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Worldradio

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Hawaiian amateurs trigger sailor's rescue

Ann S. Shaver, WH2E

If James Michener were writing "Tales of the South Pacific" today, he might include an episode describing how one ham radio operator, born and raised in Hawaii, alerted Coast Guard officials and medical personnel that a Californian sailing near Fanning Island was critically ill. Like most of Michener's popular stories, this is a tale full of high drama — skeds kept and missed, U.S. Navy SEALS parachuting from 3,000 feet to a yacht and starting life-saving intravenous antibiotics for the captain, and an eventual airlift to Tripler Army Hospital in Honolulu, nearly a thousand miles away. And like a Michener tale, it involves ordinary people doing ordinary things and achieving heroic outcomes.

"I've been following Dave Baker, KM6ET, for months as he sailed through the South Pacific," explained Ron DuBois, WH6DS, who lives with his family on a 42-foot ketch in Honolulu's Ala Wai Harbor. "We chatted daily on the Pacific Maritime Net (14.313 MHz, 0400Z) and on marine single sideband."

"I had been talking with him, too," added Richard LaChance, AH6IO. "He'd asked me some questions and I had a sked with him to tell him what I'd found out. When he didn't make the sked, I figured something was wrong. Then, the next day I saw it in the paper.

The newspaper reporter, not being a ham, of course did not understand the crucial role Amateur Radio skills — and a little good luck — played in bringing Baker's plight to the attention of rescue and medical personnel. Instead, he told his readers about a sailor who got a very nasty infection from a seemingly minor cut from a fish hook.

A Navy SEAL parachutes from a Coast Guard C-130 aircraft. ***—photo by PA1 John Moss, U.S. Coast Guard***

"It all happened really fast," DuBois elaborated. "When Dave mentioned that his leg was swelling and his temperature was rising, I got concerned. I opened a file because I realized the situation was worsening rapidly. I like to give the Coast Guard a 'heads-up' if possible.

"I had Jerry (a retired emergency-room physician who also lives at Ala Wai Harbor) talk with Dave. After he

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NEWSFRONT

Worldradio

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

FCC orders ARRL reinstated to QPC

The Federal Communications Commission has directly ordered a private corporation to reinstate an employee of the American Radio Relay League to the ham radio Question Pool Committee.

A showdown that could have affected how Amateur Radio tests are administered nationwide appears to have been avoided. The ARRL has been involved in a dispute that began simmering last year, when a group of volunteer examiner coordinators incorporated what had been an informal organization. The new group became the National Conference of Volunteer Examiner Coordinators, Incorporated.

The ARRL said it would not be part of the new group — but the League's VE Department Manager, Bart Jahnke, KB9NM, was made part of the new organization's Question Pool Committee. The Committee's job is to maintain question pools for Amateur Radio license exams administered by various volunteer examiner groups working together.

But tensions grew when Jahnke was removed from the Committee in September, an action the League charged the NCVEC had no authority to take. In February, the ARRL asked the FCC to declare the current volunteer exam mechanism broken — and to create a substitute mechanism. The NCVEC refused to reinstate Jahnke to its Question Pool Committee, saying the League should be a Conference member if it wanted Committee representation.

Pressure grew on NCVEC to grant the League's request with a letter from FCC Private Wireless Division Chief Robert McNamara to the Conference's President. McNamara said it is inconsistent with FCC rules for a VEC to be excluded from helping maintain the question pools because of lack of membership in the NCVEC or any other organization. McNamara requested that the ARRL's VEC be reinstated to a seat on the Question Pool Committee immediately. On April 3rd, NCVEC President Don Tunstill, WB4HOK, contacted Conference members, saying: "Regretfully, recent events have caused me to ask you to reconsider our position." Tunstill then asked for members to approve appointing the League's VEC to the Question Pool Committee.

Two days later Tunstill notified the FCC's McNamara that Bart Jahnke had been reinstated to the Question Pool Committee, effective immediately. The NCVEC's reversal of its stand apparently ends a dispute that could have wound up in court. Had that happened, volunteer amateur radio license exam programs throughout the United States could have been affected.

Arrest in murder case

The deaths of Floyd Teetson, W5MUG, and his wife Winnie, WN5YTR, were apparently the result of robbery. Webster Parish Sheriff's Department Chief Deputy, Tommy Kemp says 18-year-old Kevin Coleman of Heflin, Louisiana, is charged in the deaths. Kemp says Coleman was believed to have been hired as the Teetson's yardman. Investigators say money had been taken from the Teetsons, and other valuables including jewelry were believed to be missing.

Floyd Teetson, 74, was a former ARRL Delta Division Director and was an avid DXer. He and his wife were well known through Louisiana's Amateur Radio community. Floyd was a retired electrical engineer with BellSouth Telecommunications in Jackson, Mississippi. The couple moved to Louisiana following Floyd's retirement.

RM-8626 — RIP

The FCC has said "no" to a rules change request that would have placed severe limitations on stations issuing ham radio news and information bulletins. The agency did so by dismissing a rules change request filed last year by ham radio publisher Fred Maia, W5YI.

The Maia petition, which had been assigned rule making number RM-8626, claimed that the high frequency ham radio bands were being overrun by bulletin stations, and that these bulletin operations were unilaterally setting up shop and causing interference to already established ham radio communications.

But RM-8626 was strongly opposed by the American Radio Relay League. The ARRL viewed it as nothing more than an attempt by Maia to kill off the W1AW Official Bulletin Station at League Headquarters.

The petition also pulled strong opposition from other sectors of the ham

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

This issue marks 25 full years of publication for ***Worldradio.***

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We now present the names and calls of those who, when walking to take their seat at the meeting of their local radio club, will be greeted with "Sahib," "Bwana," and "G'vnor" by those of lesser status.

The latest to become ***Worldradio*** SuperBoosters (Lifetime Subscriber) are:

- **Charles Moizeau, W2SH, Millington, NJ**
- **Richard Demyan, W2BM, Horseheads, NY**
- **James Alpine, K8SJP, Laurel, MD**
- **David Bialoglowy, KE4JCE, Tampa, FL**
- **Roy Benjamin, WB2CEE, Sarasota, FL**
- **Robert Schank, K8HHP, Belleville, MI**
- **James King, K9HDF, Balsam Lake, WI**
- **K. Carter, WA5DYC, Overland Park, KS**
- **Travis Burton, KB5ILY, Prescott, AZ**
- **James Todd, WA5HTT, Dallas, TX**
- **Dan Harriman, KC5GXL, Orange, TX**
- **John Collins, KA5AOL, Rock Springs, WY**
- **Steve Gurley, KC7GCY, Tempe, AZ**
- **Daniel Chagolla, KD6TUD, Pomona, CA**
- **Edward Ross, N6GZI, San Diego, CA**
- **Steve McCubbin, KF6AOR, Cherry Valley, CA**
- **Ralph Davis, KI6YP, Vallejo, CA**
- **Rodger Burt, N6VGA, El Sobrante, CA**
- **Paul Chapman, N6IGS, Placerville, CA**
- **Frank Tate, NA7O, Seattle, WA**

Should you feel that you are an authority, or even a semi-authority, or somewhat knowledgeable, on a topic that we don't have a regular column about, this is your invitation to submit your idea. It wouldn't be an overwhelming burden as we could run it every other month. Also, a good part of it could be submissions from those interested in the subject that you would then collate. Call us.

The Yuba-Sutter ARC (Yuba City, CA) holds their monthly meetings at the Police Department. That certainly shows a great degree of awareness of Amateur Radio by (and cooperation with) governmental agencies.

There are the naysayers who are saying that Amateur Radio has no more role in disasters, emergencies, or even public service events due to the increased sophistication of other communication systems. I saw such a pronouncement statement just a few days ago with the phrase, "Those days are far in the past." Oh, to sit and pontificate with such certainty! Some may even believe those words until the next mess happens and the call goes out for Amateur Radio once again. Possibly the (wrong again) pundits could find something more productive with which to occupy their time.

We now have, hot off the presses, the book *The Little Pistol's Guide to HF Propagation* by Robert Brown, NM7M. It's 100+ pages of truly well-presented information on a subject that concerns us all. The price is only $10 plus shipping and handling of $2 (NOT the $4 that others charge). California residents please add 78 cents tax. Non-US readers please add an additional $2 for the overseas postage. This is a good one!

More on Radio Shack — I was surprised to learn that the wage for the clerks is the minimum wage. What an insult — a real slap in the face. It says, "If we could pay you less we would." Why not at least another 25 cents an hour so the employees wouldn't feel like they were on the bottom. I'd be ashamed to offer an adult the minimum wage. Maybe that's why Tandy has a giant skyscraper and I don't.

David Benedict, KC7IGD, Beaverton, Oregon, who got his Novice in 1955 and now has an Advanced, said, "I like the antennas column which debunks the outrageous claims in some of the antenna advertising."

It has been brought up that our Lifetime Subscriber price should be adjusted downward for those of advanced years. Well, I've never thought that the reason hams took out the "Lifers" was because they had one finger on the actuarial tables and the other hand computing the inflationary rate over the next, however, many decades more they thought their inherited genes would get them.

I still have the note from Don Wallace, W6AM (who at the time was already well along in years), when he took out his Lifetime Subcription, "I hope I live that long," he said.

I've always viewed the "Super-Booster" as being exactly that. Forget the insurance tables, for "average" Amateurs are not average — they live much longer. If you think you have ten years more the LS is a good deal because we will obviously be raising our prices periodically as the postage and the printing costs go up.

However, furnish proof of your overseas service in WWII and it's only $99 for a LS, and I hope I see you being feted by NBC's Willard Scott on your 100th birthday. —*Armond, N6WR*

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Dynamic and exclusive features set the FT-50R apart, too. Wide Band Receive includes 76-200 MHz (VHF), 300-540 (UHF), and 590-999 MHz*. Dual Watch checks sub-band activity while receiving on another frequency, then when a signal is detected, shifts operation to that frequency. Digital Battery Voltage displays current operating battery voltage. Digital Coded Squelch (DCS) silently monitors busy channels. Auto Range Transpond System™ (ARTS™) uses DCS to allow two radios to track one another. And, the FT-50R is ADMS-1C Windows™ PC programming compatible, too. To round out the FT-50R, it has four battery savers, and super loud audio—remarkable in an HT this size.

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

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Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details. *Cellular blocked

Hawaiian assist

(continued from page 1)

heard Dave's symptoms — pus, a growing red streak, high fever — he talked with the doctors at Tripler and they alerted the Coast Guard's Joint Rescue Command Center."

In an effort that involved the Coast Guard, Tripler Army Medical Center, CINCPAC (Commander in Chief, Pacific Forces) and the Navy SEALS (Sea-Air-Land special forces), help was on its way in a matter of hours. "We needed to find an individual who could jump out of an airplane, start an IV, take care of the patient and sail a boat 200 miles across the open ocean," casually remarked Captain Tom Cook, the Tripler ER physician who became involved in the dramatic rescue.

"It can get really bizarre, when you get a Japanese fisherman injured and a Japanese skipper talking to a ham radio operator who can translate what they are saying into English and then that gets relayed to the Coast Guard," said Cook.

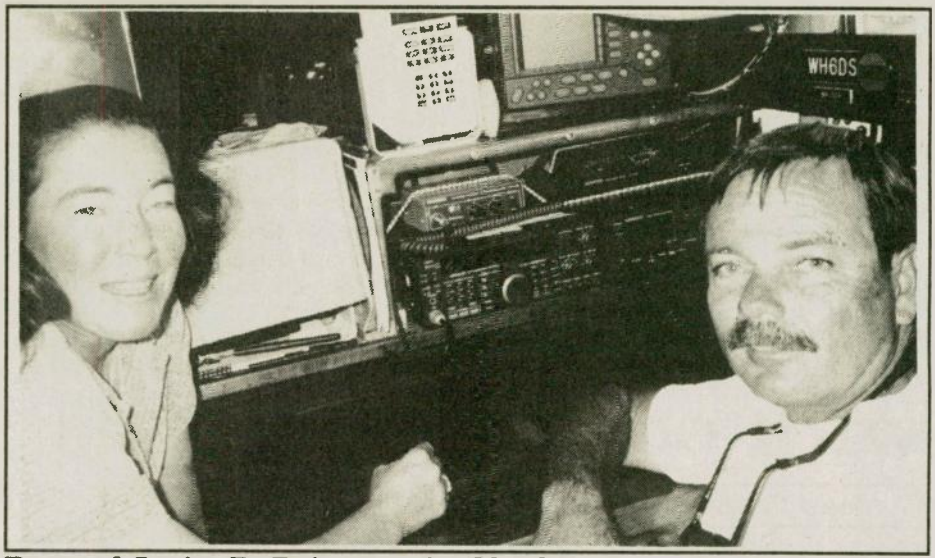
This time, thanks to DuBois' calm efficiency, the situation was anything but bizarre.

