved running counties from the US. He visited the conventions in Denver, CO, in 1987; Hampton, VA, in 1992; Mesa, AZ, in 1995 and Orlando, FL, in 1997. In conjunction with his visit this year, he and his wife, Barbara, travelled 8013 miles in five and a half weeks. He was able to operate from 109 counties in 13 states; UT, NV, CA, AZ, NM, TX, CO, WY, MT, ID, GA, FL, and SC.

Eddie is an ambassador for MARAC and county hunters by tirelessly helping fellow Europeans with county hunting. Eddie sends out the MARAC information packet to European stations and helps stations on the net with mobile's call and county names. He received the MARAC President's Award at the Mesa convention, commemorating these efforts.

Eddie's Amateur Radio equipment has changed since contacting all counties the first time. His Kenwood 830S transmitter and Heathkit SB220 amplifier have become a Yaesu 1000MP and British amplifier, Explorer. For antennas, he uses a Cushcraft A4S triband beam with dipoles on the WARC bands. As mentioned earlier, Eddie spends many hours on the net. One evening, after hunting counties for hours, Eddie was trying to make county contacts in his sleep. His ramblings woke his wife who promptly dug her elbow into his side and told him to shut up. Eddie, an experienced operator unswayed by interference, suggested his wife QSY as the frequency was already in use!!!

For Eddie, county hunting has brought him huge pleasure over the past 14 years. He stresses that the chief quality needed for county hunting is persistence. Above all, Eddie is grateful for all the friendship and companionship he has experienced on the net and at the conventions.

I enjoyed meeting Eddie in Denver in 1987. He is a real gentleman and I appreciate the opportunity to tell you his story. You can read more about Eddie in the November 1987 Awards column in CQ Magazine.

County Hunter Reflector

Back in my November 1996 article when I reviewed the county hunter web page, I recommended some changes to the forum area. The forum area is a place for county hunters to leave a short message on a specific topic; then other county hunters read these and leave related messages. I thought a better way to handle the forum was to establish a reflector, as Dxers, Contesters, and other special interest groups do. A reflector is a way for someone to send a message once that automatically gets sent to everyone on the reflector e-mail list. Here's the good and bad news about reflectors. The good news is you don't have to go anywhere on the internet to see the information, it's sent directly to your e-mail account. The bad news is you might get a lot of uninteresting information until a worthwhile gem comes along. If the gem-to-trash ratio is low, you might get in the habit of deleting all your messages and missing the gem. Too much trash and not enough gems leads you to dropping off the reflector list.

The county hunter web page forum works a lot better now with a good browser and quick modem. You can scan the topics and associated comments that are of interest and read those topics only, saving time.

If you don't have internet access, a web browser, and a quick modem, but you do have an e-mail account, the reflector method may be the best approach for you. To subscribe to the county hunter reflector, send an e-mail to Majordomo@qth.net with no subject. In the text of the message, type suscribe countyhunters your@email.account. An example of your@email.account using my e-mail account is sjansen@aol.com. Good luck!

County Hunter Chat Room

Kudos to Don Flynn for adding a new capability to his county hunter web page...a CHAT ROOM! The way it works is simple: connect to the counter hunter web page (http://www.delve.com/ch) and click on query. If somone else is connected, you can exchange information with that person in real time. Pretty simple, eh?

countyhunter.com CW Award

King Kong Publishing (Dennis Hall, KK7X) will sponsor a new award available to all Amateur Radio operators for contacting all US Counties on CW. The purpose of this award is to encourage more county hunters to operate on CW and to use the CW county hunter nets. County hunters can work for this award at the same time they're working toward any other county hunter award; USACA, 2nd Time around, 3rd Time around, etc. KK7X proposes a 3-level Award; Gold, Silver and Bronze.

Gold: Worked all counties on CW with the contacts only being used for the Gold Award. Contacts may not be used for any other award (2nd time, 3rd time etc.) nor may any contact that has been used for any other award be used for the Gold Award. Applicants for this award must have their USACA number. Applicant may apply for this award beginning at the 1000 Contact level.

Silver: Worked all counties on CW using any contact. All contacts count regardless when they were made. Applicants do NOT have to have their USACA number.

Bronze: This award would be available to SWL's on a heard basis. Same rules apply as the silver award.

Endorsements: Any endorsement can be applied such as Mobile to

Mobile, no relays, bald headed operators (Thanks KJ4EJ) etc., including all fixed.

For more information, contact Dennis at kk7x@countyhunter.com or check out his web page at http://www.countyhunter.com.

CW CHN History

Thanks to John, K3WWP, for alerting me and others to his excellent home page (http://www.geocities.com/capecanaveral/3852). John has lots of information on Amateur Radio and links to other sites, but what I found interesting for my column is John's history of CW county hunting.

Back in the 60s, W8CXS (Michigan) and K4BAI (Georgia) were some of the early county expeditioners, but it was still tough for county hunters to get new counties after the initial 500. John, K3WWP, and Dave, WA8EOH, talked about the county hunters SSB net and decided there should be a CW county hunters net also. They announced the new net in CQ Magazine and started on May 2, 1966 on 7.035 MHz meeting on Monday, Wednesday, and Friday from 1700-2000 GMT and Tuesday and Thursday from 2300 until the band closed down. They had six checkins the first day and no one contacted a new county. But it was a start!

There were more than 1000 counties on the net that first year. John developed operating standards and logging techniques specific to the net. The current CW county hunters owe their net heritage to John and Dave and the many other county hunters of the day. For more information on the early days of the net, point your web browser to John's home page above. John also provides some information on the formation of the first CW county hunters contest in 1967 (over 350 counties were represented in that first contest). In 1969, control of the contest passed to Jeff, KØWNY (now W9MSE), who ran the contest until 1981. I contacted W9MSE last week while he was mobile from several counties. Nice to know W9MSE is an active county hunter, nearly 30 years later.

Latest USA-CA Holders

Funny thing! I went to the WWW and searched for USACA and found lots of information on the United States of America Cricket Association. Unfortunately, not what I was looking for. The latest holders of the CQ Magazine USA County Award for contacting all 3076 counties are the following:

926	KW8T	7/25/97
927	WAØJCE	7/25/97

That's all folks!

Hey, why don't you check out the county hunters nets; 14.336 and 14.056 MHz. You won't find out what you're missing until you jump in! Until January, happy hunting!

73, Ace, N3 aha! WR

CONTEST! BIG! PRIZES

To help counter the declining penmanship in this country, ***Worldradio*** is sponsoring a handwriting contest.

In the spaces below write your name, callsign, street address, city, state and zip as neatly as you can. Clarity counts.

_____
Name & Callsign

_____
Street Address

_____
City, State, Zip

Due to the momentous prizes being offered it is necessary to charge a $15 entry fee, which, considering the notable significance of the major prizes and the remarkable number of prizes being offered is but sheer "peanuts."

You may use your personal check, money order, AmEx, Visa, MC. For CC, please, below.

#_____

_____
Expiration date and signature

(Overseas stations-Non USA zips, add $10 to entry fee.)

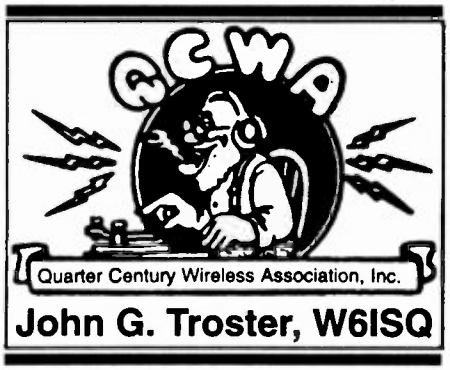
1st Prize: (and the sound of massed trumpets) A One-Year Subscription to ***Worldradio***!!!! *(The studio audience shrieks with joy.)*

2nd Prize: (Due to the abundant generosity of our sponsor) A One-Year subscription to ***Worldradio***!!! *(Band members have fainting spells.)*

3rd Prize: A One-Year Subscription to ***Worldradio***!! *(Wall Street Journal does front page story)*

Honorable Mentions: All will receive: A One-Year Subscription to ***Worldradio***!!

Send your entry to: Guaranteed Winner, ***Worldradio***, 2120 28th St., Sacramento, CA 95818.



John G. Troster, W6ISQ

QCWA Scholarships

Leland Smith, W5KL, President Emeritus of QCWA and presently Chairman of the Scholarship Committee, announced that our Scholarship Fund has risen to over $200,000. These funds are so well-invested that the committee has been able to create and sustain an ever-expanding scholarship program, granting 15 college scholarships this year. That should give us all a warm feeling. The scholarship fund is a very tangible way each of us can give to Amateur Radio in return for our many years of enjoyment. Here's a thought. Pass the scholastic cap at your December meeting! A total collection of $15K from our almost 200 Chapters would generate enough income to create another scholarship. That would be nice. Hearty thanks to the many individuals and clubs who have already donated to the fund.

QCWA Journal & Newsletters

Some of my cronies tell me they don't read through each of the Chapter reports in our quarterly Journal. Well, that's OK, we often don't know a soul in other chapters anyway. The pictures of the OBs and OGs are fun and every now and then a snippet of text rings a bell, but lately I've found my eye catches something quite different — names of restaurants where chapters hold their meetings. Some of those names out there are worthy of real note, outlandish and clever and wild. I thought to myself, "These are so good, there ought to be a contest, (being the ardent contester that I am [sic]). Let readers submit and vote on the best-named, meeting-eating place." Well, why not? Let's do it! If you think your chapter holds its meeting in a restaurant with a wonderful-colorful-crazy name, lemme know. I'll submit it to the readership for chuckles or ooohs and ahhhhs, as the case may be.

One of the several chapter bulletins I get comes from Chapter #138 in New Jersey where QCWA Board member Bob Buus, W2OD, is a Past Pres. and current editor of their bulletin. In their July issue, Bob noted that the Veteran Wireless Operators Association has awarded the Marconi Memorial Gold Medal of Achievement to Earl Korff, K2IC. Earl, as the 1997 recipient, joins a line of very distinguished ladies and gentlemen who have been honored with this Award. We add our congratulations to him.

Yardley Beers, WØJF

Last July I attended a Chapter 11 picnic and got into conversation with Frank "Duke" Dukat, K6NL, who wore his name and call on a badge pinned to his baseball cap. We chatted a little about the east and the fact that we both had lived in Boston. I said something about having gone to college in the east and he said, "Me, too," and flipped up the badge on his cap to reveal a "Y 33," which as you know, meant, "Yale, Class of '33." Memory bank on overload, I asked, "Did you ever know Yardley Beers, who was President of the Yale Radio Club about that time?" "Of course," says Duke, "he was in the class behind me." This association took me back to the time when, as a teenager, I was torn between stamp collecting and building radios. Yardley and I go way back, even if Yardley didn't realize it 'til I am telling him here. It was he who turned the tide for me, in favor of radio. Sooo, once upon a time....

My parents had a friend who visited us from Boston every few months. This nice lady used to bring me stamps which were excesses from her sons' collections. On one visit she saw me working on a receiver with two type 30 radio tubes. The type 30 tubes did not play very well at all. Next thing I knew, I received a letter from her son in the Yale Radio Club, telling me of the wonders of Amateur Radio. So I kept fiddling with the two-tuber, but for some reason, the loudest station I could receive was the Saginaw, Michigan, police! From Yonkers, NY! The Saginaw police were even louder than some of the local New York broadcast stations! I never figured out why, but I sure got to know the men in blue in Saginaw.

A few months later, to my elated surprise, I received a letter from the President of the Club, Yardley Beers! Wow! Talk about exciting! He included a diagram of a three-tube receiver, a 30-30-33 with a few tips how to make it work. I built it and the world opened up. No more "only Saginaw." The shortwave stations from Europe poured in, amateurs, everything. Excitement. Excitement. Yardley Beers was the Elmer who pushed me over the hill into Amateur Radio. I put the stamp album way back in second place.

About fifteen years ago, I opened my *QST* and there was an antenna article by Yardley. After all these years! That "small world" cliche shook me. I dug out that old 30-30-33 diagram, and sent him a copy along with a letter of thanks for pushing me over the brink into Amateur Radio. (I would re-print it here but I can't find it now.) This time, I decided to get in touch with Yardley, whom I determined had been a member of QCWA. Naturally.

He was born in Philadelphia and grew up in Trenton, NJ. He became interested in electricity through an uncle who was involved in the electrification of railways. Thus Yardley turned to electric trains and enjoyed wiring up extra signal devices and lights. In 1922, he went off to summer camp. His counselor there was Atherton Noyes, and it was he who introduced Yardley to radio. (They didn't meet again until 50 years later when Mr. Noyes was a practicing radio engineer.) When young Yardley got home from camp that summer, he began building receivers and reading radio magazines. His career as a radio enthusiast had clearly begun. In high school at Phillips Academy (aka Andover) in Massachusetts, Yardley made friends with some of the members of the radio club, call W1SW, who showed him QSL cards from faraway places. He was hooked and began to learn the code. He did it his way, which was this: learn the letters but never touch a key. Instead, listen five days a week for 20 minutes per day. Write down every letter you copy. You might start out being able to copy only one in 10 letters, but just keep at it. Soon you will copy "CQ", then maybe "de" then "W" then "the," and so on.

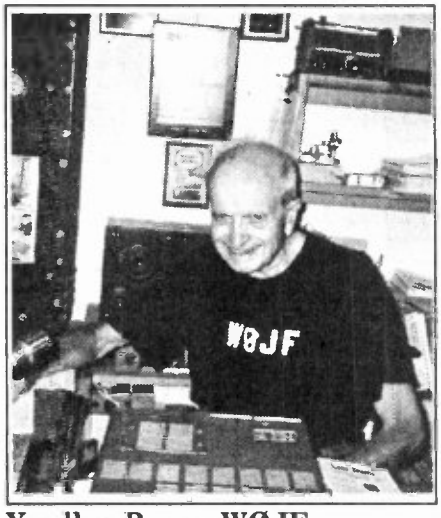
Gradually build up your comprehension. Now it was against the rules at Andover to have a radio in the dorm, but Yardley read an article in *QST* about a radio built in a lunchbox. So he built one, and with a retrievable, fine wire tossed onto a fire escape, copied code every night.