"When the paramedics reached Dave, his temperature was 104 degrees. He was in critical condition," said DuBois.

The SEALS motored Baker's 46-foot sloop almost 200 miles to Christmas Island. With the fluids and medications, Baker's fever dropped to around 100 degrees, still necessitating that he be flown to Honolulu for treatment in a hospital. His companion, Jan Mullen, who is still tending the boat in Christmas Island is not a ham — sorry, no chance to work her as a rare DX YL! But DuBois is in contact with her through marine single sideband frequencies.

In his conversations, he learned that the SEALS seriously depleted supplies on Baker's and Mullen's boat during the slow cruise to Christmas Island. Mullen, of course, wasn't complaining, but she did mention that she was running low on food. Characteristically, DuBois and his wife, Janice (call sign pending), organized a food drive. They collected over 300 pounds of provisions and made arrangements to ship them down to Christmas Island — at their own expense.

The couple also managed to fit regular "eyeball QSOs" with Baker into their already busy schedules. At presstime, Baker had just been released from Tripler Hospital. It will be several weeks before the physicians pronounce him well enough to resume his voyages.



Ron and Janice DuBois organized both emergency medical assistance and a supplemental food drive from their QTH at Ala Wai Harbor. ***—photo by WH2E***

"I've been a ham for about three years now. I enjoy my radio and I like helping out. I get a lot of rewards out of it, particularly doing things like making phone patches and putting family members together," remarked DuBois.

"I'm really lucky that my boat is in a good part of the harbor for reception. Some areas don't work so well. Different areas get interference from refrigerators and air conditioners, for instance. I just happen to have a very good spot."

At the crossroads

In a larger sense, any Amateur Radio operator in Hawaii is in a good spot to offer assistance. At the proverbial crossroads of the Pacific, Hawaiian amateurs are frequently called upon to serve as a link to the outside world. Often, the calls come at totally unexpected times — though one never really anticipates emergencies, except perhaps in novels.

"During the Special Event Station commemorating the fiftieth anniversary of the rescue of Eddie Rickenbacker (WH6R, November 8, 1992), we were getting calls from all over the Pacific. Jakarta, Saipan, Nauru Island were calling as well as Japan, New Zealand and Australia, of course. Then Phil Wilder, T32O, broke in with an urgent call," reminisced Al Shaver, NH2Z, event coordinator.

"He said there had been a diving accident earlier in the day and the folks there on Christmas Island needed to know when the air ambulance sent from Hawaii would arrive. We made several phone calls before we were finally able to put Phil in direct contact with someone from the Coast Guard's Joint Rescue Center. In the meantime, we continued with the Special Event while Phil went from his QTH to the harbor to learn more about the diver's condition.

"It seems regular telephone service shuts down on the weekends on Christmas Island, and Amateur Radio is a vital means of communication.

"While we were waiting for Phil to return, Richard Giles, KH3AF, had been monitoring from his station on Johnston Island. He was a paramedic and knew how to contact U.S. Air Force personnel in Yakota, Japan. It seems they have a coordinating center there and would know if any military aircraft had been dispatched. It turns out none had been dispatched. With this information, the Coast Guard was able to begin making its arrangements before Phil ever talked with them from Christmas Island."

Whereas Special Event operators rarely expect to do more than exchange signal reports and perhaps make a few remarks about the event they are commemorating, maritime net participants recognize that by "being there," they are often crucial to

someone else's safety and well-being.

Pacific Maritime Net

One such net, the Pacific Maritime Net, is something of an institution throughout the region. "Thanks to a lot of people, we completely surround the Pacific," DuBois explained. "After a 30-minute check-in, we have a roll call to make sure everyone's OK. We exchange weather information, weather faxes. We have land-based regulars in California, Oregon, Samoa, New Zealand and Australia. In Tahiti, Les Whiteley, FO5GZ, stays up late every night to help out. Dr. John Rea, ZL1AZR, is another regular.

"Several of us in Hawaii are very involved. There's Jim Ashford, NH6HN, and Ed Breen, NH6HT, over on the Big Island. Richard, AH6IO, often joins in and helps people, particularly with technical problems. He's been to Christmas Island and Bikini Atoll and regularly goes to the Marshall Islands so he is well acquainted with the region. I'm just part of the group."

Indeed, DuBois is part of a very special group, a group of people who use their hobby not only for their own amusement but also to serve others. Fortunately people like this exist in real life as well as in Michener's novels! **WR**

Hams support hospital with communications

Jean Priestly, KA2YKN

"Dr. White to 4 East, stat."

"Security to 3 West."

These are not your typical Amateur Radio transmissions heard during a public service event. They are normally heard during a telephone "cutover" though, when changing over from one telephone system to another within a busy hospital. Not a very common event for hams, but an absolute necessity for the welfare of patients and sanity of the hospital staff.

From pediatrics to cardiac intensive care, all areas were covered.

On 9 February, 1996, the Camden (New Jersey) County Amateur Radio Emergency Service and a group of friends from surrounding counties marched in to Our Lady of Lourdes Hospital to do what they do best — *communications*. Just imagine, 20 operators with various bags and boxes of equipment parading into the hospital. What would security and the hospital staff think? They were delighted — and even had a whole table filled with refreshments set out for everyone.

The cutover took about three hours, but with setup time and securing each floor after the new phones were installed, operators had a chance to see what it takes to run a unit for about five hours. Each operator's experience was different, depending upon the unit assigned. From pediatrics to cardiac intensive care, all areas were covered.

Every amateur played an important role, and deserves credit for their assistance. The ARES members involved were: Eugene F. Holbe, N2WFN; Lawrence Gasperone, Jr., KB2WKY; Louis H. Priestly, N2HQL; Seth Toub, KB2TFS; John C. Pedrick, KB2WKV; and, at home, standing by a telephone should the need arise, was Frank Widmann, WA2YSW. A very important backup repeater was in place through the efforts of Steven Bromhead, KB2RTZ, and Philip Ciccone, KB2TMZ.

Friends of Camden County ARES who also participated were:

Eugene Bond, WB2UVB; Janice Bond, KA2CQX; John Kucsan, Sr., KB2UAP; Rita Kucsan, KB2UAQ; Edward Champion, Sr., N2AYK; Judith Dodd, N2GXL; Sandra L. Deluca, KB2WSO; James Yates, Jr., KB2TLU; Steven Stanley, NØYHH; and Vincent Bernotas, II, N2WXF, a physician who monitored from home at McGuire AFB, ready to contact any other physicians, if needed. I am KA2YKN, CCARES coordinator, and I was stationed in the communications center.

When all was finished, and the installation was completed and functioning, each tired operator came down to the communications center for a final sample of the refreshments or cup of coffee and then headed home. "Let me know when our next activity is to be held," was heard many times.

The hospital staff and security personnel were tired too, but they thanked us again and again for our time and expertise. It had been a good drill, and everyone felt that the cutover had been accomplished quite smoothly. Thanks go to the operators, the cooperative staff of the hospital and all those quietly listening in the woodwook. Another job well done. **WR**

This month our principal source of information has been Amateur Radio *Newsline*, Inc.

Report on ham station RF measurements

Here are some important extracts from a final FCC report on RF fields at Amateur Radio stations, as a result of measurements made in 1990.

"In order to obtain data on the potential environmental impact of transmissions from Amateur Radio stations, personnel from the FCC and the U.S. Environmental Protection Agency (EPA) measured electromagnetic fields at several stations in southern California in July 1990. Measurements of electric and magnetic field strength were made in areas near antennas and transmitting equipment in order to demonstrate potential levels of exposure to RF radiation for amateur operators and other individuals who may be present in the immediate vicinity of amateur stations. Some measurements of operator exposure to 60-Hertz magnetic fields were also made because of interest by the EPA in the extremely low frequency (ELF) electromagnetic environment.

"Antennas used at stations included Yagis, Quagis, 'inverted V' dipoles, horizontal dipoles, vertical radiators, VHF discones, and others. Primarily, HF and VHF frequencies were used for transmissions. Operating powers ranged from below 100 watts to as much as 1400 watts.

"Measurements were made at one or two meters above ground at various distances with respect to the antennas studied. Measurements were also made at various locations inside buildings and at operator locations ('ham shacks'). All measurements were made while operators transmitted in the 'key down' position, i.e., continuous wave transmissions without modulation. Although this would not be a normal operating mode, it was used in order to obtain a stable reading on the measuring instruments.

"Although current FCC policy categorically excludes amateur operators from routine evaluation for compliance with RF guidelines, this policy is one of several items being reconsidered in the recent proposal to adopt new guidelines. ANSI/IEEE limits specified for 'uncontrolled environments' are used for comparison with measurements in publicly accessible areas, and limits specified for 'controlled environments' are used for comparison with measured values obtained at the amateur station or 'ham shack.'

"Publicly accessible areas are defined here as areas, other than the 'ham shack,' where it is reasonable to assume that persons who might not have control or knowledge of their exposure could have access. This is roughly equivalent to the definition of an 'uncontrolled environment' given in the ANSI/IEEE guidelines. Stricter exposure limits are specified for such situations than for 'controlled environments.' According to the guidelines, an amateur operator would be in a 'controlled environment' and subject to less restrictive limits.

"The exposure guidelines are frequency-dependent and recommend the strictest exposure limits for VHF frequencies, since these are the frequencies where the highest specific absorption rates (SARs) occur for human beings. Therefore, although some measured field strengths at HF frequencies may be relatively high, the percentage of the exposure limits may be less than for lower field strengths measured at VHF frequencies.

"According to the new ANSI/IEEE exposure guidelines, it appears that vehicle-mounted amateur antennas can create the greatest possibility for significant exposure in publicly accessible areas. In fact, in several cases involving vehicle-mounted antennas, the maximum levels measured approached or exceeded the electric field

Amateur Radio Call Signs

Amateur Radio operators often ask the FCC what call signs have been assigned lately. This list shows the last call sign in each group to be assigned for each district, as of the first of April 1996.
For more information about the call assignment in the Amateur Radio Service, see Section 97.17(f) of the FCC Rules, or write to the FCC, Consumer Assistance Branch, Gettysburg, PA 17325-7245.

Radio District	Group A Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
Ø	ABØBK	KIØBZ		KBØVVJ
1	AA1PT	KE1EJ	N1WYA	KB1BXK
2	AB2AN	KG2GJ		KB2YKO
3	AA3OA	KE3WE	N3XCV	KB3BOC
4	AE4SO	KT4NS		KF4IGS
5	AC5HD	KK5YM		KC5TRQ
6	AC6TR	KQ6EX		KF6CPF
7	AB7PX	KJ7WN		KC7QDU
8	AA8WK	KG8WF		KC8DBC
9	AA9RQ	KG9FY		KB9NEA
N. Mariana Is.	KHØV	AHØAW	KHØER	WHØABE
Guam	WH2T	AH2DB	KH2PY	WH2ANP
Hawaii		AH6ON		WH6DAN
Amer. Samoa	AH8O	AH8AH	KH8CL	WH8ABF
Alaska		AL7QI		WL7CSK
Virgin Is.	WP2X	KP2CJ	NP2JD	WP2AIC
Puerto Rico				WP4NKU

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

strength limits recommended for 'uncontrolled environments.' This also occurred in at least one other case, a center-fed dipole at Station E.

"Amateur radio facilities can generate electric and magnetic fields near antennas and transmitting equipment that, in some cases, might approach or exceed limits for human exposure. For most of the stations surveyed, RF protection guidelines for field strength and power density were not exceeded in accessible areas.

"However, at higher power levels or with different facility configurations, higher exposure levels cannot be completely ruled out. Even though this study was designed to evaluate typical stations, it represents only a small sampling of many possible Amateur Radio facilities."

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New European electromagnetic interference standards

A draft of the European Union's electromagnetic compatibility standard has been published by the European Telecommunications Standards Institute. It contains procedures and tests to ensure compliance with the European EMC Directive which came into force on the 1st of January. The Radio Society of Great Britain, through its EMC and Licensing Advisory Committees, is evaluating the document and will be responding to it. Copies are available from the British Standards Institution, 389 Chiswick High Rd., London United Kingdom.

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Auctions and the ham bands

Could our bands be auctioned off to the highest bidder as a result of spectrum utilization hearings now going on in Washington? The American Radio Relay League is taking action to see that this does not occur.

The Congressional Budget Office in Washington, DC, has started to evaluate the Amateur Radio spectrum as well as other services for its potential auction value. It is thought that this action has been brought on as a way to lower the Federal Budget Deficit. In the past the FCC has auctioned off segments of the RF spectrum as a way to settle disagreement between two or more entities wanting the same section of a particular band.

The ARRL has supplied documentation to the Congressional Budget Office highlighting the positive aspects of Amateur Radio in such areas as emergency communications and other contributions to society in an attempt to ensure that the amateur bands continue to be excluded from any further auction action. Amateurs should make sure that their representatives in Congress and the Senate are aware of the full extent that Amateur Radio plays in their districts. The American Radio Relay League is the only organization representing Amateur Radio that is taking an active part in these hearings.

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FCC approves reallocation plan for 185 MHz of spectrum

The FCC has approved a plan to reallocate 185 MHz of spectrum transferred from the Federal Government to the private sector. The Commission also established the scope and timing of future rule-making proceedings to assign the reallocated spectrum. Last March, the Secretary of Commerce identified 235 MHz of Federal Government spectrum for private-sector use, 50 MHz of which had been released earlier. The FCC allocated that spectrum space to general, commercial fixed and mobile uses and unlicensed services.

The remaining 185 MHz is to be allocated and assigned gradually over a 10-year period, and a significant portion will be held "in reserve" until that period ends.

The Commission says it intends to "consider all options for the appropriate use of the remaining 185 MHz, including, but not limited to, those addressed in allocating the first 50 MHz." Among the services that will be considered is public safety. The Budget Act requires that the FCC study public safety spectrum needs and develop a plan to ensure adequate spectrum through the year 2010.

The Public Safety Wireless Advisory Committee — chartered by the FCC and the NTIA — will advise later this year on the operational, technical and spectrum requirements of Federal, state and local public safety entities.WR

Amateurs lend helping hand

Jim Keightley, NF7D

Ed. note: The February floods in Oregon, Washington, and Idaho were all part of the same natural disaster, but different needs emerged at different sites. In some locations, helping individuals was needed most, in others — government agencies and large rescue organizations had the greatest need.

What they had in common was the use of that adaptable resource our readers know best — Amateur Radio. The two following accounts illustrate different aspects of Amateur Radio's role in those floods.

I read with interest the front page article by Ann S. Shaver, WH2E, that was published in the April, 1996, edition of ***Worldradio***. Our club was there too, although we arrived some time later and under slightly different circumstances. I recognized the bridge shown in the photograph as one that is privately owned that provided access to seven homes. That bridge was destroyed as indicated in the caption and at the same time, power and phone service was lost. Now that would be bad enough, but with the loss of power the ability to pump water was lost as well. That was very difficult to deal with but even hand-operated pumps could not be safely used because the wells had been contaminated by flood waters. More about these stranded families later.

We often hear of Amateur Radio operators from large organized groups or clubs who swing into action to provide communication during a disaster. The reason is very simple. They are organized and they train for such situations.

Therefore, this story is somewhat unusual in that it chronicles a small, loosely organized group and their efforts to provide assistance to disaster victims in the Nehalem Valley of Oregon during the floods of 1996.

The group in question is The Peninsula Amateur Radio Society, which I shared in forming in 1976 with Bea Johnson K7ZUV, and Lyle Clark, W7RDR. Our club is located on the Long Beach peninsula of Washington state. We have been meeting informally at Chuck's Restaurant in Long Beach at 10 a.m. on the first Sunday of each month ever since.

We were, of course, well aware of the devastation being visited upon our neighbors just across the Columbia River to our immediate south. However, no mobilization was attempted by our EC or authorities in our county. Russell Dunham, KC7MGL, had been listening to commercial broadcast radio as well as the emergency communications being passed via the W7BU emergency net on 2 Meters. This is the call of the Astoria, Oregon, club and was located at the Emergency Operations Center, under the direction of the Clatsop County Sheriff. The immediate need was for bedding in the Nehalem Valley. Much of the personal bedding had been spoiled by flood waters along with most of the detergents available. In addition, wells had been contaminated by flood water so what bedding and clothing had been saved could not be washed even by hand. Machines were useless due to the lack of power. In addition, there were few phones functioning in the area. This was some 5 days into the emergency.

Russ obtained a sizable amount of bedding, piled it into a friend's small pick up and they took off for the hour and a-half-long drive. What he found moved him to further action.

When he got back that evening, he called me and advised that he had found some serious needs and asked that I assist him in his efforts to help. There were many, many families without reasonable sleeping facilities.

I agreed to attempt to locate bedding donations from our community. First, I called Pacific County Fire District Number One, and they agreed to provide a drop point at the fire stations. They also put out a call on their fire radio frequencies. This was most helpful because of the many local residents who have scanners in their homes. I then called the local radio broadcasters and they immediately put public service announcements on the air.

Next, I got out the phone book and began calling every motel listed. I asked if they had old bedding that was about to be replaced and would they consider donating it to this effort. WOW!!! What a response. We got so much "stuff" that it was obvious that my full-size pick up was not going to hold it all.

Again, the Fire District came to the rescue. The Fire Commissioners made an emergency authorization and provided a 12-passenger Maxi-van and one of the volunteers stepped forward to drive. The center seats were removed and the loading began. My pick up canopy was stuffed to the roof and the cab was also full. The van was filled nearly to the roof as well.

Russ brought his hand-held and we were on our way to Jewel, Oregon, with the second load of relief supplies. As we proceeded, we checked into the W7BU net, and advised them of our purpose and, from time to time, of our progress.

When we arrived, we were met with open arms, and after unloading at the Nehalem Valley Community Church Disaster Center, there were many teary eyes among the victims gathered there.

The two vehicles then returned to the Long Beach Peninsula to solicit further assistance.

This time we contacted the Long Beach Elks Lodge who immediately made an emergency donation of funds to provide fuel and our other out-of-pocket expenses. Some years ago this same Lodge donated the auto patch on our 146.86 repeater for the community service and emergency aspects of the unit.

The Ocean Park Moose Lodge made a large donation of cleaning solvents and disinfectants. Please keep in mind how important materials of this type are when fighting potential contamination. The local IGA grocery store, operated by State Senator Sid Synder, made a donation of about a

Everyone was pretty exhausted! Pictured left to right: Jim Keightley, NF7D; Jeannie Lytle (studying for her license); Teresa Murray (mother of KC7MGL); Al Stuffelbean, KC7MGK; Tina Hargrove, KC7PCC. *—photo courtesy of Chinook Observer*

half ton of food. I could go on about the wonderful way that the community responded but no matter how much I said, it would understate the generosity. You see, the third trip had four vehicles in convoy and, this time, many of the operators stayed to provide emergency communications through the W7BU net.

We were met by Deputy White from the Clatsop County Sheriff's office who made arrangements for locations of the portable stations. It was a pleasure to work with this dedicated public servant.

We established net control at the fire station in Elsie, Oregon, and then placed into service a small, local net that fed information into W7BU at the emergency operations center and maintained a radio watch for four more days before phones were completely restored and we could secure.

After the Sheriff's Office had released us from active communications duty, our concern for the effected families continued.

The families who had been isolated by the bridge collapse were still without a reasonable method of getting to and from their homes. The Sheriff had provided a boat that was making daily trips with essential supplies as well as making health and welfare checks. However, there was a pressing need for a dock.

Russ got on the phone after arriving home and located the materials needed from a local lumber dealer and other contributors. Arrangements were made to transport these materials to the site.

Several of our members who responded were new licensees and not long ago, CB operators. However, each one performed in the finest tradition of ham radio and I was pleased with the results.

Some slogged through deep mud from door to door, checking on the health and welfare of people who had not been heard from since the emergency began.

These amateurs delivered drinking water and gave information on how to obtain the food located at the disaster center. It wasn't all radio work, but it was very important.

The Red Cross finally arrived at the disaster center after some seven days. This small area with only a few hundred victims had a low priority because of the unbelievable devastation in the Portland, Oregon, area as well as southwest Washington.

Because of our involvement in the disaster, the Astoria club has become aware of our group of some 20 hams on the Peninsula. Should there be a need in the future, they may call on us. It was a real pleasure to work with them.

I salute those who gave to make our efforts successful and those who used their vehicles and radios as well as their skills. Among them were; Bill Hoffman, KC7MGJ; Al Stufflebean, KC7MGK; Russ Dunham, KC7MGL; Bob Foreman, KC7MGM; Rod Van Son, KC7XG; Virgil Byle, KA7MGE; and Tina Hargrove, KC7PCC. I am proud to have had a part too! WR

Amateur Radio communication efforts pay off during floods

Kyle Pugh, KA7CSP

It is good to know when disaster strikes how the better side of humanity shines forth. One perfect example of this was how dozens of hams helped with communications during the recent widespread flooding in three states in the Pacific Northwest. Thirteen counties in Washington, 7 counties in Idaho, and 18 counties in Oregon became declared disaster areas with damage in the billions.

In Eastern Washington, Mable Babbitt, WB5AVH, Emergency Coordinator for Walla Walla County, received a call at 7:30 a.m. on 7 February, from the Department of Emergency Management (DEM) to stand by, that there was a little bit of flooding in the Dayton/Waitsburg area. At 9 a.m. the Red Cross was activated and Mable opened a formal net on 2 Meters on the Kamiak Butte Amateur Repeater Association (KBARA) repeater system. It supported heavy traffic (almost 24 hours a day) for the next several days.

By midday on 7 February, the main highway between Walla Walla and Dayton was closed due to high water. The bridge at Lewis and Clark State Park was under water, with the Touchet River still rising. The Red Cross opened shelters in Waitsburg, Dayton, and Walla Walla. Seventy-five to 100 people ended up in the Waitsburg shelter by evening as the town by then was under water. At the end of the day Mable had used 23 operators logging in a total of 147 public service hours.

From other parts of Eastern Washington, hams were calling in road closure and bridge washout information on the KBARA repeater link. Sandbagging was in progress along Latah

Creek in Whitman county and Pine Creek in Rosalia. Colfax and Palouse were having problems and highway 27 at Oakesdale was closed.

On 8 February, all rivers and creeks in Southeastern Washington were flooding and people were being evacuated in many locations including Colfax flats and Pinehurst, Idaho. The water supply in Waitsburg and Dayton was tainted. Mill Creek, which runs through the middle of Walla Walla, was so full it had risen to the bottom of the bridges and over the roadway in some places. The entire business district of Palouse was under water. Interstate 90 in North Idaho was closed at Enaville, and mudslides forced closure of all three main Cascade mountain passes in Western Washington.

EC Jim Nadeau, W7DLB, and his ARES members in Klickitat county worked through a cooperative effort with the Wasco county EOC in The Dalles, Oregon, with DEC Don Allan, KG7XY, extending helping hands to each other as needed. A total of 14 hams put in 24-hour watches for rising waters in rivers and streams in that part of Washington and Oregon by providing communications in local evacuations as liaison for the Red Cross, the EOC, and a number of other agencies.

The hams in Klickitat and Wasco counties volunteered a total of about 800 hours and countless road miles traveling to and from the scenes of emergency. In the Walla Walla area a total of 38 operators logged in over 850 public service hours. The Tri-Cities and Yakima areas sustained some flooding and the Yakima ARES Search and Rescue members passed 2,250 messages in and out of the Nile area on Chinook Pass.

It is hard to imagine how high the dollar amount in damage would have risen if it were not for all the ham operators who took the time to receive training.

The Spokane ARES stood ready for mutual aid with Kootenai county in North Idaho watching the Coeur d' Alene river. It set a new record at 82 feet, causing Coeur d' Alene lake to rise to seven feet above normal. The Spokane river, which originates from Coeur d' Alene lake, was awesome as it roared through its channel in downtown Spokane at over 30,000 cubic feet per second.

It is hard to imagine how high the dollar amount in damage would have risen if it were not for all the ham operators who took the time to receive training. They were there at a moment's notice to lend a hand or equipment wherever needed.