It was Monday, 24 March 1930, Yardley recalls, when he rode the train to Boston, took the amateur test, and passed it, of course. On Thursday he was back at Andover in the unheated radio shack tuning 40 meters. He heard a "CQ" and answered. The station came back to him, but he was so excited and scared, he couldn't finish the QSO!

W1SW was a pretty sophisticated station, being supported by some of their illustrious alumni. They used a regenerative detector receiver and an 852 TPTG feeding 132-foot wire. The boys hung a light bulb at the center of the antenna which lit up the surroundings when they were on the air. Boys will be boys. They operated 80, 40, 20, and by the time Yardley graduated, his best DX was Brazil. Yardley relates that some 15 years ago he gave a talk at a Cape Cod radio club about those early years on the air. He told his lunchbox story and after the meeting, a gentleman introduced himself as the one who had written that article!

Home in Trenton for the summer between Andover graduation and college, he got on the air with the call W3AWH, a regenerative detector plus audio, a 40-meter zepp, and a Hartley 210 transmitter. He also had his lunchbox receiver, which was so well shielded from the local RF that he could use it as a monitor. Yardley then entered Yale, Class of '34. There was no Radio Club at the University but the Electrical Engineering Professors thought there should be one. So he, Yardley, "Duke" Dukat and Bert Nelson, W1AYR, started the Yale Radio Club, call, W1YU. Several years behind Yardley at the club was a distant relative, Mike Villard, now W6QYT, Professor of EE at Stanford and experimenter/developer of amateur SSB. W1YU used 852 finals and by switching in an appropriate combination of condensers, they could generate a beautiful 180 hertz modulated CW signal— very good to get through QRM and work DX.

Yardley's major was Physics. He graduated in '34 and stayed for a year of graduate studies at Yale. His father had died, so Yardley transferred to Princeton, moving home to Trenton, only 17 miles away. There he put his home station, W3AWH, back on the air with a pair of 210s in the final and a W3EDP antenna. That antenna experimentally developed by his hometown friend, W3EDP, consisted of an 84-foot antenna and a 17-foot non-parallel counterpoise and worked extremely well. Yardley wrote up a description of the antenna in the March 1936 *QST*, p. 32, in the "For the Experimenter" section. This antenna became popular in England because amateurs there had to have a special license for antennas over 100 feet. The 84+17 feet of wire was close enough. A few months ago the Colorado QRP Association, in its magazine *Low Down*, featured an article about the W3EDP antenna which it had copied from a British book. That's lots of mileage output for one antenna.



Yardley Beers, WØJF

At Princeton, he completed an MS in Nuclear Physics in 1937 and a PhD in 1941. His dissertation project was to "measure the charge of the negative beta particle." Hey! come back — I'm not going to elucidate. See Yardley if you want further details. During his studies at Princeton, Yardley did have the heady experience of meeting Dr. Einstein, albeit briefly. They did speak, the eminent Einstein asking Yardley a question, and the awestruck Yardley mustered enough presence and acumen to answer satisfactorily. It happened this way — one evening Yardley attended a scientific lecture. Shortly after the lecture had begun, Einstein came in and sat down — next to him! About a third of the way through the lecture, Einstein turned to Yardley and queried, "What is the organization that has sponsored this lecture?" Yardley responded with its name. Not so memorable say you. Well, how many questions did Einstein ask you? Incidentally, Yardley totes up a total of 24 Nobel Laureates he has known.

In 1940 he began looking for a job as a physicist, making 50 applications in the process — that's how tight those positions were. But with the onset of WWII in '41, the situation dramatically changed, and he got a job with New York University, "learning how to teach and writing my dissertation." The next academic season, 1941-42, he moved to Smith College in Northampton, MA, an all-girls school, as an instructor in the Physics Department. (Note for Yardley: I used to get down to Smith rather often at that time, but not to visit the Physics Department.) This post proved very educational in another direction for Yardley. He explains, "This was the first time I had contact on a daily, working basis with members of the female sex since grade school, and this was my first experience in a college that was not part of a university with an engineering school." Attention women! He found girls were as good students as men, lacking only that very practical knowledge gained by playing with electric trains, erector sets, and model airplanes, which at times meant difficulty for them in setting up experiments. He found, too, that the worst Old Women on the physics faculty were the Old Men!

Pearl Harbor came that December, and Yardley received a letter from Princeton requesting that he go the MIT Radiation Lab in Cambridge, MA. There he was assigned to the Receiver Group and began basic research on low noise receivers.

Oops, gotta go. Hate to leave you hanging there in Cambridge, but it's a nice place and we'll continue Yardley's saga next issue. It gets even better. Here are a few hints of what's to come: Isle of Man, WWV, QRP, 9192 MHz, Dorothy, *QST*, "always on the air," Fulbright. Ten-minute quiz next month. See you then. Same time, same space.

Until then, 73+25, Jack, W6ISQ WR

Traffic

Geri Sweeney, N4GHI

Upcoming traffic

Some special event stations that we can expect to hear soon:

October

Foliage tours–Skowhegan, ME

Haywood County Fair–Waynesville, NC

Georgia National Fair–Perry, GA

December

XMAS–Virginia Beach mall, VA

First Night–Annapolis,MD

First Night–Boston, MA

11th Airborne Division

The 11th AB held a reunion recently. W6DOB announced it and received many replies via the National Traffic System. It's always a thrill to relay 'Airborne Always.'

BSA

The Boy Scouts held a huge Jamboree here in Virginia at Ft. A.P. Hill, in August. They generated many messages discussing everything from the badges they were earning to missing their families.

Holidays

November and December are the two busiest traffic months in the year. From a week before Thanksgiving to the night before Christmas, we have the time of our lives. Some days just before Christmas, we even need several stations to take TCC (TransContinental Corp) skeds. These are the folks who pass traffic from Area to Area.

1) How many areas are there in the NTS (National Traffic System)?

2) Who are the current Directors of each?

3) How is traffic passed from Area to Area?

First Night

It is tradition (anyone know how it started?) that we put away our bugs and keyers and dig out our straight keys on New Year's Eve. This is 'Straight Key Night.' Actually, a straight key makes a wonderful backup for your usual apparatus. For those on nets who may not be aware of what's happening, it must sound strange to hear these atypical key clicks. If you are NCS or have traffic to send, you might consider keeping the keyer handy to switch over as needed. It's amazing how wonderful you feel when folks can copy your straight key fist. Get a straight key ready and prepare to check into a traffic net with it on Straight Key Night.

The count

NY2V tells me that the editor of ***Worldradio*** posits that there are probably only about 200,000 active hams in the U.S. Virginia has approximately 80 traffic handlers (full and part time). Not having any idea what the medium Section weighs, I shall theorize using Virginia as a basis of analysis. If we expand that count to 69 Sections, we may suppose that there are about 5,000 traffic handlers in the U.S. and its territories. That would only be 2.5% of the total active hams. We appear to have lots of room to grow. How?

Are some fearful, or unwilling to learn how to format a message? Is it just too difficult to get a hold on those awful 'Q' signs? Is it apathy toward helping the community and others? Is making a commitment to turning on the radio even once a week for a few minutes to join a net too demanding? Are amateurs just not aware of traffic handling? How do we let folks know how much enjoyment traffic handling can be?

VHF nets

Perhaps the easiest introduction to traffic handling is checking into a local 2-meter net. The Net Manager and/or Net Control Station can give immediate help and encouragement. The radio equipment is less costly and a broad audience seems to listen in to hear what's happening. While Virginia has three local area nets, there is none covering its capital city, Richmond. It was particularly pleasing, therefore, to have just heard from a station in that area who says local amateurs are interested and would like to start a VHF traffic net. To be an NTS Local Net, it must: 1) Meet daily, 2)Have a liaison station to carry traffic on to a Section (HF) net, and/or some other mode (say digital), and 3) The net manager must send a monthly report to the Section Traffic Manager. Do you have a Local 2-meter NTS Traffic Net in your area? Do you need help starting one? The first step is to take a survey, perhaps on the repeater you will use, and see if anyone else is interested.

QMN MI Net news

"If you aren't absolutely sure of what you copied, ask for repeats until you are. Don't guess and don't QSL until you are sure." If you copy on paper and you are in doubt about a word/s, try underlining it so that you won't forget to request a fill. There are so many unlisted phone numbers now that it's imperative you get it right.

Summer picnics

The MI and VA traffic handlers held picnics in August. 2RN folks met in September. It's a great pleasure to meet folks you have been working on the air and have not seen. At the VA picnic, I met WA3JXW, whom I had been working on The International Assistance and Traffic Net every morning for 12 years. It made my day.

IMN Idaho/Montana Net news

W7GHT's newsletter is always great reading. I've copied several of his ideas (sending the latest W1PEX/Handi-Ham messages, etc) in my own Virginia newsletter. Bill's tip on sending ARL Sixty Seven, incorrect phone number, from his August *IMN Newsletter* is good, but I would quibble a bit. He feels that if the phone number is incorrect, you need to do more than send ARL Sixty Seven wrong number. Instead, he suggests you send the incorrect phone number back. There is as big a chance of the incorrect number being garbled on the way back as the correct number was garbled on the way out. I would suggest you say the phone number you received was incorrect, and/or send it with numbers: one seven two one three five six is incorrect. I'm assuming Directory Assistance and/or the Telephone Book was given a chance to straighten it all out before a service message was sent. If you request the phone number be sent again, you might suggest it be sent as words instead of numbers. Comments?

Fills

Which would you use to request a fill — 'City in SC' or 'WB SC'? The first takes 8 characters, while the second takes 4. More and more folks are using English to request fills; and, they are repeating the request. EX: It's a fine propagation night. No problems at all copying. A station says: 'WB WB last name in sig.'

Does the receive station just not have any idea how to ask for a fill? Or does s/he just not really care? The other guy must reply no matter how the fill is asked.

It gets complicated here. We now need every traffic operator we can find to help with all the schedules. We no longer have the luxury of assigning only the best operators to fill in the blanks. New folks copy what they hear. It seems that the critical mass of being more often able to hear good practice vs non-standard practice has eroded. Fewer and fewer seem to reflect on the finer points (say, should you as NCS use QNV or QNK), and execute a net as a finely skilled game. Do we need to encourage a return to the days when 'QSL' was the proper reply, instead of 'QSL your number 2758'? It's extremely difficult to compel volunteers to master what they see no need to execute. Comments?

California

Now has two CW traffic nets. With 9 Sections, one would think a lot of good traffic operators could be found. These nets are slow speed. No excuses.

*** 7:15 P.M. 3598 KHz ***
*** 9:00 P.M. 3705 KHz ***

The first includes Nevada. The second is primarily Southern CA. I'm told that participation is marginal and traffic is light. And yet, in August, some of my Long Beach, CA, relatives were visiting me. I sent a message for them to Long Beach. It was not delivered and no service message was returned. California... you can do it. Check out a CW traffic net.

CW Slow Speed traffic nets

EASTERN AREA

CSN (NC/SC)	6:00 p.m. 3715
FSN (FL)	8:00 p.m. 3715
MSN (MD)	7:30 p.m. 3717
EMRI (MA/RI)	9:00 p.m. 3715
MSSN (ME)	6:10 p.m. 3685
CSN (NC/SC)	6:00 p.m. 3715
NJSN (NJ)	6:30 p.m. 3515
ES (NY)	6:00 p.m. 3590
OSN (OH)	6:10 p.m. 3708
PTTN (PA)	6:30 p.m. 3610

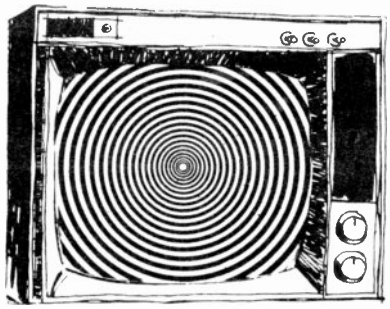
Local times. Let me know of any slow speed traffic nets in your area. Isn't it great to have so many nets that only one Area at a time can be listed? From the above listings, you can see that the Eastern Area has ten SLOW SPEED CW traffic training nets. They run from Florida to Maine. There is no excuse not to listen in to one, or two, or three. You should choose to support the one in your Section, but listen around and join the one that makes you feel at home. The more practice the better. This is a perfect real-time way to practice CW. **WR**

Dear Subscribers...

Please include your current mailing label with renewals, address changes, or any subscription problems.

Should you be fortunate enough to receive a one-year subscription as a club or hamfest prize and wish to extend an existing subscription, including your present label will help us give you faster, better service.

Thank you.



RFI & you

Jack Althouse, K6NY

We've talked about putting ferrite beads over cables to stop unwanted radio frequency (RF) currents from going down them. The beads serve as chokes to stop the RF, but once in a while they don't work. Why is this? If they are RF chokes then why don't they always choke off the RF?

To answer those questions we have to look at the whole circuit, not just the beads. Take a look at Fig. 1. It shows a common RFI situation. There is a SOURCE of RF (our transmitter), a PATH, a wire that picks up the RF and carries it to the RECEPTOR (a TV, a telephone, a stereo, etc.).

Note that the PATH is shown as a single wire even though it probably is either a coaxial cable or a two-wire cable. In the case of a burglar alarm system it may be a multi-wire cable. So why is it drawn as a single wire?

If it's a coaxial cable the beads we've put over it don't affect the signal going down the cable. They just stop RF from flowing on the shield. So for our analysis we can think of the shield as just a single wire.