Damage estimates just in Walla Walla county rose to $52 million for public and private property with an additional $26 million for anticipated crop damage and stream-bank repairs, with Columbia county's damages estimated at $30 million.

It takes both the professional and many such volunteers to come through an emergency with no loss of life.

Many thanks to Mable Babbitt, WB5AVH; James Nadeau, W7DLB; Donald Allan, KG7XY; and Mark Tharp, KB7HDX, for their information and contribution to this article. Also, a big thank you goes to Eastern Washington SEC Jack Babbitt, WA5ZAY, for his assistance and support. WR

Experimenting with reflected power

Jack Althouse, K6NY

Jack Althouse, K6NY, is the founder and owner of Palomar Engineers in Escondido, California.

If our transmitter puts out 100 watts and 60 watts is reflected from the antenna what does our SWR/ Power Meter read?

1. 160 watts forward and 60 watts reflected.
2. 40 watts forward and 60 watts reflected.
3. 100 watts forward and 60 watts reflected.

The correct answer is #1. Why? If the transmitter puts out 100 watts and there are no losses in the transmission line then 100 watts must be going into the antenna. If 100 watts is going into the antenna and 60 watts is reflected then the forward power must be 160 watts. Simple arithmetic!

Thousands of words have been written to explain this but arguments still go on. Instead of adding to the verbiage I'm going to describe an experiment that illustrates what happens so that doubters can see for themselves. The equipment required is simple and can be found in most ham shacks: A transmitter, a 50-ohm dummy load, two SWR/Power meters, and some 50 ohm coax. You'll also need two 4:1 RF transformers (Figure 3); I'll explain how easy and inexpensive it is to make them.

Figure 1 shows the basic test setup. The transmitter power goes through a short piece of coax to a 4:1 transformer. The transformer output is at 200 ohms. At the other end of this coax a second transformer steps back down to 50 ohms. A short piece of coax then goes to the 50-ohm dummy load.

Note that, on the first and last coax cable, SWR= 1, so there is no reflected power. The middle cable sees a 200 ohm load so SWR=4, on it.

Figure 2 shows the instrumentation. Three power meters are shown but you only need two; one can be moved around.

Start with meters #1 and #3. Adjust the transmitter power to get 100 watts output as shown on meter #1. (You can use half the power, ⅓ the power, or whatever is convenient; the power ratios will stay the same). If you have 100 watts on #1 then meter #3 should read close to 100 watts. You may lose a few watts in the transformers.

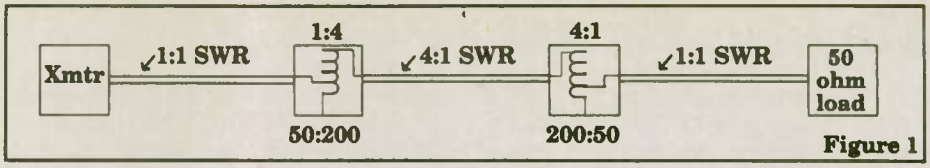


Figure 1

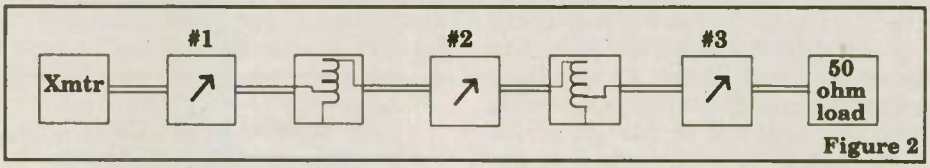
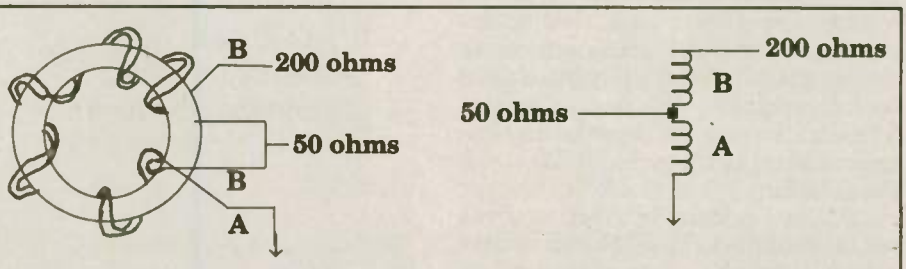


Figure 2



4:1 RF transformer

Use a F114-67 ferrite toroid core and two 22-inch lengths of #22 hookup wire. It's helpful to use two colors of wire. Hold the wires side-by-side and wind 15 bifilar turns on the core. Connect as shown above.

Two of these transformers are required. They have the least loss on the 40 Meter band. Run your tests there if you can. **Figure 3.**

Move meter #3 so it becomes meter #2. Keep the power through meter #1 at 100 watts and read both forward and reflected power at #2. You'll get 160 and 60 watts respectively. I got 157 and 61 in my experiment; that's close enough to prove the point. **WR**

Liability protection for volunteer examiners

Hams who volunteer their services to various Amateur Radio projects may soon be protected from frivolous law suits, if the American Radio Relay League is successful in promoting congressional legislation sponsored by Representative Bill Baker.

Baker has introduced a bill to protect hams in the Volunteer Examination program and the Amateur Auxiliary from frivolous lawsuits while they are doing their volunteer jobs. The bill, designated as HR-3207, would afford amateurs engaged in statutorily defined activities with the VE program and with the Amateur Auxiliary the same liability as Federal workers enjoy under the Federal Tort Claims Act.

When individuals who fall under such protection are sued for something they have done while performing their duties, the Federal government steps in to protect them. While the bill would not give blanket immunity, it does offer a fairly rigorous body of legal protection from the kind of malicious litigation that tends to frighten volunteers away from these activities.

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The proposed legislation is know as the Amateur Radio Volunteer Services Act of 1996, and was introduced to congress on 29 March. Other individuals and private organizations currently protected by the Federal Tort Claims Act include Volunteers in Service to America, the Peace Corps and Job Corps. **WR**

Maggie Herrick, N2XJC, and the YL Packet Net

Margaret Dunn, KC7LXS

Last spring, while I was studying for my first license test, I read about packet radio in *Now You're Talking*. With my interest in computers, I knew that I'd love it. When I finally got my packet station going a few months later, I was delighted to find the YL Packet Net — YLs from across the country exchanging messages with each other.

The YL Packet Net was the inspiration of Maggie Herrick, N2XJC. She says, "When I first looked at packet radio, I saw nothing but men, so I put out a bulletin to WOMEN@USBBS asking if there were any women on packet. That was in late October of 1994. We gradually began to hear from other YLs who wrote bulletins to YL@USBBS (or YL@ALLUS, depending on your area). The category 'WOMEN' was not a good choice, as men thought we had a dating service! We tried YL and XYL, but a number of the women don't like to use XYL. It gives them various negative feelings."

Maggie continues, "The net began to grow and there are many who have stuck with it from the very beginning; many come and go at their convenience. Phyllis Davis, KA1JC, formerly of Maine, now in Florida, has kept a roster that now shows about 225 women who have sent bulletins to the YL Packet Net during its first year. She has a record of their mail and packet addresses, and is now recording e-mail addresses. She sends automatic birthday greetings to each one and also keeps a record of their 'funny phonetics.' One of the YLs, Patty McMurray, N3PBD, has kept a hard copy record of every bulletin from the very beginning!"

The YL Packet Net is not a club or organization. It has no affiliations with any other group, such as the ARRL or YLRL, although many of its members independently belong to one or the other, or both. There are no dues or fees needed to participate. The only requirements are an interest in communicating with other YLs on packet radio and the willingness to follow the "rules" that were made in the beginning: "No flames and no replying to flames, and no recipes distributed via the YL Packet Net."

Since its inception, the Net has flourished. Its participants include a wide cross section of women. Most are grandmothers or mothers; participants include a cross-country truck driver, a new pilot, office workers, and nurses, just to name a few. Deb Clark, KB1AOV, mentioned to Maggie how very impressed she was with the content of the YL bulletins. The bulletins speak of our lives — our hopes and dreams, families and friends, work and play, comedies and tragedies. There is no swearing, arguing, or gossiping, and less talk about rigs and antennas.

Maggie Herrick, N2XJC

The Net means something special and different to each YL. Robin Parker-Resnick, KJ7BI, wrote to Maggie, "I no longer can work. Having been a therapist in the mental health field, you can imagine my depression at no longer having daily contact with a variety of women (I only had female clients) when I left the work force. I can't even begin to tell you about the extent of the lifeline provided me by the YL Packet Net!" For some YLs, the net is the only regular connection they have with other YLs.

Although Maggie started the YL Packet Net, she is not "net control." An official net control on a packet net is not practical. Instead, she monitors and participates in the net and, if needed, gently reminds us of the rules we made.

It has not been all smooth sailing. The "no recipes" rule was made because some of the SysOps thought that their packet bulletin boards would be flooded with recipes. They threatened to delete ALL YL bulletins if recipes appeared in them. One packeteer said, ". . . the latest trend to use packet for swapping recipes has got me on the keyboard. Packet and packet bulletin boards are not the place for this kind of stuff. I am glad to see YLs on the air, but keep your Suzy Homemaker stuff off." He was also curious how other SysOps felt about "non ham-related subjects like this on packet."

Another bump in the road has been the bootlegging of the call signs of a few of our YLs. Some of the messages generated were easily offensive to the men who use packet radio. The general consensus has been that these calls were illegally used in an attempt to get the YLs kicked off of packet bulletin boards. Luckily, sane heads prevailed and we're still here.

I don't want you to think that most OMs have been against us. Nothing could be further from the truth. We have several men who participate regularly, and many have sent messages of encouragement, especially during times of controversy. Herb Petereit, WØAFY, has been voted the best-liked male YL Packet Net correspondent. Sometimes a man has written requesting messages be sent to his wife to encourage her to get licensed or, if she already is, to encourage her interest in the YL bulletins. There have been successes with both.

Of course, most of the SysOps have been good to us as well. Without them, we wouldn't have the YL Packet Net, let alone all of the nodes and PBBSs. To show our appreciation, the YL Packet Net instituted Annual SysOps Appreciation Day, 17 January. On this day, each YL sends a "thank you" note to the SysOp of her PBBS.

What's next for the Net? The move now is to go worldwide. A few bulletins have made it overseas and there has been interest expressed in seeing more. As a result, some YLs are posting their bulletins worldwide and one OM, Stew, DA1RS, has offered to repost the US bulletins overseas. So, we continue to grow.

If you are interested in participating in the YL Packet Net, send a bulletin to YL@ALLUS or send a personal message to Maggie, N2XJC@WA2YSM.#ENY.NY.USA.NA.

Hope to see YOU on the YL Packet Net!! **WR**

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Operate 10 bands: 75/80, 40, 30, 20, 17, 15, 12, 10, 6 and 2 Meters with one antenna
Separate full size radiators . . . End loading . . . Elevated top feed . . . Low Radiation Angle . . . Very wide bandwidth . . . Highest performance no ground vertical ever . . .

Operate 10 bands -- 75/80, 40, 30, 20, 17, 15, 12, 10, 6 and 2 Meters -- with this MFJ-1798 vertical antenna and get *full size performance* with no ground or radials!

Full size performance gives you high efficiency for more power radiated. The result? Stronger signals and more Q-5 QSOs.

Full size performance also gives you exceptionally wide bandwidths so you can use more of your hard earned frequencies.

Full size performance is achieved by using separate full size radiators for 2 through 20 Meters and highly efficient end loading for 30, 40 and 75 /80 Meters.

You get very low radiation angle for exciting DX, automatic bandswitching, omni-directional coverage, low SWR and it handles 1500 watts PEP SSB.

MFJ's unique *Elevated Top Feed*™ elevates the feedpoint *all the way to the top* of the antenna. It puts the maximum radiation point high up in the clear where it does the most good -- your signal gets out even if you're ground mounted.

It's easy to tune because adjusting one band has minimum effect on the resonant frequency of other bands.

Self-supporting and just 20 feet tall, the MFJ-1798 mounts easily from ground level to tower top -- on small lots, backyards, apartments, condos, roof tops, tower mounts.

Separate *Full Size* Radiators

Separate full size quarter wave radiators are used on 20, 17, 15, 12, 10 and 2 Meters. On 6 Meters, the 17 Meter radiator becomes a 3/4 wave radiator.

The active radiator works as a stub to decouple everything beyond it. *In phase* antenna current flows in all parallel radiators.

This forms a very large equivalent radiator and gives you incredible bandwidths.

These radiator stubs provide automatic bandswitching -- there is absolutely *no loss* due to loading coils or traps.

MFJ-1798
$269.95

End Loading

On 30, 40, 75/80 Meters, end loading -- the most efficient form of loading -- gives you highly efficient performance, excellent bandwidth, low angle radiation and automatic bandswitching.

MFJ's unique *Frequency Adaptive L-Network*™ provides automatic impedance matching for lowest SWR on these low bands.

Tuning to your favorite part of these bands is simple and is done at the *bottom* of the antenna.

No Ground or Radials Needed

You don't need a ground or radials because an effective counterpoise that's 12 feet across gives you *excellent* ground isolation.

You can mount it from ground level to roof top and get awesome performance.

No Feedline Radiation to Waste Power

The feedline is decoupled and isolated from the antenna with MFJ's exclusive *AirCore*™ high power current balun. It's wound with Teflon® coax and *can't* saturate, no matter how high your power.

Built to Last

Incredibly strong solid fiberglass rod and large diameter 6061 T-6 aircraft strength aluminum tubing is used in the main structure.

Efficient high-Q coils are wound on tough *low loss* fiberglass forms using highly weather resistant Teflon® covered wire.

Teflon® is registered trademark of Dupont

MFJ *Super Hi-Q Loop*™

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MFJ's *tiny* 36 inch diameter *high efficiency* loop antenna lets you operate 10 to 30 MHz *continuously* -- including the WARC bands!

It's ideal where space is limited -- apartments, small lots, mobile homes, attics, motor homes.

Enjoy both DX and local contacts when you mount it vertically. You get *both* low angle radiation for excellent DX *and* high angle radiation for local close-in contacts. Handles 150 watts.

Super easy-to-use! Only MFJ-1786 *Super* Remote Control has *Auto Band Selection*™. It auto-tunes to your desired band, then beeps to let you know. No control cable is needed.

Fast/slow tune push buttons and built-in two range *Cross-Needle* SWR/Wattmeter lets you quickly tune to your exact frequency.

All *welded* construction, no mechanical joints, welded butterfly capacitor with no rotating contacts, large 1.050 inch diameter *round* radiator -- not a lossy thin flat-strip -- gives you highest possible efficiency.

Each plate in MFJ's *superb* tuning capacitor is welded for low loss and *polished* to prevent high voltage arcing. It's welded to the radiator, has nylon bearing, anti-backlash mechanism, limit switches and a continuous *no-step* DC motor for *smooth precision* tuning.

A heavy duty 1/8 inch thick ABS plastic housing with ultraviolet inhibitors protects it.

MFJ-1782, $269.95. Same as MFJ-1786 but remote control has only fast/slow tune buttons.

Super 80/40M Vertical

MFJ-1792
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Designed as a *high performance* antenna for 80 and 40 Meters, the MFJ-1792 features a *full size* quarter wave radiator for 40 Meters - - that's a full 33 feet of ruthless radiating power.

End loading -- the most efficient form of loading -- is used for 80 Meters. It's accomplished by a virtually lossless 4½ foot capacitance hat and a high-Q coil wound with Teflon® wire on a *low-loss* fiberglass form.

The *entire length* radiates power.

High strength 6061-T6 aluminum tubing, super strong solid fiberglass insulator, *Frequency Adaptive L-Network*™, heavy duty *swing* mount. Handles 1500 watts PEP. Requires guying and radials, counterpoises or ground screen.

MFJ-1793, $179.95. Same as MFJ-1792 but includes *full size* 20 Meter quarter wave radiator.

Box Fan Portable Loop

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No, it's not a fan -- it's a high efficiency portable loop antenna that's about the same size and shape as a 2x2 foot box fan, complete with carrying handle.

Carry it like a suitcase, tuck it in a corner of your car or check it as baggage on a plane.

When you get there, set it on a table or desk and enjoy ragchewing or DXing.

All welded construction, covers 14-30 MHz *continuously* including WARC bands, handles 150 watts. Remote control has fast/slow tune buttons. Separate control cable not needed.

MFJ *halfwave* Vertical

6 bands: 40, 20, 15, 10, 6, 2 Meters . . . No radials or ground needed!

MFJ-1796
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Operate 6 bands -- 40, 20, 15, 10, 6 and 2 Meters -- with this MFJ-1796 *ground independent halfwave* vertical antenna! No radials or ground ever needed!

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- *New for 1996 -- MFJ AirCore™ Roller Inductor*
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- *peak/average Cross-Needle SWR/Wattmeter*
- *Antenna Selector • Balun • Built-in Dummy Load*

More hams use MFJ-989s than any other 3 KW tuner!

MFJ uses super heavy duty roller inductor, variable capacitors, antenna switch and balun to build the world's most popular 3 KW antenna tuner.

The rugged MFJ-989C handles 3 KW PEP SSB and covers 1.8 to 30 MHz, including all MARS and WARC bands.

MFJ's new 1996 AirCore™ Roller Inductor, three-digit turns counter and spinner knob gives you exact inductance control for absolute minimum SWR.

You can match dipoles, verticals, inverted vees, random wires, beams, mobile whips, shortwave -- nearly any antenna. Use coax or balanced lines.

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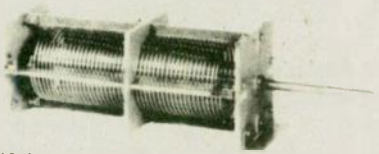
MFJ builds the world's most popular 3 KW antenna tuner using these **super heavy duty** *components . . .*

MFJ *AirCore*™ Roller Inductor



MFJ's exclusive *super heavy duty AirCore*™ Roller Inductor has an air core that can't burn up! You get ultra high-Q, the lowest loss, highest efficiency and highest power handling of any roller inductor in ham radio.

MFJ's exclusive *Self-Resonance Killer*™ keeps potentially damaging self-resonances away from your operating frequency.

Large, self-cleaning wiping contact gives excellent low-resistance connection without arcing or contact burning.

A *solid* ¼ inch brass shaft with self align bearings gives smooth non-binding rotation.

Some competing "legal limit" tuners use a lossy, low Q, solid core with erratic electrical contacts and have potentially damaging self-resonant frequencies. This can cause excessive heating and can destroy the core.

Massive Transmitting Capacitors

Look inside . . . you'll see two *super heavy duty* transmitting variable capacitors that can handle 6000 volts. Extra wide (0.27 inch) stator plate spacing gives you arc-free operation.

Specially shaped plates give low minimum capacitance when unmeshed. This and a hefty 250 pf maximum give you an extremely wide matching range -- even on 160 and 10 Meters.

The nearest competing "legal limit" tuner has variable capacitors physically *much smaller* than the MFJ-989C's. Theirs is rated at 4500 volts -- a full *25% less* than the MFJ-989C. Theirs is more likely to arc -- *not what you want in a "legal limit" tuner!*

Super Antenna Switch

The MFJ-989C *super heavy duty* antenna switch is made of *two* individual *ceramic* wafers wired in parallel. Extra wide spaced, heavy duty contacts handle extreme voltages and currents. *We've never burned one up!*

You can select two coax antennas (directly or through tuner), balanced line/random wire, or built-in dummy load.

3 KW *Current* Balun

MFJ's *super heavy duty* 3 KW *current* balun for balanced lines uses *two* giant 2½ inch toroid cores. It's wound with *Teflon®* wire connected to high voltage *glazed ceramic* feedthrough insulators.

The MFJ-989C lets you safely operate high power into balanced feedlines without core saturation or voltage breakdown.

Some "legal limit" tuners have inferior *voltage* baluns with smaller diameter toroid cores and use soft plastic feedthrough insulators that can arc and melt.

More reasons why the MFJ-989C is the world's finest 3 KW tuner . . .

Built-in Dummy Load

A full size 300 watt non-inductive 50 ohm dummy load is built into the MFJ-989C.

You'll find it handy for transmitter tuning, testing and repairing your rig, setting power level, adjusting your mic gain and more.

Some "legal limit" tuners *don't* have a built-in dummy load. They want *you* to pay for an external dummy load that just gets in your way.

Lighted Cross-Needle Meter

MFJ's lighted *Cross-Needle* SWR/Wattmeter lets you monitor SWR forward and reflected power *simultaneously*. Read both peak and average power in two power ranges.

Sleek and Compact

The compact MFJ-989C slides right into your operating position -- you'll hardly know it's there. It's just 10¾x4⅓x15 inches. *Do you really want a bulky "legal limit" tuner that's bigger than your amplifier?*

Superior Cabinet

The MFJ-989C's *premium*, low-profile all-aluminum cabinet has a sub-chassis that adds strength and RFI protection.

Every cabinet is chemically treated and has a tough, scratch-proof vinyl cladding -- not paint that can scratch or chip off. You won't find a tougher, longer-lasting finish anywhere.

Detailed logging scales and legends are *permanently* silk screened on *real* aluminum front and back panels -- they aren't decals or glued-on paper strips that can peel off.

Superior Construction

Every MFJ-989C uses PEM nuts (*not* self-tapping screws), wing-nut for ground post (*not* a cheap nut), fire-retardant epoxy glass PC board (*not* canvas based), heavy guage wire throughout (*not* small guage), locking compound on nuts/bolts (*not* loose hardware).

No Matter What™ Warranty

Every MFJ-989C is protected by MFJ's famous one year *No Matter What*™ unconditional warranty. We will repair or replace your MFJ-989C (at our option) *no matter what* for a full year.

Others may give you a *limited* warranty on defects in material and workmanship.

But what do you do if your "legal limit" tuner burns up and they say, "Sorry, your *limited* warranty does *not* cover that?"

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

Old Marconi wireless station owned by Mr. and Mrs. Charles Cahoon.

—photo by K1JKV

Nantucket Island's Marconi Station

Francis W. Pease, K1JKV

Having been born and raised on Nantucket Island, I have always had a certain fascination for communications. I often thought of the vast amount of material it must have required to install submarine cables between the island and the "mainland," nearly thirty miles away. Then there was the problem of laying the cable while avoiding the numerous shoals of Nantucket Island. I never could figure out why the Western Union cable went "overboard" at the west end of the island, whereas the telephone cable went off in a northerly direction looking right toward Cape Cod.

When I reached junior high school age one of the first jobs I ever held was delivering telegrams for Western Union. My boss was Benson C. Chase, W1PMC. We were the only two personnel still working after the summer of 1938, when the infamous hurricane hit southern New England. Nantucket was spared the worst of the devastation, but Western Union's cable parted somewhere west of the island. Ben and I were obliged to monitor the line waiting for the vessel *Cyrus Field* to pick up the cable. It seems to me now that this went on for some days before I finally heard a voice in the earphones, and Nantucket's Western Union contingency was back in business. During the outage, I was privileged to sit for some time in the radio shack of Gus Bentley, then W1EVJ, later W1SU, as he handled Western Union traffic via ham CW. Ben and Gus are long since silent keys.

My fascination for radio, etc., did not end with my completing high school. Having volunteered to help Uncle Sam beat the Nazis and others, I tried to convince the U.S. Army that I should be in the Signal Corps, which immediately got me located in Chemical Warfare, followed two years later by the Engineer Corps. So much for my military success. In 1958, I rekindled my radio interest and became K1JKV.

Some history

In digging into records of the Nantucket Historical Association, I find that the first "telegraph" system was actually an array of visual signals to Nantucket from Woods Hole, Massachusetts, via West Chop (a lighthouse station on Martha's Vineyard), Edgartown, Muskeget Island, Tuckernuck Island, and finally Nantucket. You can imagine how efficient it was in foggy weather, but it wasn't a bad start considering it was 1840.

In 1856, cable, a full five-eighths of an inch thick, was laid across the sound on 19 August. It lasted all of twenty four hours. With the strong tides, and frequent gales known to kick up on Nantucket Sound, it is not hard to envision some wreckage bouncing along the bottom and maybe fouling a cable, parting it. Once a cable has had time to settle on the bottom a little, its chances of survival are much better.

Marconi

Guglielmo Marconi was born in Bologna, Italy, on 25 April 1874, of fairly well-to-do parents. His father was a country gentleman and his mother a native of Ireland. He spent considerable time experimenting on his father's country estate near Bologna.