If we have a two-wire cable, twin-lead for example, the beads will stop the unwanted "common mode" RF going the same direction down both wires but won't affect the desired transmission line RF going down the cable. So for our analysis of the ferrite bead's suppression of the common mode RF we can look at the two-wire cable as a single wire.

The same analysis holds for a bundle of two-wire conductors no matter how many there are in the cable.

Example

Let's use telephone RFI as an example. It's a good one because RF interference to telephones is a common and widespread problem. We have a two-wire cable connected to the telephone. This cable carries the voice signal as a "differential mode" signal. That is, the voice signal current flows into the telephone on one wire and back out on the other so

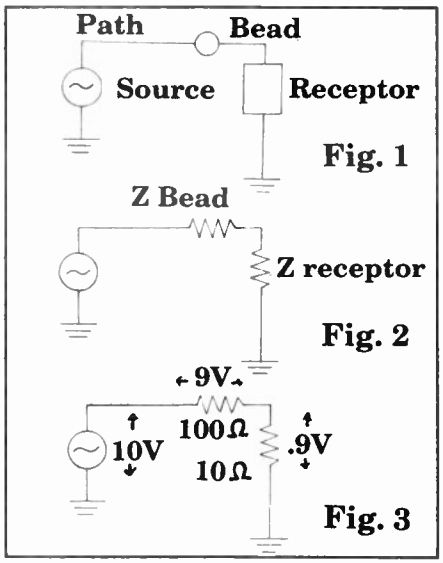


Fig. 1

Fig. 2

Fig. 3

the current is going in opposite direction in the two wires. So we can put a ferrite bead over the two wires without affecting the voice signal at all. The current in the bead due to one wire is canceled by the opposite current in the other wire.

But when RF is picked up by the cable the currents flow down both wires in the same direction. So as far as the ferrite bead sees it there is just one wire and there is no cancellation effect.

Look again at the schematic of Fig. 1. Our single wire is connected to the RF SOURCE (the signal from our transmitter picked up by the long telephone cable).

We've put a ferrite bead over the cable to stop it from getting into the RECEPTOR (our neighbor's telephone).

How effective is the bead? This depends on two things: 1) The impedance of the bead and 2) The RF impedance of the telephone. This is shown as a diagram in Fig 2.

We know the impedance of the bead. It depends on the size of the bead and the frequency but we can take 100 ohms as a typical value.

But what is the RF impedance of the telephone? That's the problem; we don't know. Fortunately most telephones look like a low RF resistance. If this one looks like 10 ohms to our 40-meter signal then we'll have the situation diagramed in Fig 3. If ten volts of RF appear on the cable we would have ten RF volts on the telephone but with the bead in place we have just under a volt, a 20 dB improvement. That may be enough to stop the RFI.

Some of us live under an unlucky star and the neighbor's cheap telephone will have, say, 100 ohms RF resistance. Now half of the RF voltage will be across it, a 6 dB improvement but, with our luck, probably not enough to stop the RFI. Our voice is weaker but still there.

Stronger measures

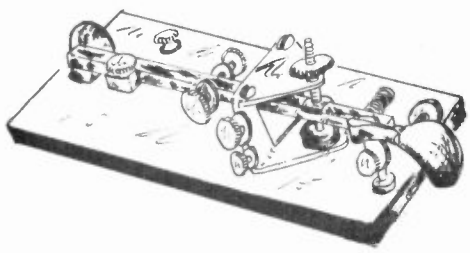
It's time to call in reinforcements. The obvious and straightforward solution is to add more beads. Each one will add 100 ohms of suppression resistance. Ten beads will give us 1000 ohms and the signal across the telephone will again drop to less than a volt.

Another way to increase the RF suppression resistance is to run the cable through the bead more than once. The RF resistance goes up as the square of the number of turns. Our 100-ohm bead wound with two turns gives 400 ohms; three turns gives 900 ohms, almost as much as ten beads strung on the cable.

Desperation measures

If you've used up all your beads and wound the cable through them but still have the RFI, then what? It may be that the telephone has a very high RF resistance, say 100,000 ohms. Could happen. Clearly there is no way you are going to get a high enough impedance with ferrite beads to do any good. They will need help. We need to lower the RF impedance across the telephone. The easy way to do that is to put an RF bypass capacitor across it, that is, from the cable to ground. A disc or monolithic ceramic capacitor, about .01 mfd. for the HF band, gives less than 10 ohms and better than 20 dB suppression with our single 100-ohm bead.

I call this a desperation measure because you are now connecting directly to the telephone circuit, something it's best to avoid at your neighbor's place. That's why the beads alone are nice—no modification to the equipment. But in your own home why not? If it works and solves the problem go for it. All alone or with a little extra help ferrite beads usually can do the job. WR



Positively CW

Nancy Kott, WZ8C
P.O. Box 47 • Hadley, MI 48440-0047
e-mail: nancy@tir.com

Inside every ham is a CW operator just waiting to get out. I know this from personal experience. Let me tell you a bit about my ham history. My father, W8ROG, has been a ham since the 1930's, so I always knew Amateur Radio existed, but learning the code never appealed to me. I took electronics in college and worked in an engineering laboratory as an electronic tech, so the technical part of the exams didn't bother me. I simply didn't want to get a ham license enough to warrant learning the code.

In 1985, I moved about 60 miles from the Detroit area where I had grown up. The phone bill from talking to my parents was enormous. My father pointed out that if my mother and I got ham tickets, we could save a fortune on phone calls by talking on two meters. This made sense to us, and we set about getting our tickets. My mother, WO8E, had to learn all the theory AND the code from scratch — at least I had an advantage on the theory from taking it in school. She got her ticket before I did! I simply hated Morse code and resented having to learn it. After all, I wasn't ever going to use it, I just wanted to chat on two meters using a repeater and a handi-talkie! Why should I have to learn the code? I fought it every step of the way, and consequently it took two years to pass my 5 wpm. If there had been a no-code license in 1988, I would have been first in line to sign up.

In retrospect, I'm very grateful that I didn't have that option. My mother and I soon discovered that chatting on two meters wasn't all it was cracked up to be. We began to get intrigued by the low band activity my father would casually mention in conversation. Not wanting to invest much money, we built HW-99's, Heathkit 50-watt CW only rigs. After all, we thought, how much fun could it be to communicate using something as slow and boring as Morse code? I quickly found out that using Morse code on the air opens up a whole new world. There is something magical about sending a CQ into the airwaves and the possibility of someone from anywhere in the world answering your call. The adrenaline you feel when you hear your callsign come back to you in code is just incredible. I was hooked. I never would have believed it if it hadn't happened to me.

The first contacts using any mode are memorable landmarks in your ham career, but I don't think any come close to the memories created by your first Morse code chats.

However, the adrenaline that makes it so exciting can also make it the most nerve-wracking of your ham experiences. I doubt if there is a CW operator in the world who didn't sweat bullets during his or her first CW chat! Some of the most experienced SSB operators get butterflies or freeze up when they think of answering a CQ using Morse, so this phenomenon isn't unique to new hams. Unfortunately, this fear keeps many hams from upgrading, because one of the best ways to increase your code speed is to get on the air and use CW.

Luckily, there are thousands of experienced operators who get a kick out of helping hams through their first CW contacts. Many times, when you cruise the Novice subbands you will hear more non-Novice callsigns calling CQ than Novices!

Before getting on the air, have a band plan in front of you so you can be sure you are in a subband where you are legally licensed to operate. Another thing you may find helpful is a "cheat sheet" of a typical QSO format. Basic QSOs consist of the signal report (RST), name, location (QTH), type of rig and antenna and the sign off. Write it out, word for word. For example: tnx for call, ur rst 599 599. name nancy nancy. qth hadley, mi hadley, mi. rig is knwd, ant dipole up 40 ft. tnx fer chat pse qsl 73 de wz8c. Of course, you wouldn't send all this info during one transmission. Turn the conversation over to the other ham after the RST, name and QTH and again after telling about your station setup. If it's going well and you want to ad lib, that's great! But it helps to have the cheat sheet to fall back on if you need it. I had a such a piece of paper taped to my desk, which may sound silly, but it was a lifesaver when I got flustered!

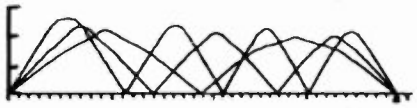
Now that you're ready to get on the air, the easiest way to get your feet wet is to answer a CQ. Slowly scan the frequencies in the subbands of your license class, listening for a station sending CQ at a speed you can comfortably copy. Carefully tune your radio to the calling station's frequency. Watch the S meter on your receiver and tune around the signal until the S meter is at the highest point. This is where you have the best chance of being heard. When they finish their CQ — generally it will sound like CQ CQ CQ de callsign callsign callsign — immediately send their callsign de your callsign three times. If they can't copy you well, they may send "QRZ?" which means "who is calling me?" Send your callsign again two or three times. Don't let this throw you, and don't take it as an insult if the other station doesn't copy you the first time.

After you've exchanged your basic information, don't forget to tell the other station that it is one of your first CW QSOs. Trust me, it will make their day!

Don't make the mistake I did of hating CW just because it's a requirement. It's been around for decades because it's functional and fun. If you give it half a chance, you just might discover that CW operator who is hiding inside you, too!

I welcome your comments. Please write to me at Nancy Kott WZ8C, P.O. Box 47, Hadley MI 48440-0047, or e-mail at nancy@tir.com WR

propagation



Carl Luetzelschwab, K9LA
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e-mail: k9la@gte.net

Last month we ended after identifying possible modes and determining the MUFs along the Ft. Wayne-to-Los Angeles path. These MUFs, being derived from median critical frequencies, are also median values. Here's the second area where things may not be well understood. This means these MUFs are not absolute values — they are statistical in nature. On half of the days of the month, the MUF will be above this value. On the other half of the days, the MUF will be below this value.

Since they're statistical in nature, they have distributions tied to them. We know where the "center" of the distribution is (the median value), but do we know how far the "tails" extend? Yes, we do. This comes from the variation of the daily data, and is in the form of lower and upper deciles (10 percent and 90 percent, respectively). For E region modes, the lower decile multiplying factor is generally assumed to be .95 and the upper decile multiplying factor is assumed to be 1.05. For F region modes, there are tables of lower and upper decile multiplying factors based on SSN, season, latitude, and local time (the CCIR Supplement to Report 252-2 has these tables in it).

Knowing this allows us to calculate the mode availability, which is the probability (1.00 = 100%, .90 = 90%, etc.) that the operating frequency (10.1MHz in this case) is below the MUF. These results for the possible modes of last month's Figure 1 are in Figure 2.

mode	mode availability
2E	1.00
2F	.80

Figure 2: Mode Availabilities

Figure 2 says the 2E mode (100% probability) is a sure thing, with the 2F mode (80% probability) not far behind.

Here's a third area where things may not be well understood. All the mode availability tells us is whether the ionosphere can get a signal from Ft. Wayne to Los Angeles based on the operating frequency of the MUF. It tells us nothing about how strong the signal will be in Los Angeles. It very well could be that the ionosphere could get a signal from Ft. Wayne to Los Angeles, but the arriving signal could be so weak that it's below the noise at the receiver. My predecessor, NM7M, liked to use the phrase "MUF is not ENUF." This phrase is relevant and accurate, so the next step is to calculate signal levels.

Calculating the signal level at the receiver is a simple concept. Knowing the transmitter power, subtract all the losses and add all the gains. My transceiver puts out about 100W, so that's the transmitter power I'll use to calculate signal levels later.

The first loss is the spatial loss, which is the loss due to spreading of the wave as it goes from Ft. Wayne to Los Angeles. We use the actual slant distance the wave travels for each mode, and not just the 2960 km ground distance (although we could, as it introduces only a minor error).

A second loss is the absorption that occurs when the wave goes through the D region down around 70km. The smoothed sunspot number, the solar zenith angle (which tells us how sunlit the path is), the angle at which the wave goes through the D region, and the operating frequency all are factors in calculating the absorption. There are equations that have been developed based on magneto-ionic theory, with simplifying assumptions to make them easier to use. Davies (Ionospheric Radio Propagation, 1965) has presented these equations with two nomographs (including a correction factor for the winter anomaly) that allow graphical calculation of the absorption — these are his Figures 7.5 and 7.6. The results are the loss in dB per hop (two passes through the D region — one going up and one going back down).

A third loss is due to ground reflection. For multiple hop modes, the downcoming wave is reflected from the earth back up. The loss per ground reflection is based on the wave frequency, the polarization of the wave as it encounters the earth, the earth characteristics, and the angle at which the wave hits the earth. This loss data can be found in several sources. For example, Figure 10.6 of NM7M's *The Little Pistol's Guide to HF Propagation* gives the reflection loss versus angle for three different types of ground at 14MHz.

A fourth loss is polarization mismatch loss. Just because I transmit with a horizontally polarized dipole doesn't mean the wave arriving in Los Angeles will be horizontally polarized. It'll usually be something else, and this incurs a loss based on the polarization of the antenna in Los Angeles. The calculation of this loss gets very technical very quickly. If you're really interested, check out paragraph 7.4 in the CCIR Supplement to Report 252-2.

Enough for the major losses. What about gains? Hopefully, that's where our antenna will positively contribute. But what we have to do is take into account the vertical pattern of the antenna over ground (for simplicity here we'll assume the antennas are oriented properly in azimuth). It's very possible that a required elevation angle falls right into the null of the antenna's vertical pattern — that surely won't help, even if the mode availability is 1.00. For this exercise, I will use horizontal dipoles at 50 feet cut for 10.1 MHz at both ends of the path.

Finally, several other factors can be considered — the gain or loss due to focusing/defocusing, over-the-MUF loss, and a couple other less well-known losses.