While his equipment was a little crude, nevertheless he was able to send out signals over short distances.

In July of 1896, the twenty-two-year-old Marconi crossed over from France to England. His baggage consisted mostly of "strange instruments" that the English Customs officers found strongly suspicious and ordered destroyed. Young Marconi persisted and had new instruments built in England. He was allowed to prove his expertise when he successfully sent a wireless signal from Folkstone across the English Channel to Cape Gris Nez, an instant success. In 1902, traveling aboard the U.S. liner *Philadelphia*, Marconi was able to prove, despite some "expert" contradiction, that signals could be sent over greater distances at night than in daylight. He could cover approximately 700 miles by day, but discovered he could send them 2,000 miles at night. This act was probably one of his greatest tri-

umphs in wireless telegraphy. From here he went on to many more improvements in equipment and techniques. Marconi received much recognition from several scientific foundations, shared the 1909 Nobel prize in physics, as well as being knighted by the Italian government. He performed several services for Italy, including representation at peace conferences following WWI. He died in Rome on 20 July 1937.

Building the station

In 1901, the *New York Herald* decided to build a wireless station on Nantucket Island. They chose the little village of Siasconset on the eastern extremity of the island for its site.

Commander J.D.J. Kelley, a retired naval officer and a *Herald* staff member, was sent to the island to oversee the project. Cmdr. Kelley arrived with Mr. W. W. Bradfield, Mr. Marconi's personal representative. Work began on Bunker Hill in "Sconset." A three-section mast of Oregon pine was fashioned by the Johnson and Howland Company of New Bedford and shipped to the island. Once erected and guyed-off, it stood 160' tall with only ten feet of it in the ground. It wasn't until 16 August, of that summer, that Cmdr. Kelley publicly acknowledged that they were indeed installing a telegraph station, but Nantucket's grapevine had pretty good knowledge of it already. The 160 foot mast was in use until 1904, when Mr. Bradfield announced it would be replaced by two masts in a location nearby with a new "instrument" and power house. The result was to be improved power output enabling marine contacts of greater distances.

Mr. Marconi had been experimenting with balloons, trying to get the antennas even higher. Now standing less than a half mile from the original Marconi Station site is a U.S. Coast Guard Loran tower in excess of 600 feet. Wouldn't the Marconi crew have enjoyed that?

The location of the two masts was about one-quarter of a mile north of the original site. Having been inside the house at that location, it was interesting to note the thickness of the interior walls. To provide sound proofing between rooms, they were about twelve inches thick and were filled with cork. The house at the original site is also still standing and occupied by Charles and Eileen Cahoon who were kind enough to provide some material for this article. Charles is the nephew of one of the operators of the station. Another house was moved from the site, seven and a half miles to its present location on the north bluff of Nantucket and is still in use as a very nice summer home. It is still known to some of us as the "Wireless Cottage."

This wireless installation was the first such utility in the United States installed to handle maritime traffic. The *Herald* intended it for the use of the public, not just its own purposes. Its apparatus could handle ten words per minute, so one can imagine the backlog of traffic that must have occurred from time to time.

The station suffered heavily from a fire in 1907. It was promptly rebuilt. On 28 September 1914, it was closed by the Federal government for alleged violations of the Neutrality Law. It did not reopen until 17 January 1915, and operated under government censorship.

In 1919, the United States Navy opened a "radio compass" station in Surfside, a tiny village on the south shore of Nantucket. This station received the first distress call from the liner *Morro Castle* at the outset of its terrible disaster. The station was still operating up to and during WWII.

The International Wireless Telegraph Company opened for business in 1920 but closed on 31 August 1921, with most of its equipment going to

the Navy station at Surfside.

On 12 August 1901, the first message was sent from the lightship to the "Sconset" station saying "signals clear; am using plain aerial, good luck." The lightship's call letters were PI. It operated on 425 Meters and was powered by a 5kW rotary spark gap manufactured by Telefunken. The Siasconset station's call was MSC and operated on 350 Meters, with a 2kW spark transmitter manufactured by Marconi.

The first ship to send such a signal in this direction was the Cunard liner *Lucania* when 72 miles away from the lightship. It was received by the lightship, relayed to the "Marconi Station" at Siasconset, causing much celebration among the station personnel. The message arrived in New York some thirty minutes later by means of other shorter telegraph lines via Edgartown, Oak Bluffs, Vineyard Haven, Gay Head, the Elizabeth Islands, Woods Hole and eventually to New York. This system actually cut off 24 hours from the time in which a vessel was completely out of touch with the rest of the world while crossing the Atlantic. It gave passengers the capability of contacting relatives well before arriving, not to mention the importance of news and other communications. Mr. William Mulock, Postmaster General of Canada, sent a message to Sir Wilfred Laurier, Canadian Prime Minister in Ottawa, while fifty miles at sea on the *Lucania*. Mr. Mulock predicted a strong future for wireless telegraph.

Rapidly following Cunard's obvious success with wireless, North German Lloyd Lines, Hamburg American Lines, American Line, Holland American Line, Hirzell Feltman and Company, and the French Line followed suit and installed wireless equipment.

Historic "saves"

Lightships, vessels that were anchored in specific locations, displayed their lights to aid in maritime navigation much the same as a land-based lighthouse would. On 10 December, 1905, Lightship number 58 put out a distress call and the lighthouse tender *Azalea* was dispatched to the rescue. This was the first such rescue of a U.S. vessel effected by wireless. "Number 58" was on the station commonly known then as the Nantucket Shoals, 37 miles southeast of the island. The lightship was being buffeted by a severe gale and could no longer stay ahead of the serious leaks that it had sprung. While being towed toward Nantucket, the crew could no longer keep the vessel afloat, and signaled the tender. The Lightship's crew was safely transferred to the *Azalea*, whereupon #58 promptly sank!

Their wireless equipment proved very valuable at times of thick fog and ice conditions.

On 23 January 1909, the vessel *Florida* struck the White Star liner *Republic* amidships. Operator A.H. Ginman was on duty at the Siasconset station and received the distress call "CQD." He immediately contacted the Revenue Cutter *Acushnet* based in Woods Hole and contacted other ships in the area. Jack Binns, the wireless operator aboard the *Republic* became well known for his efforts while Mr. Ginman got no more than honorable mention. At any rate, many lives were saved due to the wireless equipment, and the expert operators. In 1910 the United States Congress passed a law requiring all U.S. registered ships to carry wireless equipment.

Among other operators at the Sconset station were Matt Tierney, who spent a great deal of time on duty during the *Titanic* disaster. There was Harry Holden, whom I remember as a radio repairman living in 'Sconset the rest of his life and Warren Rogers, the uncle of Charles Cahoon and his sister Betty Yarmy. There were many others, including the then young David Sarnoff.

This writer clearly remembers the small steamers plugging back and forth from Nantucket to the mainland having wireless equipment housed in a neat little radio operator's cabin on the top deck and once I was even allowed inside those hallowed walls.

The first such installation was aboard the steamer *New Bedford* in 1933, the second on the steamer *Martha's Vineyard*. Both vessels are well remembered by most Nantucket natives of the Big Depression era. Their wireless equipment proved very valuable at times of thick fog and ice conditions. In those years they were fueled by soft coal, which required some interesting logistics at times; being ice-locked in Nantucket Harbor for example. Who, then, would have believed radio contact now could be even simpler than making a phone call? The radios on the present day island vessels are now just another instrument in the wheel house along with the lorans, radars, depth sounders, and that instrument of the ages, the compass.

In interviewing Mr. Edouard Stackpole, Nantucket's leading historian, he estimated the closing of the 'Sconset Wireless Station to have been in the early 1920s. It was certainly gone when this writer was a youngster cruising nearly every dirt road on the island on his bike. WR

Cue cards for hams?

John Foley, KA6SED

Have you ever been frustrated by seeing a two meter antenna and call plates on the car in front of you and realizing that it would be difficult to alert the driver and to talk to him or her on the air?

A simple cardboard cue card can solve the problem. The card is about 6 by 18 inches and has 145.565 (or your favorite frequency) on one side and the mirror image of the frequency on the other side. (Use a mirror when you try to write backward). The lettering can be done with a dark color felt pen.

If the car you want to talk to is ahead of you, hold up the mirror image side of your cue card facing your windshield. When the driver ahead sees it in the mirror, he can read the frequency and give you a call.

Hold the card with the direct lettering showing when you want to alert the driver behind you. Give it a try!

Happy motoring! — *The BPARC Communicator,* Buena Park, CA

radio community that are involved in news dissemination. With little in the way of support, the FCC decided to dismiss the Maia petition rather than let it go forward to a rule making notice. The FCC has also made clear that it will not revisit the issue again anytime in the foreseeable future.

NY ham wins tower case — almost

The FCC has struck down a New York township antenna ordinance as being unreasonable. J. P. Kleinhaus, AA2DU, says that he chose to live in Cortlandt Manor, New York, in 1993, because the town's zoning ordinance did not restrict him from erecting a planned 120-foot tower. By the time he closed the deal on his house in early 1994, a new zoning ordinance had gone into effect, one prohibiting towers above 35 feet.

The town denied his application for the much taller tower, and Kleinhaus sued. On March 20, the New York Supreme Court handed down a ruling annulling the Zoning Board of Appeal's decision as "irrational, arbitrary and capricious." But the fine print in the decision does not order the town to grant the permit. Instead, it directs Kleinhaus and the town to arrive at a compromise. Among the possibilities the judge cited was painting the tower to help it blend in with its surroundings.

Kleinhaus, a contester and a DXer, wants to install a guyed, 120-foot tower in a wooded area 250 feet back from the road and behind his house. Strangely, the town imposes no height restrictions on rooftop structures, provided they cover no more than 25% of the roof's surface area.

League spread spectrum petition

The ARRL says its petition to relax spread spectrum rules seeks to address a lack of experimentation by hams, not to advocate spread spectrum usage. Responding to comments filed in response to its December rule making petition, RM-8737, the League emphasized that Amateur Radio — as an experimental service — requires flexible rules and some trust of the licensees carrying out experiments.

Noting that some commentaries called for tighter rules on spread spectrum operation, the League sought to dispel fears that relaxing the rules on spread spectrum would lead to an increase in the noise floor in bands used by narrow band modes.

The League says that most opposing commentators ignore the fact that some amateur bands already are occupied by Part 15 spread spectrum devices. Also, that many already operate near ham stations. The League says that additional constraints would hinder hams from keeping up with spread spectrum developments and prevent maximizing spectrum efficiency. The ARRL believes that its petition suggests only a modest deregulatory effort.

The League's Petition for Rule Making seeks relaxed restrictions on spreading sequences and greater flexibility in spreading modulation. The spread spectrum technique, distributes information among several synchronized frequencies within a band at the transmitter and reassembles the information at the receiver. It was first approved for Amateur Radio in 1985 for bands above 225 MHz, and there has been some experimental amateur operation since then.

FCC OK's Olympics call signs for Georgia

Hams operating within the state of Georgia may use special call signs 15 April-31 August 1996 to commemorate the 1996 Olympics, under a Special Temporary Authority issued by the FCC.

Here's how it works: An FCC-licensed radio amateur operating in Georgia with a "4" in his or her call sign may replace that number with "96" (representing the year) or "26" (commemorating the 26th Olympiad) during the period of the STA. Amateurs with any number in their call signs and operating within the State of Georgia may add "ØØ" to the existing number (to mark the centennial year of the Olympic Games.)

For example, WA4BKD in Georgia also could identify as WA96BKD,

WA26BKD or WA4ØØBKD, while NG3K, when operating in Georgia, could identify only as NG3ØØK or as NG3K.

The Olympics start in July. The STA stemmed from an initiative by James Altman, N4UCK, of Atlanta and the Georgia Amateur Radio Operators Group he organized with the support of ARRL. —*The ARRL Letter*

RE: Atlas Radio

(Ed. note: We received a copy of the following letter from the Attorney General of California regarding Atlas Radio.)

"Thank you for bringing your consumer complaint to the attention of Attorney General Dan Lungren. Often, it is only through letters from concerned and responsible citizens, like you, that our office becomes aware of consumer problems.

"The information you have provided to us suggests that the company may have gone out of business. If this is the case, it is unlikely that you can receive any return on your purchase or investment. If you choose to pursue this matter further, we suggest you rely on the advice of a private attorney who can directly represent your interests.

"We regret we cannot be of more assistance to you in this situation. However, we will maintain your consumer complaint in our files in the event we receive new information about the company.

"Again, thank you for contacting our office regarding this consumer matter.

"Sincerely, Daniel E. Lungren, Attorney General"

(Ed. note: Our interpretation of this letter is. . .in other words, don't call us, and don't wait for us to call you.)

SKYWARN hams alert Zebulon

Thanks to early eyewitness reports of tornado activity by Skywarn hams, no lives were lost when tornadoes hit the Raleigh, North Carolina suburb of Zebulon around supper time 15 April. The storms damaged or destroyed nearly 100 homes and caused some minor injuries. Eyewitness reports of the tornadoes on the Amateur Radio Skywarn network, intercepted and broadcast by Raleigh TV stations, gave many people the few minutes they needed to take cover.

The Skywarn network is a voluntary effort by Amateur Radio operators and other weather spotters, working in cooperation with the National Weather Service. Because of a severe thunderstorm watch, the Raleigh Skywarn network had been on the air since midday 15 April, with an operator at the ham station at the Raleigh NWS office. Just before 6 p.m. sightings from hams on the Skywarn system prompted a tornado warning from the weather service. WRAL-TV monitored the Amateur Radio traffic and broadcast its own warning before the official NWS warning.

The Skywarn net stayed on the air late into the evening, as a tornado watch continued until 1 a.m. Then, as telephone circuits in Zebulon were disrupted and cellular channels became overloaded, Wake County Emergency Management called in additional Amateur Radio operators to provide communication between the county emergency operations center and several sites in Zebulon, including emergency shelters. —*Gary Pearce, KN4AQ, Raleigh Amateur Radio Society; Wake County Amateur Radio Emergency Service via The ARRL Letter*

10-GHz Cumulative contest expanded

The ARRL Awards Committee has voted unanimously to accept a Contest Advisory Committee recommendation to add the bands above 10-GHz to the ARRL 10-GHz Cumulative Contest, to encourage use of the upper microwave bands. The 10-GHz cumulative runs 17-18 August and September 21-22 September. In the past, entries have not been divided. Effective this year, however, there will be two entry categories, 10-GHz only and 10 GHz and above.

Scoring is based on distance points and QSO points. Distance points are earned at the rate of 1 point for each kilometer of distance between stations for each successfully completed QSO. An additional 100 QSO points is awarded for each unique call sign worked per band. Portable indicators added to a call sign do not make the call sign unique. The total score is the sum of distance points and QSO points. There are no multipliers.

Back to Novice Class

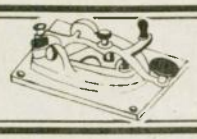
Arthur P. Baumgarden of Bingen, Washington, won't be KI7CW much longer. In a case that hinged in part on Baumgarden's claimed driving skill, the FCC concluded that he obtained his Advanced Class license improperly and refused to review that decision.

Baumgarden, 62, said he successfully upgraded to Advanced during a 1991 test session in Carson, California, a round trip of more than 2,000 miles from his home. According to the FCC, however, he later told a Commission informant that he obtained his upgrade "through payment of money, without passing the required examinations." When the FCC questioned Baumgarden, he denied the allegations. The FCC asked Baumgarden to take the test again under another Volunteer Examination team, but he refused and appealed.

FCC records indicate that Baumgarden changed his story after the FCC first took issue with his version of events and especially with the travel times he supplied. In part, the Commission expressed disbelief that Baumgarden could have driven to Carson, California, and back in the times he claimed and called the alleged travel schedule "impossible to achieve within the speed limit." The fact that Baumgarden later changed his story "damages rather than enhances his credibility," the FCC said. The Commission also noted that Baumgarden failed to corroborate his tale or to adequately explain why he provided two versions of events.

Although Baumgarden continues to deny he obtained his amateur license improperly, the FCC concluded that "his denials are not credible" and refused to review the case on both procedural and substantive grounds. The Commission ordered that because Baumgarden declined to appear for re-testing, his operator license would be reduced to Novice and his call sign changed to one appropriate for that license class. —tnx FCC

Silent Keys



Milton Chaffee, W1EFW

The Quarter Century Wireless Association received word that long-time Board of Directors member, Milton Chaffee, W1EFW, became a Silent Key on April 8, 1996.

Milt was born 29 March, 1913, in Connecticut, and spent most of his life there. After high school, he was employed by a bank as a teller. In December of 1941, Milt joined the Civil Air Patrol, and was discharged from the CAP in August of 1942. He then entered the Army, where he served until his discharge in April of 1946.

After the war Milt returned to the bank, and after many years of service became the bank's president. He retired in 1975.

Milt was married in 1941, and widowed in 1947. In 1948 he married Katherine, and she and two children survive.

W1EFW was very active in his community, serving on police, housing and parking advisory groups, as well as the Chamber of Commerce. He served as director and president of two insurance companies. He was a Director for the ARRL from 1957 to 1964. He was also a Director of QCWA, a position from which he planned to retire this year.

Milt Chaffee was a quiet person who gave a great deal of himself to Amateur Radio. He was a good friend and QCWA will miss his presence.—*submitted by Jim Walsh, W7LVN*

Lionel Stafford, KJ7WL

Lionel Stafford, KJ7WL, formerly KC7MBO, became a silent key during the evening of 28 March, 1996. After passing his Advanced test on 18 March, he was looking forward to his new privileges as an Advanced Class Amateur Radio operator. Lionel passed away just hours before his new call sign was posted on the Internet. Mr. Stafford was born in Stark, Kentucky, on 22 November 1939, and moved to Arizona when he was seven years old. He was instrumental in founding the Arizona Model Aviators and spent many hours daily, teaching aspiring model aviators how to fly radio controlled model aircraft. He helped hundreds of people in this endeavor.

He will be remembered by many, and missed by all of the people who associated with him over the years. As Lionel would say to all of those he communicated with on the radio when he ended a QSO, we can now say to him — "See ya." Lionel is survived by his wife, Joan, who helped him with his study of radio theory with her expertise in computers. —*submitted by Steve Gurley, KJ7WK*

Eugene A. Freeman, W7AVC

Eugene A. Freeman — self-made electrical wizard and Amateur Radio operator — got a charge out of life.

He always had, since his youth on Seattle's Capitol Hill where he learned Morse code and earned an Amateur Radio operator's license at the age of 16.

When he went to work for Seattle Radio Supply after graduating from Broadway High School, everyone who was anyone in radio came to know old "W7AVC" — Mr. Freeman's radio call sign. It was among the first call signs issued here.

During World War II and afterward, in the midst of a 37-year career with what was then Bell Telephone, Mr. Freeman had one of the tallest radio towers in Seattle. It was 90 feet tall. He used to climb it every holiday season and top it with a Christmas tree.

"People used to drive from far and wide to see that tree," said his daughter Diane Joss of Spokane. "That's when our house was where North Seattle Community College now stands."

Mr. Freeman used that tower to run phone patches between military personnel and their loved ones.

Family was important to him and he knew its value to others.

Mr. Freeman died 14 December of cancer. He was 82.

Sports also were important. In 1984 he served in the radio-support van that followed the Summer Olympics torch runner.

Mr. Freeman cut quite a figure in his heyday. A granddaughter said he looked like actor Christopher Reeve; Mr. Freeman's dark hair turned silver when he was in his 30s.

Those looks helped him and his wife Freda turn heads in Northwest square dance circles in the 1950s.

What kept him vital, said loved ones, was his keen interest in learning. Every year his family gave him a Farmer's Almanac, which he mentally devoured bit-by-bit. "He was a self-educated, disciplined, practical person, and always had a good sense of humor," said his friend Ed Lutz.

Other survivors include his daughters Lynda Wilson and Virginia Freeman, of Davis, California, and Betty Ronquillo, Bremerton; 10 grandchildren and six great-grandchildren. His wife of 50 years, Freda Freeman, died in 1985.—*submitted by John Van Voorhees, W7ITV, via Seattle Times*

Ralph Burch, W8LCU

Ralph Burch, W8LCU, a veteran QRPer and founder of the world renowned Michigan QRP Club, died 1 March 1996. He was 66.

Installed several years ago as a lifetime director of MQRP, Mr. Burch had undergone heart surgery a few months before his death, according to the club's Lowell Corbett, KD8FR.

Mr. Burch lived in Branch, Michigan, and held an Extra Class license. He founded MQRP in January, 1978, and the group quickly grew to be one of the largest and most respected QRP organizations in the world. It currently has a worldwide membership of more than 1,500.

Mr. Burch is survived by his wife Donna, W8QOY. —*submitted by Richard Fisher, KI6SN*

Joseph F. Haefner, WD8PSX

Joe Haefner, WD8PSX, who served as Michigan's Official Observer coordinator for the past three years, died unexpectedly 11 April 1996 at the age of 71. A resident of Garden City, Michigan, Joe was an active member of the Garden City Amateur Radio Club.

Michigan Section Manager Dale Williams, WA8EFK, said Joe's passing "leaves a gap in the section" that will be hard to fill. "He did a marvelous job," he said. "He was very conscientious."

Joe is survived by his wife and daughter. —*The ARRL Letter*

Special Events

Pioneer Village

The Hastings Amateur Radio Club (Nebraska) will operate a special event station 8 June, 1400-2100 UTC from the Amateur Radio Display booth at Pioneer Village in Minden, to celebrate the 43rd anniversary of the village. Operation will be on 3.980, 7.280, 14.250, 21.320 and 28.400 MHz. For QSL, send QSL and SASE to HARC, 907 Jefferson, Hastings, NE 68901.

Henry Ford

The Garden City Amateur Radio Club will operate KC8BEB on 15 & 16 June, 1400-2000 UTC from the Henry Ford Museum & Greenfield Village to commemorate the American Automobile Centennial. Operation will be on: 7.255, 15.255, 21.330, and 28.380 MHz. For certificate, send #10 SASE to GCARC, P.O. Box 482, Garden City, MI 48135.

RCARS 20th Anniversary

The River City Amateur Radio Society of Sacramento, CA will commemorate its 20th anniversary 15 June by operating as AB6DF from 1600-2100 UTC in the General portion of the 20M & 40M bands. For certificate, send 9x12 SASE and your QSL card with contact number to RCARS, P.O. Box 215073, Sacramento, CA 95821.

Young Eagle Days

The Oswego County Amateur Radio Emergency Service, ARES, will operate KY2F, 8 & 9 June, 1200-2000 UTC during the Experimental Aircraft Association's Young Eagle Days at the Oswego County Airport in Fulton, NY. Operation will be in the lower half of the General 80-, 40-, 20-, 15- and 10-meter Phone bands. For certificate, send QSL and a large SASE to Fred Swiatlowski, KY2F, P.O. Box 5281, Oswego, NY 13126.

Dayton Bicentennial

Special event station KB8JUA will be on the air 15 and 16 June, 1500-2200 UTC, to celebrate Dayton, Ohio's bicentennial. Operation will be on CW — 7.125, 14.125, 21.125, 28.125; Phone — 7.275, 14.275, 21.375, 28.475 MHz. For certificate, send 9 x 12 SASE to Mike Priest, KB8JUA, 626 Creighton Ave., Dayton, OH 45410.

Bear Flag Revolt

The Valley of the Moon ARC will operate WB6DWY on 22 June from 1500 UTC to 0400 UTC 23 June, to celebrate the 150th anniversary of the Bear Flag Revolt in Sonoma. Operation will be on ±7.250, 14.250 and 21.350 MHz SSB. A commemorative QSL card will go to all stations confirming contact during the event with a QSL card. QSL to WB6DWY, 358 Patten St., Sonoma, CA 95476. For information, contact Darrel Jones, WD6BOR at 707/996-4494.

Little House on the Prairie

The Lake Area Radio Klub of Watertown, S.D., and the Huron Amateur Radio Club of Huron, S.D., will operate KBØTAH from 1700-0200 UTC daily 28-30 June, in observance of the 25th anniversary of the Little House on the Prairie Pageant. Phone — 3.870, 7.265, 14.265, 21.340, and 28.340 MHz. CW operation will be 40 kHz up from the bottom of each band 80 through 10 Meters. For unfolded certificate, send 9 x 12 SASE (55¢) to: Lake Area Radio Klub, P.O. Box 642, Watertown, SD 57021-0642.

Station Appearance

A. G. "Huck" Trudell, W7EAP

*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.

1995 station

My father was an agent-telegrapher on the Northern Pacific Railway.