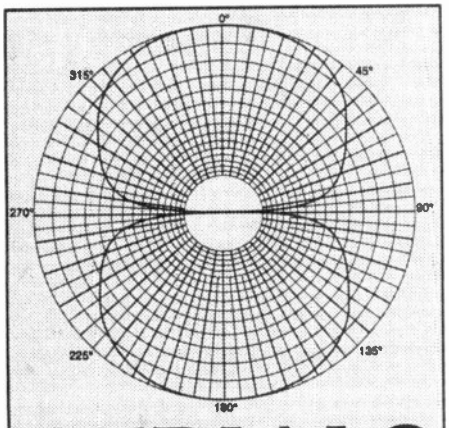
I've actually calculated all the losses and gains above for our two possible modes (my calculator sure got a workout). The results are per Figure 3.

mode	signal strength
2E	1.6uv (about S4)
2F	50.0uv (about S9)

Figure 3: Modes and Signal Strengths

This is a good place to end this month. Next month we'll look at signal-to-noise ratios, the probabilities tied to signal strength and signal-to-noise, and conclude with a brief summary of this entire three-part topic. WR

E-mail your story to n6wr@ns.net



AERIALS

Kurt N. Sterba

It was a letter from C. H. "Art" Smith that instigated this column. He felt there were erroneous impressions being ladled out to our youth and that I should take action.

In some circles it is being offered that SWR is the measurement of the ratio between the impedance of the feedline and the impedance of the connected antenna. Bandied about is the notion that a 50-ohm feedline and a 300-ohm antenna result in an SWR of 6 to 1, a 200-ohm antenna and a 50-ohm feedline is 4 to 1, etc. Ah, if life were only that simple. If it were only this "impedance" that mattered.

Let us illustrate: For the sake of the discussion we'll observe two antennas. The first one (A) has 50 ohms of resistance and 1 ohm of reactance. The second one (B) has 1 ohm of resistance and 50 ohms of reactance.

Using the impedance formula, both antennas will have the exact same impedance (50.01) and, according to the thoughts of many, an SWR of 1.0002.

Not so fast! In real life, antenna "A" will have an SWR of 1.020 and antenna "B" will have an SWR of 100 to 1.

So, it appears that SWR is a measurement of the power ratio, NOT the impedance ratio.

To describe another situation: A resistance of 50 ohms and a reactance of 3 ohms. Looks like 50.09 ohms, right? How about 3 ohms R and 50 ohms X? Looks like a Z of 50.09 ohms again, right?

But what are the SWRs, really? In the first case 1.002 and in the second case 33.3.

Oh, I can hear the grinding of teeth from here. All I can say to the Kurt critics is that I am quite correct, again, as usual. Save your letters. What I said is in the real books, and in sugar-coated form, the full formulas are in my April column of this year.

New subject: A manufacturer sent me a fax via the Worldradio office. There was material in it that was, to be gracious, "less than wonderful." To be realistic — incorrect. Waiving my usual consulting fee, I was kind enough to keep him from embarrassing himself in print in his brochures. Not a word of thanks. I'll remember that.

Another manufacturer says, "Antenna Tuners can lower your antenna SWR from 4 or 5 to 1, to a more reasonable 1.2 to 1.5 to 1." Isn't that nice? Too bad it isn't true.

In reality, the antenna SWR has not changed at all. You could come up with six capacitors and three silver-plated roller inductors and still not change the "antenna SWR" a whit, unless you put them between the antenna and the feedline.

The tuner does indeed match whatever complex impedance has resulted from the antenna/feedline mismatch. That results in all the power being radiated MINUS the loss in the feedline resulting from the SWR, which didn't really go away at all. It was compensated for.

It's like tuned circuits. When XL equals XC you have resonance. Some take that to mean that, say, XL attaining a certain value has canceled out the XC and there is no X at all. No, that's not it. XC is still there in all its value, it's just that XL has equaled it.

Next, it is possible to adjust a tuner in such a manner that it is supposed that the maximum power is being transferred but it really isn't. The SWR bridge can be fooled. There is only one way to know for sure — the Field Strength meter!

I hope that over the years I may make a contribution, if even a small one. I'll consider myself a success if I can just prevent one ham, even only just one, from saying as I heard on 75 phone just a few nights ago, "I really don't like to operate this high in the band, my SWR is 1.7 to 1."

Please, even if you should agree with him and not me, please, don't go on the air and say that.

I was looking at a past issue of a periodical in the hope it was a technology journal. A writer told of having three SWR meters. He admitted to the uncertainty of calibration. So, for purposes of the outlined experiment he selected the one with the worst (highest) readings.

Now will be outlined how to, instead, know what you are doing. First, get a Bird Wattmeter Model 43. Expensive? Yes! With plastic money one could pay for it over three years or so. Then, don't do like some, after buying a new wattmeter, who, to save some money, buy used slugs. You don't know just how many times some klutz dropped that slug on the concrete floor at the shop.

We'll assume that, so as to not spew a lot of signal into the air while making tests, that you run at say, the 60-watt level.

Your wattmeter reads 80W forward and 20W reflected. OK, take the 20W and divide it by 80W and the answer is: 0.25. Next, take the square root of that 0.25 which is: 0.5. Then add a 1 to that and you have 1.5 for the answer. The next step is to subtract 0.5 from the whole number 1, and the answer is 0.5. Finally, divide 1.5 by 0.5 and the answer is 3, which is your SWR, 3:1.

You've gone out and adjusted things and now you take another reading and see 70W forward and 10W reflected.

10/70=0.1428 and the square root of that is: 0.3779. So, we take 1 minus that number and end up with 0.6220. We divide 1.3779 by that number and we get: 2.21, which means we've made progress.

Just once more to make sure everyone gets it. Forward power is 65W and reflected power is 5W. Work it out yourself. Yes, the answer is: 1.76 for your SWR. One more adjustment and you see 62.5W forward and 2.5W reflected, an SWR of 1.5:1.

And, I'll bet the majority of hams reading this have never seen this presented anywhere else.

It's not every day that one runs into such amusing tidbits. One licensed (?) amateur, in trying to make a case for a particular antenna, told how it beat out some other amateur's (quite similar) antenna by two "S" units. Uh huh.

First (you know, this is so bizarre it is almost difficult to continue), if the real scientists ever heard of two Yagi-type antennas of nearly the same size having such a differing result they would either (1.) tear apart the supposed great antenna and examine it piece by piece under a microscope, or (2.) and more likely, just say, "Oh, it's those hams at it again. Cute little things aren't they? But they are just so mischievous!"

I will now tell all of you who really care how antennas are really measured. But first, isn't it amazing how all of these spectacular antennas always come, NOT from people who have devoted a lifetime of serious study and practice to the subject. These precedent-shattering antennas never seem to be written up in the IEEE journals. The military and communications companies that are always searching for improvements never adopt them. And why is that? You really know, don't you?

Now for actual measurement. Anything less than this can be fun, a day in the sun and out in the fresh air, but science, not.

For 20M the downrange antenna is at least 10 wavelengths away from the transmitting antenna. For 14.2 MHz that would be approximately 693 ft., 1-38/64 inches. The two antennas are at the same height and at the very least a half-wave above ground. The receiving antenna is a dipole which then feeds the captured energy to recording instruments.

The transmitting antenna is a dipole. Careful notations are taken at both the transmitting and receiving sites. After a reference level is noted the transmitting dipole is removed and the antenna under test is put in its place (using the same feedline). Readings are compared to the reference dipole.

Now comes the professional way to judge results. A highly-calibrated attenuator is placed between the receiving antenna and the recording device. The pads are adjusted until the reading is equal to that of the dipole. The amount of attenuation required is recorded as the gain of the new antenna.

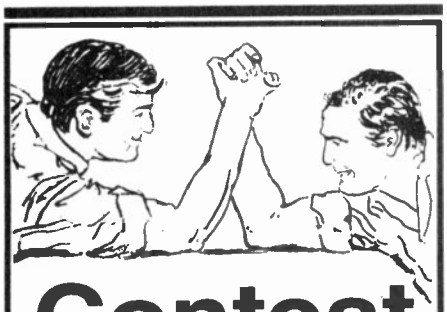
The test is repeated again and again at different power levels, and here are some standards: The raising and lowering of the antenna, up or down a quarter-wavelength should not result in a more than 0.1 change in SWR. As you can see this is not a playground, we are talking serious stuff. So serious, that if you met all the requirements you could actually advertise your figures in *QST* if you submitted all the test data. That would include the radiation pattern and showing of the half-power (3 dB) points.

You have to show the bandwidth between the 2-to-1 SWR points at the antenna, not after the journey down the coax.

To be realistic, these tests must be conducted in such a way that test transmissions are not reflected from parked cars, water towers, moving vans, Quonset huts, etc. One company has even gone so far that in the construction of the building to house the test equipment, no nails were used. The University of Arizona has an antenna range that can be utilized upon proper payment.

There is an old saying, that also applies to antennas, "If it sounds too good to be true, it probably is." There is no black magic, no witch doctor jumping around the antenna that can make it perform any better than what is in the books.

(Those who wish to drink from the well of knowledge can gather here again next month.) **WR**



Contest Corner

Don Durk, KA1DWX
info@autofold.com

November is Sweepstakes month! Plan your strategy now for running those densely populated areas. A modest height dipole may be very useful for nearby areas, while lower takeoff angles may be useful for KH6, KL7 or VE1. For these long hauls, try something a bit different. Check out the web site: solar.uleth.ca/solar/www/ realtime.html Here you'll find near real time MUF charts (near real time=updated every 1/2 hour!). You can see the MUF between two points and by mid-point math find the near real time MUF! WOW!

Check out the neat contest goodies this month! The really big first prize in the JA International SSB DX Contest and the nice coffee mugs for clean sweeping Sweepstakes or a participation pin for 100 Qs!

Get logs in within 15-30 days! Electronic logs are often accepted provided the format is as specified. Usually ASCII or CT.Bin files are OK. Most contests require separate logs per band, checksheets for over 200 Qs, a summary sheet and a signed and dated affidavit attesting to observance of the rules of both the contest and your local regulating authority. A statement wherein you agree to be bound by the decisions of the contest committee is also needed. All times are in UTC. WARC bands excluded.

LATE OCTOBER CONTESTS

(see October ***Worldradio*** magazine for details)

•CQ WW SSB

25 October 00:00-26 October 24:00 (RS+CQ ZONE)

•YLRL SSB PARTY

Wednesday 22 October 14:00-Friday 24 October 02:00 (RST+QSO number + State/ VE PROV/DXCC Country)

NOVEMBER CONTESTS

•ARRL CW SWEEPSTAKES

1 November 21:00- 3 November 03:00 (599+A/B/Q+YR)

Q US + Canada 1 time only, not 1 time per band. 1.8-28 MHz, NO WARC BANDS. Operate no more than 24 of 30 hrs. Exchange format example: W1AW NR 001 A KA1DWX 56 EMA. Give station's call; Consecutive serial #; A if <150 watts , B if >150 watts or Q if <5 watts; Ur call; Last two digits of year first licensed, e.g.1956, and ARRL Section. Score: 2 pts per Q x mults per band (ARRL + Canada sections + VE8/ VY1, Max 77). KP4 = Puerto Rico Section, KV4/KP2/KG4 = Virgin Island Section, KH6/US Pacific Possessions = Pacific Section. Single Op, non packet/

Multi Op 1 transmitter/QRP Single Op/Club competition. 100 Qs gets you a pin ($5 + address label). Clean Sweep Coffee/Tea mugs($10 + address label). ARRL

•UKRAINIAN SSB/CW DX CONTEST

1 November 12:00-2 November 12:00 (RS(T)+number)

Q 1 x per mode, 2 x per band but 10 minutes between the Qs.,160-10. Multi Op 10 minute rule.Score:pts(1 own country;2 for other country in ur continent;3 for other continent;10 for Ukraine Qs) x mults(WAE/DXCC countries and Ukrainian regions per band).Ukraine regions: 057-VI; 058-VO; 059-LU; 060-DN; 062-ZH; 063-ZA; 064-ZP; 065-KO; 066-KI; 067-KR; 068-LV; 069-NI; 070-OD; 071-PO; 072-RI; 073-DO; 074-IF; 075-SU; 076-TE; 077-HA: 078-HE; 079-HM; 080-CH; 081-CR; 082-CN; 186-KV;187-SL. Ukrainian Contest Club HQ, P.O. Box 4850, Zaporozhye, 330118, Ukraine.

•DARC DIGITAL CORONA 10M CONTEST

2 November, 11:00-17:00 (RST+Number)

Q 1x per mode- RTTY, AMTOR, CLOVER and PACTOR. 28 MHz only. Score-pts (1 per Q) x mults(DXCC/WAE list and each call district in JA, W and VE). Single op or SWL. Separate log per mode.DF5BX

•HIGH SPEED CW CONTEST

2 November, 09:00-11:00 and 15;00-17:00

(RST+ number for non-HSC members; RST+ number for HSC member)

Q 1x per band, 10-80.Score: pts (1 for own continent; 3 for other continent) x mults (1 for ea WAE/DXCC country per band). DL8WAA

•HA CW QRP 80M CONTEST

1 November 00:00-7 November 24:00 (RST+QTH+Name)

Max power out is 10. Score:pts (1 for same country; 2 for other country) x mults (ea DXCC country =1). Radiotechnika Szerkestosge,Pf 603,H-1374 Budapest, Hungary.

•JA INT'L DX TEST SSB *(CHECK THIS OUT!!!)*

11/7 23:00 - 11/9 23:00

(59 + CQ Zone or Prefecture 01-50 for JA stns)

Q 1x per Band. Q JA only. JA Q only non JA. Q w/mm ok for pts and Zone but not for Country mult. 3.5 -28.9 MHz NO WARC BANDS. Look for JA stns. 3525-3575;3747-3754,3791-3805. Single Ops, 30 Hr. max.; Multis, 48. Rest period of at least 60 mins. Score - pts (1 for 40-15; 2 for 80 and 10) x mults (prefectures per band). 100W or > Single Op/Single Band//Single Op Multi Band. 100W or < Single Op/Single Band// Single Op Multi Band.Multi Op/ Multi Band (ck 10-min rules!). Packet or other assistance not allowed for single op. Checksheet for 500 or more Qs or for band w/> 200 Qs. Results on:jidx-info@dumpty.nal.go.jp. ARRL format log to: jidx@dumpty.nal.go.jp w/ printed summary sheet or 59 Magazine, P.O. Box 59, Kamata, Tokyo 144, Japan. Winner of U.S. phone will be granted a free r/t ticket to JA to get plaque (Courtesy of Bear JA7RHJ/AA6PU).

•ALARA SSB/CW CONTEST (AUSTRALIAN LADIES' AMATEUR RADIO ASSN.)

8 November 0001-2359

(For YL non-ALARA, OM or Club send RS[T] + Number + Name + Club [if club]; For ALARA members send RS[T] + Name)

Q 1x per mode per band. 3.5-28 MHz. Fqs: 28380-28410; 21170-21200 and 21380-21410;14250-14280; 7070-7100; 3560-3590. Score-pts. -5 forALARA Q; 4 for YL non-member Q; 3 for OM or Club Q. Note: contacts where 1 op is Novice count for double points. There are no multipliers in this contest. Certs and trophies. Logs to VK3DMS.

•WAE RTTY TEST

8 November 00:00-9 November 24:00 (599+Number)

Q 1x/Band. 3.5 - 28 MHz NO WARC BANDS. 36-Hour max for single ops. For WAE RTTY work all stations including your continent, BUT no QTC'S within your own continent. EU and Non-EU may both receive QTC's. QTC is a list of prior exchanges. Send and receive no more than 10 to or from each station outside your continent. The format is Grp 1/10, 2/10, 3/5, 4/5, etc. This means your first group having ten exchanges, your fourth group having 5 exchanges etc. You then send time/stn/ nr, for example, 0001/DJ6QT/020 0002/ DL1IAO/034 0004/DJ6RB/023, etc. Score: number of QSO's + QTC's x multipliers (Non EU = number of EU countries per band [WAE Country List] x2 for 14/21/28; x3 for 7 MHz; x4 for 3.5 MHz.) (EU = 1 mult per band for each non-EU country per DXCC list.) Single op all bands/Multi op single transmitter/ SWL. **Congrats to '96 stars: S50A, DJ6QT, K1AM, W2UP and multis IK2ZUT & K5DJ.** WAEDC RTTY Contest, Durerring 7, P.O. Box 1126, D- 74370 Sersheim, Germany.

•OK/OM SSB/CW DX CONTEST

8 November 00:00- 9 November 24:00 (RS[T] + number for non-OK/OM; RS[T] + Number + 3-letter district code)

OK/OM Q only outside OK/OM others Q only OK/OL/OM. Q 1x per mode per band 1.8 -28 MHz.Score: pts(EU w/ OK/OL/OM-1;others w/OK/OL/OM-3; OK/OL/OM w/EU-1; OK/OL/OM w/ other continent-3) x mults (OK/OL/OM prefixes per band and each mode). Districts were: APA, APB, APC, APD, APE, APF, APG, APH, API, APJ, BBE, BBN, BKD, BKH, BKO, BMB, BME, BNY, BPB, BPV, BPZ, BRA, CBU, CCK, CJH, CPE, CPI, CPR, CDT, CTA, DCH, DDO, DKV, DPJ, DPM, DPS, DRO, DSO, DTA, ECH, ECL, EDE, EJA, ELI, ELO, ELT, EMO, ETE, EUL, FCR, FHB, FHK, FJI, FNA, FPA, FRK, FSE, FSV, FTR, FUO, GBL, GBM, GBR, GBV, GHO, GJI, GKR, GPR, GTR, GUH, GVY, GZL, GZN, GZS, HBR, HFM, HKA, HNJ, HOL, HOP, HOS, HPR, HSU, HVS, IBA, IBB, IBC, IBD, BE, IBV, IDS, IGA, IKO, ILE, INI, INZ, ISE, ITA, ITO, ITR, JBB, JCA, JDK, JLM, JLU, JMA, JPB, JPR, JRS, JVK, JZI, JZH, JZV, KBA, KHU, KKM, KKV, KMI, KPO, KPR, KRO, KSD, KSL, KSV, KTR and KVR.

Classes are:Single Op CW; Single Op SSB; Single Op Mixed; Multi Op Mixed; QRP; SWL. Special QSL for each participant, Trophies, Awards, 4-color certificates. OK2FD

•ARRL SS(SSB)

15 November 21:00 -17 November 03:00

SEE RULES FOR ARRL SS(CW) 11/1 -11/3 in this column.

•ARRL INT'L EME CONTEST

15 November 00:00 - 16 November 24:00

THIS IS A 2-WEEKEND contest w/ the first weekend in October (BOTH Calls + Report + Acknowledgment of calls and reports)

Q 1 x per band SSB/CW.50 MHz and up. Score-pts (100/Q) x mults per Band. Mults = U.S.+VE call areas+DXCC countries (not U.S./Canada). Single Op multi band/single band// Multi Op — special rule — 2 or more amateurs including neighboring amateurs within one call area but not greater than 50 km apart, provided EME facilities for different bands on the different premises are present. Certs for even 1 Q via moonbounce. ARRL

•RSGB 1.8 MHZ CW CONTEST

16 November 21:00-17 November 01:00

(RST + Number; UK stns RST+ Number + County) UK stns. work all others. G3UFY.

•ARRL INT'L EME CONTEST

23 November 0000-24 November 2400

This is the 2nd Weekend of a two-weekend contest. The first weekend was in October

(BOTH CALLS + REPORT + Acknowledgment of calls and reports)

Q 1x/Band SSB/CW.50 MHz and up. Score-Pts (100/Q) x Mults per Band. Mults = U.S.+ VE call areas + DXCC countries (not U.S./Canada). Single Op multi band/single band//Multi Op — special rule — 2 or more amateurs including neighboring amateurs within one call area but not greater than 50 km apart provided EME facilities for different bands on the different premises are present. Certs for even 1 Q via moonbounce. ARRL

•CQ WW CW

29 November 00:00 -30 November 24:00

(RST +CQ ZONE)

Q 1x per Band. 1.8- 28 MHz. (NOT WARC BANDS). You must sign portable if your call sign indicates a different zone or country than actual. Single ops need 12 hrs or more for awards; multis need 24. 10-minute rule and antenna details — CK RULES! Score-pts (Diff continent-3 pts; Own country-0 pts but OK for mult; NA other NA countries-2 pts; Non NA stns-same continent but different country 1 pt) x mults (ea CQ Zone + ea DXCC Country/WAE Country per band) /mm = zone mult only. Single Op All Band or Single Band. A1-Single Op High-no DX alerting assistance. A2-Single Op Low-not> 100W out. A3-Single Op QRP-not> 5W out. A4-Single Op assisted. Multi Op-All Band only. B1-Multi Op 1 Tx-1 Tx on 1 band during any 10-minute period, except that during this 10-minute period one, and only one, other band may be used if the station worked is a new mult. B2- Multi Xmtr-1 signal and running station per band. Team-Any 5 ops in the single op category. You may be on only 1 team per mode. You may be on entirely different SSB/CW teams. Competing on a team does not prevent you from submitting your score for a club. A list of the team's members must be received by CQ prior to the contest's start. FAX to CQ, Att:Team Contest,. 516 681 2926. Club - at least 3 logs and club officer must report list of participants and scores. For awards, single op must have minimum of 12 hours on; multi must have minimum of 24. Trophies, plaques and certs. Checksheet for each band w/200+ Qs. Penalty for dupes or broken calls - up to 3%, 3 Qs removed for each error; for > 3% possible disqualification. Disks-IBM, MS-DOS compatible. Format CT.Bin for example - HS0AC.BIN or N6TR.DAT or your .DBF files. CQ.

NOVEMBER CONTESTS

11/1 Weekend

- UKRAINIAN DX SSB/CW Contest
- COLLEGIATE CW Championship
- IPA RADIO CLUB SSB/CW Contest
- DARC Corona Digital Contest
- HSC CW Contest

11/8 Weekend

- JA INT'L SSB Contest
- WAE RTTY Contest
- ALARA SSB/CW Contest
- OK/OM SSB/CW Contest
- DARC 10 METER SSB/CW Contest

11/15 Weekend

- ARRL SSB SS
- ARRL INT'L EME Part 2
- IARU REG 1 160 METER CW Contest
- COLLEGIATE SSB Championship
- RSGB 1.8 MHz CW Contest
- AGCW DL HOMEBREW & OLD TIME EQUIPMENT CW Contest

DECEMBER CONTESTS

12/6 Weekend

- ARRL CW 160 Contest
- FAIRS HF DX DIGITAL DATA Contest
- EA CW DX Contest
- TOPS CW 80M Contest
- QRP ARCI HOLIDAY HOMEBREW CW Sprint

12/13 Weekend

- ARRL SSB/CW 10M Contest
- TARA RTTY Sprint

12/20 Weekend

- CROATIAN CW Contest
- INT'L NAVAL SSB/CW Contest
- 12th INTERNET CW Contest

12/27 Weekend

- STEW PERRY 160 CW Contest
- ORIGINAL QRP CW Contest
- RAC CANADA SSB/CW Contest

JANUARY CONTESTS

1/1/98

- STRAIGHT KEY NIGHT
- SARTG NEW YEAR RTTY Contest
- AGCW HAPPY NEW YEAR CW Contest

1/3 Weekend

- ARRL RTTY ROUNDUP
- HUNTING LIONS ON THE AIR CW Contest
- AGCW-DL QRP WINTER CW Contest

1/10 Weekend

- HUNTING LIONS ON THE AIR SSB Contest
- NAQP-NORTH AMERICA CW QSO Party

Got a cheap, cheesy little camera? Take a picture for *Worldradio!*

1/17 Weekend

- ARRL VHF SWEEPSTAKES
- YL-ISSB CW QSO Party
- LZ OPEN CHAMPIONSHIP
- NAQP-SSB QSO Party
- HA CW DX Contest

1/24 Weekend

- REF FRENCH CW Contest
- UBA BELGIAN SSB Contest

WR

Now! Send your articles to *Worldradio*

You wrote a great article and both *QST* and *CQ* turned it down and that discouraged you. What do they know?

One day a major publishing house turned down "Born Free" in the morning and "Catch-22" in the afternoon. A publisher told Thor Heyerdahl that if he'd really shorten "Kon Tiki" it might make an article for *National Geographic.*

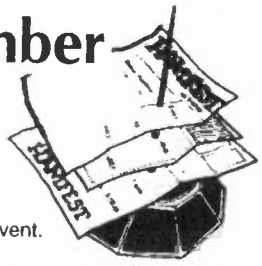
Nobody knows anything. So send your article to ***Worldradio.*** You might earn enough to buy dinner for two at Burger King. What if ***Worldradio*** turns down your article? Well, there's always *73.*

Send your article to us at 2120 28th Street, Sacramento, CA 95818 or e-mail to n6wr@ns.net

Hamfests

November

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



•ALABAMA•

The **Montgomery ARC** will host the 20th annual Montgomery Hamfest and Computer Show on 8 November from 8 a.m. to 5p.m. (setup 3-8 p.m. Friday and 6-7:30 a.m. Saturday) at the South Alabama Fairgrounds, located on Federal Drive in Montgomery. Admission $5, free parking, all indoors including the flea market. Flea market reservations are encouraged. VE exams on site at 8 a.m. For more information or table reservations, write to: Hamfest Committee, 2141 Edinburgh Dr., Montgomery, AL 36116-1313 or telephone Phil at 334/272-7980 after 5 p.m.; fax 334/365-0558 or e-mail WB4OZN@worldnet.att.net Talk-in 146.84 (–), 146.92(–), 147.18(+) or 449.5(–). Kick-off banquet Friday evening,7 November at Bonnie Crest Country Club with ARRL national staffer Rick Palm, K1CE. Contact Patty@ 334/567-7195 or e-mail to prolan@juno.com for reservations.

•CALIFORNIA•

The **Livermore Amateur Radio Klub** will hold a swap meet 2 November, 7 a.m.-12 noon at Las Positas College, 3033 Collier Canyon Rd., Livermore, CA (Airway Blvd. exit to north of 580 highway). New, used, surplus ham, computer gear, misc. electronics & testing equipment, refreshments available. Admission and parking: Free. Vendor cost, $10 per space (space equals two parking places). Talk-in: 145.350(–) PL 100 (receive and send), 147.045(+) PL 94.8, 147.120(+) PL 100. Contact Noel Anklam, KC6QZK, eve., 510/447-3857; days, 510/783-2803.

•FLORIDA•

The **Lake Amateur Radio Association, Inc.** will hold a hamfest and electronic expo on 1 November from 8 a.m. to 4 p.m. (setup 6-8 a.m.) at the East Lake Chamber of Commerce in Sorrento. Admission is $5, sellers $10 (includes one admission ticket). VE exams at 10 a.m., walk-ins okay. Contact Chuck Crittendon,KE4EXM, P.O. Box 615, Altoona, FL 32705,or call 352/669-2075. Talk-in on 147.255(+) or 442.90(+).

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The **Flamingo Net** and the **University of Miami Amateur Radio Club** will hold a Hamfest/Tailgate Swapfest on Saturday and Sunday, 15-16 November, 8:00 a.m. to noon in the Physics parking lot, N. corner of the University of Miami Coral Gables campus. Admission is free. Activities scheduled are VE exams and an arboretum tour. Talk-in on 146.865 (–). For further information, contact Walt: 305/895-0398.

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The **Pelican Chapter #128, QCWA's** annual Catered Fried Chicken Picnic will be 19 November, 10:30 a.m. in Shelter #13 at Lake Seminole Park in St. Petersburg. The menu – fried chicken with all the trimmings, dessert and drink. There will be prizes and goodies before the picnic. Price, $7.50. QCWA members and guests are invited. For tickets and reservations: Don Bice, W4PCO, at 813/347-2707 or via the Callbook™ address. Talk-in on the QCWA repeater 145.29(–).

•ILLINOIS•

The **Lamoine Emergency ARC** will hold a hamfest on 9 November from 8 a.m. (vendors 7 a.m.) at the National Guard Armory, 1 mile south of the Macomb town square on Lafayette and one block west on Grant. Admission is $3/advance, $4/door. Tables $5, or donation of door prize (vendors may also set up the night of 8 Novemer from 7-10 p.m.). Door prizes hourly, VE testing, talk-in on 147.06(+),or 444.300(+).

•INDIANA•

The **Allen County ARTS** will hold their Fort Wayne Hamfest and Computer Expo (including the Indiana ARRL Convention) on 15-16 November, 9 a.m.-4 p.m. Saturday and 9 a.m.-3 p.m. Sunday at the Allen County War Memorial Coliseum on U.S. 30 in Fort Wayne. Features include over 1100 commercial and flea market tables all under one roof, containing both new and used radio, computer, and general electronic items and several international ham equipment manufacturers, forums and VE testing (Saturday). Admission, $5 at the door only. Parking, $2. Information, Doug Jones, 219/484-1314. Table information, Bill Anders, 219/483-8163. To order tables, send SASE to ACARTS, P.O. Box 10342, Fort Wayne, IN 46851.

•LOUISIANA•

The Twin City Ham Club will sponsor the Monroe Area Hamfest Saturday, 8 November, 8 a.m.-3:30 p.m. at the West Monroe Convention Center, corner of North 7th and Ridge Ave., West Monroe, LA. There will be forums thoughout the day, movies for the kids, over 12,000 sq. ft. of display area, ARRL/VE testing, plenty of on-site parking, and easy access to mo-

tels and restaurants. For more information contact TCHC Hamfest Director, P.O. Box 1871, West Monroe, LA 71294; e-mail: tchc@iamerica.net

•NEW YORK•

Radio Central ARC (RCARC) will hold HamExpo '97 Sunday, 16 November 1997, 9:00 a.m.-4:00 p.m. at the Huntington Hotel & Convention Center, Melville, Long Island. Take the LI Expressway (I495) to Exit 49 (Rte. 110), south for 1 mile. The hotel is at the corner of Rte. 110 & Bethpage-Spagnoli Rd. Talk-in 145.150 Mhz (–), 136.5 PL. Vendor tables, $20 (+ $10 for electricity); General Admission, $8.00; children under 12 free. Vendor setup, 7:00 a.m. Advance reservations: Steve Dworkin, N2MDQ, 516/584-5909; e-mail: n2mdq@1i.net

•OKLAHOMA•

The **Enid Hamfest Group** is sponsoring the Enid Hamfest on 1 November 8 a.m.-5 p.m. in the Hoover Building at the Garfield County Fairgrounds. Free hot dogs and soda in the afternoon. VE testing, 1 p.m. Admission, $2; tables, $1 each. Contact Fred, N5QJX, 405/242-3551; Tom, N5LWT, 404/233-8473; or write: Enid ARC, P.O. Box 261, Enid, OK 73702. Talk-in on 147.15(+), or 444.40(+).

•TEXAS•

The **West Texas ARC** will hold its annual Odessa Hamfest 1-2 November, doors open at 8 a.m. (Friday setup 4-10 p.m. and Sat. 7 a.m.) at the Ector County Coliseum, Exhibit Building C, located at 42nd and Andrews Highway. Pre-registration is $7, $8 at the door, tables $8 with paid registration. Features include hourly prizes and lots of dealers at Sunday Barbecue ($7). For information, contact Robert Jordan, N5RKN, e-mail n5rkn@apex2000.net or telephone 915/335-7980. Talk-in on 145.470(–).

•WISCONSIN•

The **Milwaukee Repeater Club** is sponsoring their "Friendly Fest" on 1 November, 8 a.m.-1 p.m. (vendor setup 5:30 a.m.) at the Waukesha County Expo Arena "Forum." Features include swapfest, indoor ground access and exams. Admission is $5; vendor tables are $5/four-foot table, reserved. Please call Burt, N9VBI, 414/328-0535. Send SASE to The Milwaukee Repeater Club, P.O. Box 2123, Milwaukee, WI 53201. Talk-in on 146.91(–) and 146.52.

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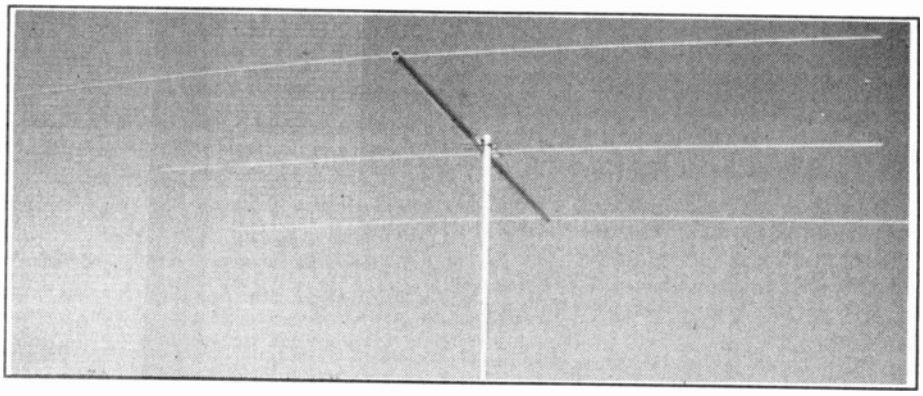
The **Fox Cities ARC**'s annual hamfest will be 2 November from 8 a.m. at the Starlite Club, located at the corner of Highway 55 and City Road JJ, in Kaukauna. Great deals, food, refreshments, prizes, nearby lodging and VE testing. VE exams 9 a.m. (registration 8 a.m., no walk-ins after 9 a.m.) Advance admission $4, tables $8/eight-foot. Contact Larry Siebers, KD9IA, 414/757-1167. Talk-in, 146.52 simplex.

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



MFJ1762 3-el 6M Yagi

MFJ proudly announces the MFJ-1762 three-element 6 Meter Yagi (directional antenna) for only $69.95!

A directional antenna is essential for long-distance VHF communication. By focusing transmitter power onto the horizon in a single direction, MFJ's three-element 6 Meter Yagi quadruples ERP (effective radiated power) over a half-wave dipole.

The same benefit applies when receiving — sensitivity toward the front of the antenna is improved greatly over a dipole, while unwanted noise and interference from other directions are rejected.

The MFJ-1762's main lobe (area of maximum sensitivity) is 70 to 80 degrees wide, so you can converse with several stations in one general direction without having to constantly reposition your rotator for maximum signal.

Two MFJ-1762s can be stacked to double the transmitter ERP and the received signal over a single antenna. It also doubles the received signal. Stacked antennas have greater capture area, which can improve reception even more.

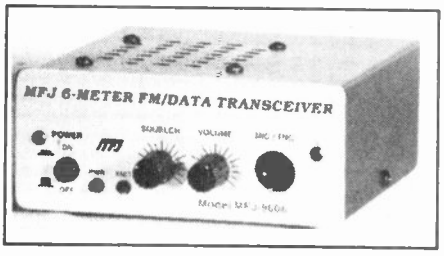
The MFJ-1762 weighs just 2 pounds and has a boom length of 6 feet. It is designed for installation with readily available TV mast, mounts and hardware. A current balun decouples the 50 ohm feedline from the antenna.

MFJ's exclusive *NoTune Hairpin*-impedance matching system is used for the driven element. Elements are cut to the exact length at the factory. No further tuning should be needed for coverage of the 50 MHz SSB band.

The MFJ-1762 is also an excellent choice for 6 Meter portable or rover operation because of its compact size, lightweight construction, and easy-to-remove elements. The MFJ-1762 will handle 300 watts PEP SSB and can be mounted horizontally or vertically.

MFJ-1762 3-element 6 Meter Yagi is covered by MFJ's famous *NO MATTER WHAT*™ one-year unconditional warranty. MFJ will repair or replace (at their option) your unit for one complete year.

For your nearest dealer or to order, call toll-free 800/647-1800, fax 601/323-6551 or write to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759.



MFJ-9606 6M transceiver

The MFJ-9606 *FMCommunicator*™ is a perfect 6-meter transceiver for No-Code Techs and veterans alike. Use it for packet, data or voice — only $149.95!

The MFJ-9606 is Packet-ready and compatible with virtually any TNC. The *FM Communicator*™ is the perfect way for local club members to stay in touch on a clear and quiet channel. Find out how pleasant FM simplex can sound, or choose one of the growing number of 6-meter repeaters.

MFJ-9606 has a ten-watt transmitter, which is plenty enough power to have fun on FM Simplex, repeater or packet service. If you need more power out, the MFJ-9606 is fully compatible with Mirage's high-power 150W A-1015-G amplifier.

MFJ-9606 features MFJ's exclusive *CrystalClearVoice*™ that gives true-to-life speech quality and ultra-clean AFSK data signals. An optional plug-in CTCSS encoding module will be available soon for accessing protected repeaters.

Super-fast PIN diode transmit/receive switching keeps turn-around time low — this is perfect for Packet and other data modes. The *FM Communicator*™ can be run 24 hours a day without even getting warm. The receiver draws less than 30 mA (including the pilot light).

The MFJ-9606 gives you a super dual-conversion FM receiver with quiet LNA (low noise amplifier) front end for excellent weak signal reception. This is the same LNA used in the widely-acclaimed 6-meter SSB MFJ-9406 transceiver. This is an exceptionally pleasant radio to use because of the clear audio reproduction, loud built-in speaker, and choice of squelch modes.

You can choose the type of squelch you need! Select conventional hysteresis squelch for weak signal base-to-mobile service, use MFJ's exclusive *Instant-OnSquelch*™ for tail-free repeater or Packet operation, or use open squelch if your TNC, like MFJ's, has a noise-rejecting DCD.

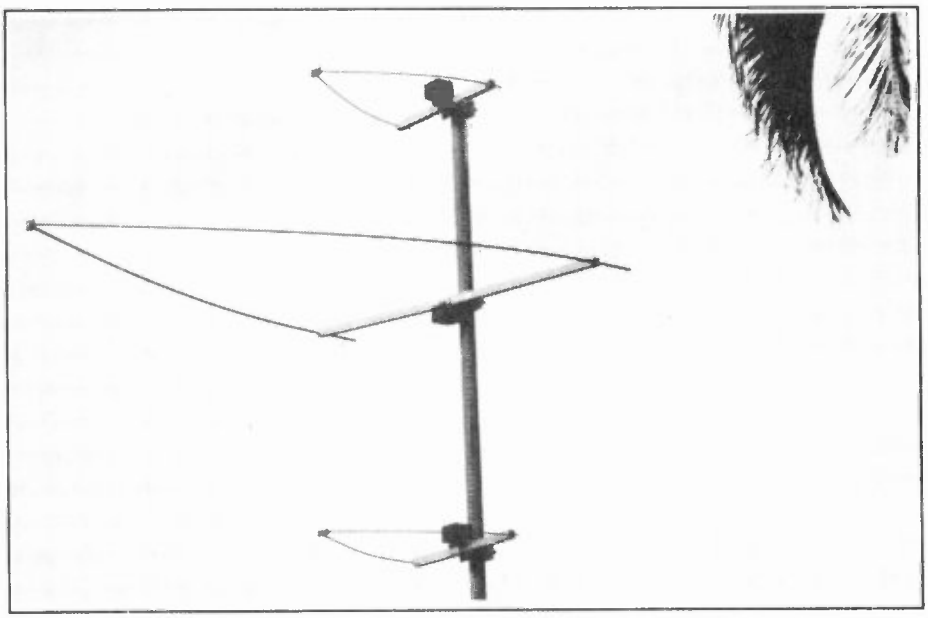
The MFJ-9606 *FM Communicator*™ is very simple to operate and easy to rechannel. Use the factory installed 52.525 MHz calling frequency crystals or order other packet or voice channels from MFJ — $24.95 for each frequency pair, transmit/receive. The manual provides simple step-by-step instructions on how to change crystals.

It's built to last! A conservative design, rugged construction, high quality components, and G-10 plated through PC board will keep you operating 6-meter FM for a long, long time!

Special offer on the MFJ-9606! Order with microphone (includes MFJ-290 mic) MFJ9606X for $159.95. Join the fun on the "magic band"! Call your favorite dealer for your best price.

MFJ-9606 6-meter *FM Communicator*™ Transceiver is covered by MFJ's famous *NO MATTER WHAT*™ one-year unconditional warranty. MFJ will repair or replace (at their option) your unit for one complete year.

For your nearest dealer or to order, call toll-free 800/647-1800, fax 601/323-6551 or write to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759.



PAR VHF horizontal omni antennas

Par Electronics has released two new horizontally-polarized, omnidirectional antennas for 6 and 2M.

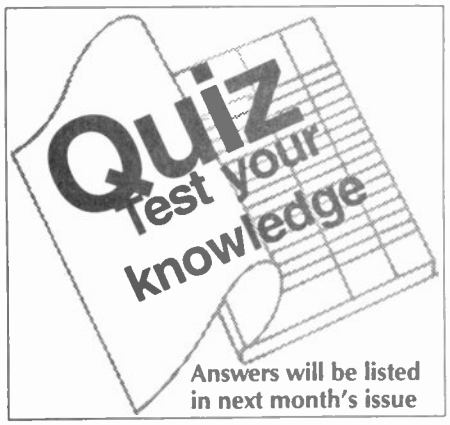
The triangular-shaped antennas yield an excellent omnidirectional pattern, have approximately four times broader bandwidth than traditional halos, low wind profile, and perhaps, most importantly, have negligible detuning with rain or fog, long a problem for other omni antennas.

The antennas are machined from 6061T6 aluminum, fiberglass, and stainless steel hardware. Coaxial cable attachment is via a silver/teflon SO239 connector. Conservative power rating is 160W. Tuning requires no tools and is accomplished by a unique self-locking arrangement. The antennas are designed to mount on a vertical mast or tower leg up to 1.5" in diameter.

The antennas find widespread use for mobile/roving, net control, working the Russian satellites, band spotting, and anywhere a low profile antenna is required.

The antennas are currently available from Amateur Electronic Supply or factory direct.

For more information, contact PAR Electronics, 6869 Bayshore Drive, Lantana, FL 33462. Voice 561/586-8278; FAX 561/582-1234; e-mail: par@magg.net or at http://www.rf-filters.com



The answers to last month's quiz questions are: 257. C; 258. A; 259. D; 260. C; 261. B; 262. B; 263. C; 264. D; 265. D; 266. C; 267. D; 268. D; 269. A; 270. B; 271. B; 272. C; 273. D; 274. B; 275. C; 276. B

277. How can a single-sideband phone signal be generated?
A. By driving a product detector with a DSB signal
B. By using a reactance modulator followed by a mixer
C. By using a loop modulator followed by a mixer
D. By using a balanced modulator followed by a filter

278. How can a double-sideband phone signal be generated?
A. By feeding a phase modulated signal into a low pass filter
B. By using a balanced modulator followed by a filter
C. By detuning a Hartley oscillator
D.By modulating the plate voltage of a class C amplifier

279. How is the efficiency of a power amplifier determined?
A. Efficiency = (RF power out / DC power in) X 100%
B. Efficiency = (RF power in / RF power out) X 100%
C. Efficiency = (RF power in / DC power in) X 100%
D. Efficiency = (DC power in / RF power in) X 100%

280. For reasonably efficient operation of a vacuum-tube Class C amplifier, what should the plate-load resistance be with 1500 volts at the plate and 500-milliamperes plate current?
A. 2000 ohms
B. 1500 ohms
C: 4800 ohms
D. 480 ohms

281. For reasonably efficient operation of a vacuum-tube Class B amplifier, what should the plate-load resistance be with 800 volts at the plate and 75-milliamperes plate current?
A. 679.4 ohms
B. 60 ohms
C. 6794 ohms
D.10,667 ohms

282. For reasonably efficient operation of a vacuum-tube Class A amplifier, what should the plate-load resistance be with 250 volts at the plate and 25-milliamperes plate current?
A. 7692 ohms
B. 3250 ohms
C. 325 ohms
D. 769.2 ohms

283. For reasonably efficient operation of a transistor amplifier, what should the load resistance be with 12-volts at the collector and 5 watts power output?
A. 100.3 ohms
B. 14.4 ohms
C. 10.3 ohms
D. 144 ohms

284. What is the ++++flywheel effect++++?
A. The continued motion of a radio wave through space when the transmitter is turned off
B. The back and forth oscillation of electrons in an LC circuit
C. The use of a capacitor in a power supply to filter rectified AC
D. The transmission of a radio signal to a distant station by several hops through the ionosphere

285. How can a power amplifier be neutralized?
A. By increasing the grid drive
B. By feeding back an in-phase component of the output to the input
C. By feeding back an out-of-phase component of the output to the input
D. By feeding back an out-of-phase component of the input to the output

286. What order of Q is required by a tank-circuit sufficient to reduce harmonics to an acceptable level?
A. Approximately 120
B. Approximately 12
C. Approximately 1200
D. Approximately 1.2

287. How can parasitic oscillations be eliminated from a power amplifier?
A. By tuning for maximum SWR
B. By tuning for maximum power output
C. By neutralization
D. By tuning the output

288. What is the procedure for tuning a power amplifier having an output pi-network?
A. Adjust the loading capacitor to maximum capacitance and then dip the plate current with the tuning capacitor
B. Alternately increase the plate current with the tuning capacitor and dip the plate current with the loading capacitor
C. Adjust the tuning capacitor to maximum capacitance-and then dip the plate current with the loading capacitor
D. Alternately increase the plate current with the loading capacitor and dip the plate current with the tuning capacitor

289. What is the process of ++++detection++++?
A. The process of masking out the intelligence on a received carrier to make an S-meter operational
B.The recovery of intelligence from the modulated RF signal
C. The modulation of a carrier
D. The mixing of noise with the received signal

290. What is the principle of detection in a diode detector?
A. Rectification and filtering of RF
B. Breakdown of the Zener voltage
C. Mixing with noise in the transition region of the diode
D. The change of reactance in the diode with respect to frequency

291. What is a ++++product detector++++?
A. A detector that provides local oscillations for input to the mixer
B. A detector that amplifies and narrows the band-pass frequencies
C. A detector that uses a mixing process with a locally generated carrier
D. A detector used to detect cross-modulation products

292. How are FM-phone signals detected?
A. By a balanced modulator
B. By a frequency discriminator
C. By a product detector
D. By a phase splitter

293. What is a ++++frequency discriminator++++?
A. A circuit for detecting FM signals
B. A circuit for filtering two closely adjacent signals
C. An automatic bandswitching circuit
D. An FM generator

294. What is the ++++mixing process++++?
A. The elimination of noise in a wideband receiver by phase comparison
B. The elimination of noise in a wideband receiver by phase differentiation
C. Distortion caused by auroral propagation
D. The combination of two signals to produce sum and difference frequencies

295. What are the principal frequencies which appear at the output of a mixer circuit?
A. Two and four times the original frequency
B. The sum, difference and square root of the input frequencies
C. The original frequencies and the sum and difference frequencies
D. 1.414 and 0.707 times the input frequency

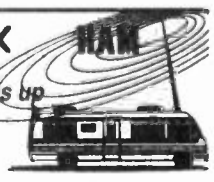
Answers next month!

VE exam schedules

As a service to our readers, ***Worldradio*** presents a feature listing of 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 December, please have the information to us by mid-September. ***Worldradio***, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams." List the location (City), any information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information. Examinees should bring their original license (along with a photo copy), two forms of identification (at least one should be a photo), and required fee.

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

State	City	Contact	Notes
Alabama			
12/02/97	Mobile	David, WA4VAC 205/649-5229	
Arizona			
12/13/97	Tucson	Joe, K7OPX 520/886-7217	w/i
Arkansas			
12/13/97	Siloam Sprgs	Mike, KJ5OP 501/524-8090	p/r
California			
12/09/97	Arcadia	Gary, 818/335-1127 or Denny, W6VRK 818/358-1480	p/r pref.
12/13/97	Brea	Robert, KD6DA 310/691-1514	p/r
12/07/97	Chico	Jackie, W6YKU 916/342-1180	p/r pref.
12/18/97	Colton	Harold, AB6RN 909/825-7136 or 909/685-6073 (eves.)	p/r pref.
12/07/97	Concord	Gene, WW6H 510/254-5090	w/i/only
12/27/97	Culver City	Scott, K6PYP 310/459-0337 or Dave N3BKV 818/559-2572	w/i
12/06/97	Culver City	Clive, AA6TZ 310/827-2538	p/r pref.
12/06/07	Cupertino	Emmett, AE6Z 408/243-8349	w/i only
12/20/97	Cupertino	Emmett, AE6Z 408/243-8349	w/i only
12/13/97	Downey	Wes, KA3DSE 310/923-5598	p/r pref.
12/27/97	Escondido	Harry, WA6YOO 760/743-4212	p/r
12/02/97	Fremont	Dennis, K6DF 510/791-0954	w/i only
12/06/97	Lake Isabella	HOTLINE 619/379-2947	p/r pref.
12/20/97	Long Beach	Donald, NN6Q 310/420-9480	p/r pref.
12/15/97	Mission Viejo	Louis, 714/951-0336	p/r
12/09/97	Palm Desert	Don, W6EEN 760/345-8780	p/r pref.
12/13/97	Petaluma	Dale, 707/762-9414	p/r pref.
12/20/97	Redwood City	Joe, KB6OWG 408/255-9000	w/i only
12/14/97	Sacramento	Dick, N6DK 916/383-2113	p/r
12/06/97	San Rafael	Recording 415/883-9789	p/r pref.
12/10/97	Santa Ana	Red Cross 714/835-5381 x140	w/i
12/20/97	Stockton	Mark, W6DKI 209/465-7496	w/i
12/13/97	Sunnyvale	Gordon, W6NW 408/255-9000 or John, KG6XF	w/i only
Colorado			
	All Colorado	Exam recording 303/360-7293	
12/13/97	Denver	Glenn, WØIJR 303/366-0155	w/i pref.
12/06/97	Littleton	Dave, NØHEQ 303/795-5718	w/i pref.
Connecticut			
12/18/97	Trumbull	Kevin, N1KGM 203/268-5015 or Bob, KA1ZMF 203/933-9587	
Florida			
12/11/97	Ft. Myers	Norm, AF4AZ 941/694-2505	w/i
12/20/97	Melbourne	Bill, WB9IVR 407/724-6183	p/r pref.
Idaho			
12/13/97	Boise	Lem, W7JMH 208/343-9153	w/i pref.
12/31/97	Grangeville	Larry, AB7GY 208/983-2163	w/i pref.
Illinois			
12/20/97	Morton	James, NT9C 309/266-6756	p/r pref.
12/13/97	Oak Forest	David, NF9N 708/448-0580	p/r pref.
Indiana			
12/13/97	Chesterton	Bill, N9SLQ 219/762-2887	w/i pref.
12/17/97	Indianapolis	Tom, N9FLU 317/326-3168	p/r
12/07/97	Terre Haute	Fred, K9EBK 812/466-2122	p/r pref.
Iowa			
12/13/97	Council Bluffs	Lorraine, AAØBS 712/322-1454	p/r pref.
Maine			
12/17/97	Brunswick	Steve, WZ1J 207/725-5155	p/r pref.
Massachusetts			
12/20/97	Melrose	Scott, WB1F 617/665-7654	p/r pref.
Michigan			
12/13/97	Marquette	Richard, N8GBA 906/249-3837	p/r pref.
Montana			
12/29/97	Hamilton	Jim Wood, 406/972-3672	p/r pref.
Nevada			
12/20/97	Reno	Steve, W7VI 702/851-1176	p/r
12/13/97	Reno	Don, W7FD 702/851-1176	p/r
New Jersey			
12/18/97	Bellmawr	Diane, N2LCQ 609/227-6281	w/i
12/13/97	Cranford	Hotline 201/377-4790	w/i pref.
12/10/97	Ft. Monmouth	Jerry, WB2GYS 908/532-5354	p/r pref.
12/01/97	Sayreville	Larry, N2ELW 908/390-5857	w/i pref.
New York			
12/09/97	Bethpage	Bob, W2ILP 516/499-2214	w/i pref.
12/07/97	Yonkers	Emily, AC2V 914/237-5589	p/r pref.
Ohio			
12/06/97	Cincinnati	Herb, WA8PBW 513/891-7556	p/r pref.
12/13/97	Van Wert	Robert, KA8IAF 419/795-5763	p/r pref.
Oregon			
12/12/97	Grants Pass	Clyde, AA7WC 541/474-0205 or Gary, KB7CFI 541/474-7974	p/r pref.
12/08/97	Medford	Dale, N7IXS 541/772-6865 or Rick, KG7PX 541/779-3404	p/r pref.
12/10/97	Roseburg	Dick, AA7GC 541/672-7564	p/r pref.
Pennsylvania			
12/06/97	Erie	Norma, W3CG 814/665-9124	w/i only
12/04/97	Philadelphia	Dusty, ND3Q 215/879-0505, 215/448-1139(tape)	p/r pref.
Rhode Island			
12/11/97	Providence	Judy, KC1RI 401/231-9156 Al, NN1U 401/454-6848	w/i pref.
12/27/97	Slatersville	Bob, W1YRC 401/333-2129 or 401/333-2373	
South Dakota			
12/13/97	Rapid City	Frank, NUØF 605/348-6564	p/r pref.
Texas			
12/06/97	Brownsville	Bob, K5VC 210/542-7449 (days) or 210/546-4779 (eves)	p/r pref.
12/11/97	Ft. Worth	Ted, AB5QU 817/293-6745	p/r
12/09/97	Houston	Harold, ND5F 713/464-9044	p/r pref.
Vermont			
12/26/97	Essex Jct.	Mitch, W1SJ 802/879-6589	p/r pref.
Wisconsin			
12/06/97	Hudson	Greg, KB9JHL 715/386-9857	w/i pref.
12/06/97	Racine	Bob, WØWLN 414/886-8551	p/r pref.



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AUTO-CALL MAGAZINE, official journal of the Foundation For Amateur Radio, a federation of over 80 clubs in the greater Baltimore/Washington DC area. Great coverage of FCC, ARRL, VEC, Public Service and club activities in the area. A must for those even passing through the area. For a sample copy write FOUNDATION FOR AMATEUR RADIO, P.O. Box 7612, Falls Church, VA 22046-7612. F198

WANTED REPLY COUPONS of all types, IRCs & others. Buy, sell, trade. JIM NOLL, P.O. Box 3410, Escondido, CA 92033. 497-498

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CLASSIC RADIOS. RadioFinder web list revised weekly: www/radiofinder.com Telephone/fax 313/454-1890. E-mail finder@radiofinder.com 597-598

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CHAVERIM-WESTERN USA AND MEXICO CHAPTER. Jewish amateurs and friends interested in our chapter or the Chaverim, contact KA6BJO, 24055 Paseo Del Lago West T1, #1006, Laguna Hills, CA 92653. 797-798

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POOR RECEPTION ON YOUR AM RADIO? Our signal booster will help. Guaranteed! Version 1701 tunes 530-1700 kHz. $48 plus $5.50 S/H. If not satisfied within 30 days, we'll refund your money, less S/H charge. FALA ELECTRONICS-7, P.O. Box 1376, Milwaukee, WI 53201-1376; 414/671-5203. 5-1197

WANTED: COLLINS RADIOS, any condition for my collection. FRED, W6YM, 17890 Sharon Ct., Pine Grove, CA 95665; fhonnold@juno.com 897-598

DX HEADING MAPS AND LISTS. Honolulu to San Juan. Color $6.95, B/W $3.95 Bearing lists $6.95. W2HOJ, 800/941-2252. 8-1197

CALLBOOK FINAL EDITION: North American/International–$30.95/ea. *ARRL Handbook,* $27.95; *ARRL Antenna Book* (18th), $26.95 postpaid. AA6EE – CALLBOOK DISTRIBUTOR, 16832 Whirlwind/W11, Ramona, CA 92065. 760/789-3674. 10-1197

FOR SALE: ALINCO DUAL BAND MOBILE RIG, 20 memories–$200. Alinco Dual Band HT with extras–$300. IC2000 2-meter rigs (two)– $200 each. Prices are firm, no swap, trade etc. More info, send SASE to P.O. Box 518, White House, FL 32220. 10-1197

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WANTED: HAM EQUIPMENT AND RELATED ITEMS. Donate your excess gear — new, old, in any condition — to the Radio Club of Junior High School 22, the Nation's only full-time, non-profit organization working to get ham radio into schools around the country as a teaching tool, using our EDUCOM – Education Thru Communication. Send your radio to school. Your donated material will be picked up ANYWHERE or shipping arranged and this means a tax deduction to the full extent of the law for you as we are an IRS 501(c)(3) charity in our 17th year of service. It is always easier to donate and usually more financially rewarding *but most important,* your gift will mean a whole new world of educational opportunity for children nationwide. Radios you can write off, kids you can't; make 1997 the year to help a child and yourself. Write, phone or fax the WB2JKJ "22 Crew" today: The RC of JHS 22, P.O. Box 1052, New York, NY 10002. Call 24 hours 516/674-4072 or fax 516/674-9600; e-mail crew@wb2jkj.org; Internet www. wb2jkj.org Join us on the WB2JKJ classroom net, 7.238 MHz 1100-1230 UTC daily and 21.395 MHz from 1400-2000 UTC. 1197

QSL SAMPLES — 50¢ SAMCARDS, 48 Monte Carlo Dr., Pittsburgh, PA 15239. 197-198

HAM GOODIES! Free Shack Attack catalog: SHACK ATTACK, P.O. Box 91, Enterprise, UT 84725. 801/878-2760; kb7vrd@aol.com, http://www.vcnet.com/sa 1197-0498

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WANTED: TENTEC MANUALS photocopies. M-234 Speech Processor, M-645 Keyer, M-546-C transceiver. WB5EMX, rcscruggs@mmm.com 1197

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QRP supplies — the ABCs

WAYNE REED, K9NE

Listed below are suppliers who deal with QRP-related supplies. This list will be published piecemeal in ***Worldradio*** *as space permits.*

•624 KITS, 171 Springlake Dr., Spartanburg, SC 29302. **QRP kits & parts. Send 2 stamps for catalog.**

•A&A ENGINEERING, 2521 W. LaPalma, Unit #K, Anahiem, CA 98201; 714/952-2114; Fax 714/952-3280. **Small parts, transceivers. Send #10 SASE with 2 stamps.**

•ALL ELECTRONICS CORP., P.O. Box 567, Van Nuys, CA 91408-0567; 800/826-5432; also 1232 East Broadway, Ste. 210, Tempe, AZ 85282; 602/966-2200. **Small parts.**

•ALLIED ELECTRONICS, 7410 Pebble, Ft. Worth, TX 76118-6997; 817/595-3500; Fax 817/595-6414. **Components.**

•ALPHA DELTA COMMUNICATIONS, Mr. Don Tyrrell, P.O. Box 620, Manchester, KY 40962; 606/598-2029. **Antennas & accessories.**

•AMIDON, 3122 Alpine Ave., Santa Ana, CA 92704; 714/850-4660; Fax 714/850/1163. **Ferrite toroids. Catalog $8. Free tech data flyer.**

•ANTENNAS WEST, P.O. Box 50062, Provo, UT 84605; 800/926-7373; Fax 801/373-8426; Tech assistance tel: 801/373-8425. **Antennas, baluns, solar acc., QSL cards, support line, catalog.**

•ANTIQUE ELECTRONIC SUPPLY, Box 27468, 6221 S. Maple Ave., Tempe, AZ 85285-7468; 602/820-5411; Fax 602/820-4643. **Antique components, equipment manuals, catalog.**

•AUTEK RESEARCH, P.O. Box 8772, Madera Beach, Fl 33738; 813/886-9515; also P.O. Box 302, Dept. J, Odessa, FL 33556; 813/920-5810. **Active audio filter, computing SWR.**

•BENCHER, INC., 831 N Central Ave., Wood Dale, IL 60191; 708/238-1183; Fax 708/238-1186; also 333 W. Lake St., Chicago, IL 60606. **Keyer paddles.**

•BUCKEYE ELECTRONICS, 10231 Columbus Grove Rd., Bluffton, OH 45817; **Transistors, diodes, ICs, toroids, vernier dials, more. Parts list available.**

•BYERS CHASSIS KITS, 5120 Harmony Grove Rd., Dover, PA 17315; 717/292-4901. **Chassis kits, custom enclosures, catalog.**

•C-W CRYSTALS, Marshfield, MO 65706. **Crystals.**

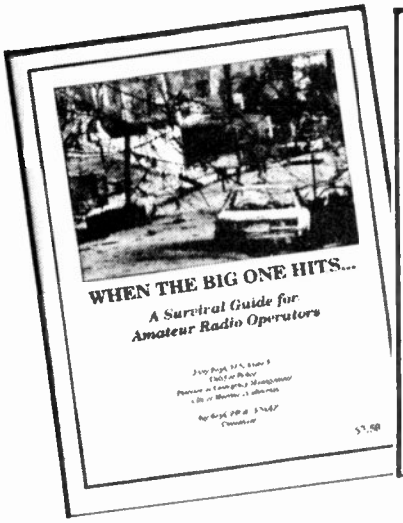
•CAIG LABORATORIES, INC., 16744 W. Bernardo Dr., San Diego, CA 92127-1904; 800-CAIG-123; 619/451-1799; Fax 619/451-2799. **Mfgr. environmentally-safe cleaners for electronics.**

•CUBEX CO.; 2761 Saturn St., Unit E, Brea, CA 92621; 714/577-9009; Fax 714/577-9124. **Antennas, antenna rope, fiberglass, tubing, catalog.**

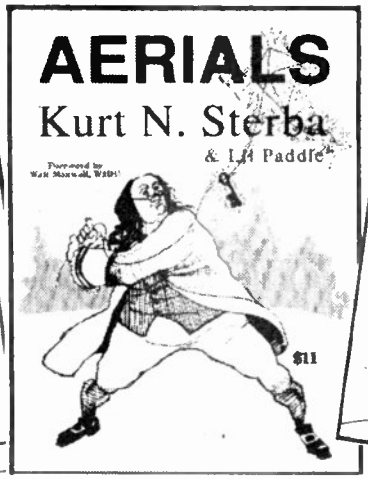
Continued next month!

ADVERTISERS' INDEX

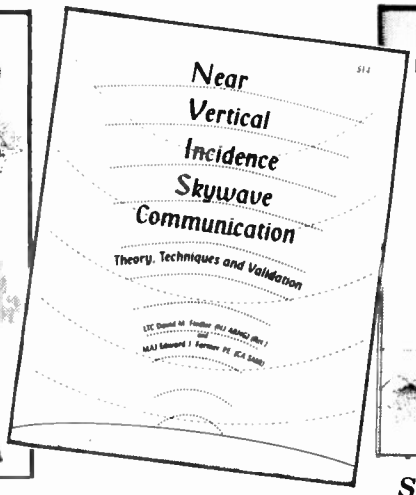
WORLDRADIO BOOKS, ETC.



When the Big One Hits...
A Survival Guide for Amateur Radio Operators
$7.50 + $2.00 S&H.
CA residents add $.58 tax.



Aerials
$11+ $2.00 S&H.
CA residents add $.85 tax.



NVIS Communications
$14+ $2.00 S&H.
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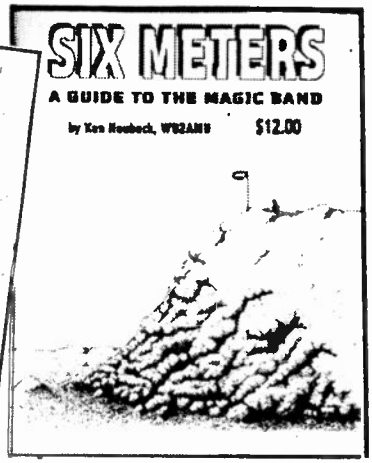

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What does the well-dressed Amateur Radio operator wear when drinking out of a ***Worldradio*** mug? Why, this classy ***Worldradio*** cap, of course! Durable navy blue poplin with light blue imprint. $7.00 + $2.00 S&H. CA residents add $.54 tax.

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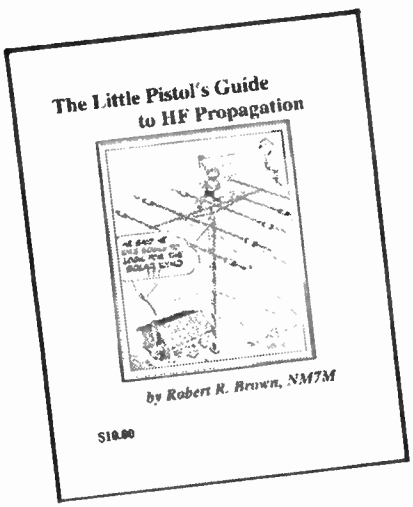

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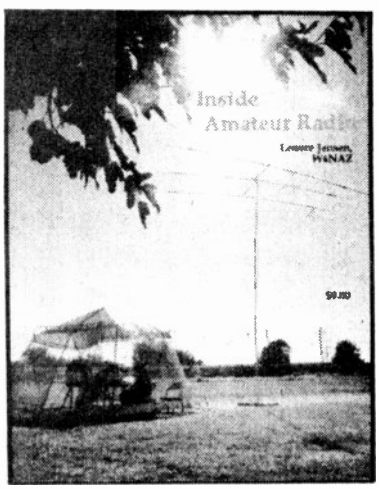

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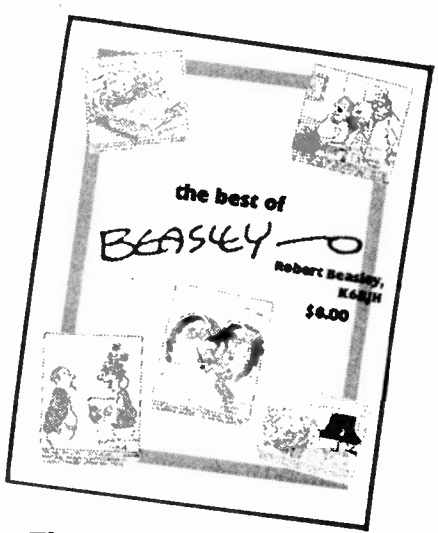

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Fort Wayne warehouse fire

BILL HALL, WD9HII

Around 1:00 p.m. Saturday, 30 August 1997, an alarm was sounded for a fire at a warehouse in the east central part of Fort Wayne, Indiana. Contents of the warehouse included approximately 600,000 old tires awaiting removal for recycling. Within minutes there was a conflagration that sent a column of acrid smoke roiling over the neighborhood, eventually building into a column that reached above 8,000 feet. It was visible for miles around.

About 30 minutes into the fire, the adjacent six-story headquarters building for the City Police Department had to be evacuated and fire officials expressed concern for nearby residential areas that included two apartment complexes housing elderly and low-income families. Evacuation plans were set in motion through the Allen County Emergency Management Agency (EMA). As a result the Allen-Wells Chapter of the American Red Cross (ARC) and the Northeast Indiana Emergency Medical Response team (MRT) were activated.

Responding to a call from the Red Cross, the local ARES group began setting up operations to provide communications support under the direction of assistant Emergency Coordinator, Doug Jones, N9NNT. By 3:00 p.m. ham operators had been dispatched to man the evacuation staging point, the ARC shelter being set up at the Memorial Coliseum and the ARC Chapter House. Red Cross radio was also manned by hams for communications with the two ARC Emergency Response Canteen Vehicles (ERV's) dispatched to the scene.

Two Amateur Radio operators are staff members of the MRT and provide any needed communications with that group. The MRT was staged at the Coliseum shelter for medical assistance to the evacuees.

Another local ham operator who is a city police officer provided liaison communication with that agency on the status of traffic restrictions at the fire scene and progress of the fire-fighting efforts. This was valuable information in dispatching ARC personnel and equipment.

Of the 1,000 people forced to evacuate, approximately 150 sought shelter. The City Public Transportation Corp. provided three buses for those without personal transportation. The shelter opened Saturday afternoon and remained open until the evacuation order was lifted Monday noon. After lunch was provided, City buses returned the folks to their residences and the Red Cross began the process of dismantling the shelter. At about 2:30 p.m. communications were no longer needed and the ARES group suspended operations.

As it was a holiday weekend, many local ARES members were out of town. Those remaining responded in true ham fashion, however. Of the approximately 50 hours of continuous around-the-clock operation, amateurs contributed over 200 man-hours of public service communications. By call sign they included: N9NNT, WD9DYM, WD9GIU, WD9HII, KB9EWN, N9KNJ, N9YBM, N9STQ, KA9QWC, N9SYE, KB9JHB, N9RYI, N9WOY, N9VAJ, KB9DOY, N9RNV, N9DGL, and N9WBO. The hams on the MRT were N9BAC and KB9IH. Our apologies for any omissions. **WR**

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