He patiently taught me to telegraph while I was in high school.

In 1936 I was hired by the Northern Pacific as a telegrapher. It took me two years of diligent practice to become proficient enough to work as a terminal telegrapher — I spent eight hours a day receiving and transmitting messages. Needless to say, this kind of work makes a real professional out of a person.

In 1942 I enlisted in the United States Coast Guard as a Radioman Third Class. It took me about three months to make the transformation from a Morse telegrapher to a International CW operator.

I served on ships for about a year. I was taken off a ship and given a Morse and CW test — which I passed. I was sent to a McKay coastal commercial station — taken over by the Coast Guard and Navy. My duties consisted of monitoring 500 kc, the international distress frequency — a frequency also used by foreign ships coming in to U. S. ports. I then shifted them to the traffic frequency of 418 kc and handled the traffic. The traffic was then taken to a Morse position and sent to a receiving station in the port. Mostly worked were Russian, English and Australian ships. Needless to say, it required a very fertile imagination to copy some of those folks. After a year at the McKay KEK radio station I was transferred back to sea. I was discharged as a RM1C in November, 1945.

I returned back to the Northwest Pacific and worked as a terminal telegrapher until 1948. That ended my years as a commercial telegrapher — 10 enjoyable years.

1953 station. ***—photos by W7EAP***

I became a ham in 1953, and avidly worked CW for the first several years. The press of business kept me from becoming too involved in Amateur Radio, but I always endeavored to maintain a modern station — which was infrequently used.

Shown are my 1953 and 1995 stations. The 1953 station consists of a Collins 32V3 transmitter and a Collins 75A4 receiver. The antenna was a 44-foot vertical that I built from plans in some radio magazine. It generated lots of good worldwide CW contacts as well as bad TVI. My wife would attest to my many telephone calls that were generated by the TVI.

The 1995 station:

Top shelf, left to right: Icom IC551 (6 Meter); Icom IC251A (2 Meter); Icom IC751 (with power supply); Hygain 3750 receiver made by Panasonic and distributed by Hygain, circa 1976-77.

Bottom shelf, left to right:

Yaesu FT-990 w/external speaker; Alpha 76A linear; Bearcat scanner; Commodore computer with AEA interface and Star printer. Antenna is a motorized Tri-Ex 54-foot crank-up with a 5-element Telrex beam. I also have a trapped Telrex dipole on 40-80. Two- and six-meter antennas are Cushcraft verticals. **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**!*

Hot shot gets shocked

Ted Petrucci, W2EJY

A few years ago when I was a hot shot operator with my Martin Vibroplex, I heard a Russian station call "CQ." The station calling in excess of 30 wpm was much too fast for me. Although I could handle 30 wpm, I called to answer the CQ at about 25 wpm. The Russian came back at the original speed. My signal report was all I could make out. Consequently, I asked to please QRS. On the next return the Russian reduced to perhaps 35 wpm, while I never exceeded 25 wpm, again.

I asked to please QRS. Well, the Russian came back and asked me if I got my license from Sears and Roebuck. Needless to say, I was embarrassed not only because it was a Russian, but because she was a YL — Hi. **WR**

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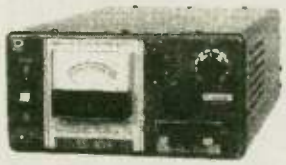

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Current (ICS)	12	14	30	40	5.2
Current (cont.)	9.2	12	24	32	4.2
Ripple(max.)	3mV	3mV	3mV	3mV	3mV
Regulation	1%	1%	1%	1%	2%
Cooling Fan	NO	NO	NO	YES	NO
Size(inch.)	5x4x9	5x4x9	7x6x9	11x5.5x9	6x3x9
Weight (lbs.)	11	11	18	22	6
Meter	YES	NO	YES	YES	YES

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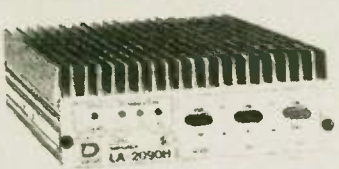

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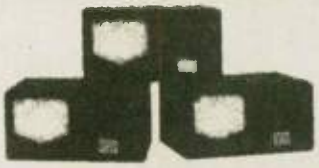

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Off the air

How did you learn?

The article in the April, 1996 issue about the Australian WWII code breakers was very interesting and recognized a little-known group which made a significant contribution to winning the war. I must take exception, however, to the author's statement that the accomplishments of a carefully selected elite group provide "proof that anyone can learn to copy [Morse code at] 20 words per minute."

Such a statement is like someone who grew up on a ranch telling a resident of New York City that anyone can learn to ride a horse. Regardless of the technical truth of the statement, it ignores the fundamental fact that the opportunities each of us have vary enormously with our different situations. And as we all should know, opportunity counts as much towards success as talent or effort. How often have we heard an electronics whiz talk about how there needs to be more emphasis on the technical aspects of radio only to learn that he (1) has a college degree in electrical engineering, (2) learned it in a trade school, (3) attended an armed forces technical school, or (4) otherwise had professional training in electronics?

The same is often true of Morse code experts. Many of them received intensive training in military schools or something similar. No, I'm not belittling the accomplishments of the person who can copy 45 wpm as the result of a stint in the Army Security Agency. However, think about being paid to study Morse code for six hours a day at the age of 19, having the incentive of wanting to stay out of the infantry, and then spending the next three years listening to more code: We *expect* people to become proficient under those circumstances.

Most of us, however, didn't have the chance to learn electronics or the code like that. So who deserves more respect for being able to set up and operate a ham station? The guy with the EE degree or the history teacher? Whom should we congratulate first, the retired Merchant Marine communicator who just got his Amateur Extra ticket or the woman with two kids and a full-time job at a supermarket who passed the General exam by guessing at six of the code questions? I'm not suggesting we make the tests easier or that we eliminate the code requirement, but if you start lecturing me about what I should know or be able to do, I'm going to ask how *you* learned it. If you managed it a few minutes at a time while trying to live a real life, I'll show some respect. If not, then don't presume to tell me what "anyone" can do.

John Stewart, KFØPQ
Leadville, CO

Call of your choice

I received a sample copy of ***Worldradio*** in the mail today and found interesting reading material on most every page. Enclosed is my subscription. My attention was drawn to Mr. R.W. Thimmesch's position ["No" on Vanity Calls] in your "Off the air" column.

The FCC will probably receive a flood of requests to reissue old calls as soon as "Gate 1" opens and mine will be there also.

I chose to let my license expire when I felt my hobby was taking too much time from my family and was given my new call when I requested a renewal after the time limits FCC allows had passed. I consider this opportunity that the FCC is giving me as very generous and I would not deny anyone to use this means to obtain a call of their choice, as future gates open.

Billy P. Payne, N5CQO
Terrell, TX

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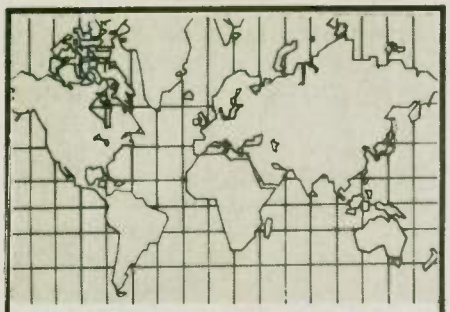

DX WORLD

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

W-100-N

Congratulations to the following DXer for completing the necessary requirements for *Worldradio's Worked 100 Nations Award* (#507):

Raymond A. Allard, K1MFZ

Senegal (6W)

DX News Sheet says that Bernd, DK3LQ/6W1, was to leave Senegal at the end of March 1996. However, no recent reports were found so I assume that he shut down earlier than that. Very little activity from this one has been noticed recently.

During February, Jean-Louis Pipien, 6W6JX, was reported three times and all on separate bands: 1.836 MHz at 0000 UTC; 7.010 MHz at 2245 UTC; and 10.101 MHz at 2300 UTC. Near the end of March 6W6/K3IPK was reported on 7.004 MHz at 0530 UTC and 14.027 MHz at 1315 UTC.

Algeria (7X)

Seventy-five Meters has produced a handful of calls out of Algeria recently and includes the following:

7X2BK	3.792 MHz	0000 UTC
7X2DG	3.800 MHz	0400 UTC
7X2LS	3.789 MHz	2330 UTC
7X5JF	3.792 MHz	0100 UTC
7X6ZK	3.795 MHz	0415 UTC

If your space for an 80-meter antenna is restricted, then try these 40-meter reports: 7X2CR on 7.014 MHz at 0815 UTC, and 7X4AN on 7.002 MHz at 2345 UTC. On 20 Meters 7X2LS has been reported often between 14.178 and 14.226 MHz. Look for him after 2000 UTC. Activity on other bands produced the following:

7X5JF	18.152 MHz	1545 UTC
7X2YL	21.292 MHz	1730 UTC
7X2LS	28.516 MHz	2030 UTC

425 DX News reports there was to be an operation from two offshore islands in the Mediterranean Sea at the end of April.

Malta (9H)

The DX Bulletin reports that the Hannemanns, Birgit, DL7IQ, and Holger, DL7IO, along with several other German DXers, will be operating from Malta, 17 through 31 May. They plan on using two complete stations from Gozo Island and will use the calls 9H3TY and 9H3TZ. They will be using log-periodic arrays for the lower bands. They will attempt to operate in the *CQ* WPX (CW) Contest from Comino Island using 9H3TY or a special 9H8 call sign.

A photo of Birgit was included in the March column showing her busy working the deserving DXers during the TN2M/TN4U German DXpedition to Brazzaville last year.

Bolivia (CP)

You might want to swing your beam south for this one. From Bolivia CP6IB has been very active on 40 Meters recently and usually found 7.005 to 7.010 MHz from 0130 UTC. Reports show that he has worked DXers on both shores of North America. Other calls reported during March include:

CP6EE	7.018 MHz	0330 UTC
CP6PL	7.065 MHz	0030 UTC
CP8UH	14.012 MHz	0045 UTC
CP8XA	10.101 MHz	2300 UTC

Sable Island (CYØ)

The Sable Island DXpedition is on schedule and will begin operation somewhere between 18 June and 2 July. This will be an all-band operation between 2 and 160 Meters, running SSB, CW and RTTY. There will be one station with a special emphasis on 6 Meters. The duration of their stay will be 7 to 10 days, so be patient if you don't work them on the first call.

San Andres Island (HKØ)

All the reports with this island recently have been on CW. HKØER has been reported on 80 Meters near 3.505 MHz between 0130 and 0300 UTC; on 40 Meters near 7.007 MHz after 0200 UTC; 30 Meters between 10.101 and 10.108 MHz at 0030 and 1230 UTC; and 20 Meters on 14.008 MHz between 2245 and 2330 UTC.

Also from San Andres Island is Abel, HJØVGJ, who works mostly 40

Meters. Look for him between 7.007 and 7.010 MHz between 0330 and 0430 UTC. This operator is good for a QSL to confirm your contact.

Saudi Arabia (HZ)

According to *Inside DX*, Mike, K3UOC, is operating 7Z5OO, says that Amateur Radio in Saudi Arabia is technically illegal as only members of the Royal family are licensed besides that of HZ1AB. The call 7Z5OO belongs to a member of the Royal family and he is allowed to use that call. Mike's activity from 7Z5OO started in October, 1994, and expects to be active through this July. Over 40,000 contacts have been made, 97 percent on CW. During the month of March 7Z5OO has been reported often on 20 Meters between 14.010 and 14.015 MHz after 1345 UTC. He has been reported on other bands working into Europe. Three reports were observed for HZ1AB: those being 14.037 MHz at 1730 UTC on 22 February, 18.155 MHz at 1330 UTC on 15 March; and 21.006 MHz at 1515 UTC on 23 March.

Grenada (J3)

Dennis Carter, J37LK, hangs out near the DX Group on 14.247 MHz often after 2100 UTC. Assigned to the American Embassy at St. George's, he expects to be there for another two years. Dennis holds a stateside call of KE3TD.

Mount Athos (SV/A)

The following is an excerpt of a letter that was sent to all Southwestern Division DX Clubs. The letter was authored by John Alexander, K6SVL, their DXAC Representative and reads as follows: "The current most controversial topic is a possible change in the status of Mt. Athos. Although the vote has been postponed indefinitely it will eventually happen. The choice will be between withdrawal or retaining its current status. I have followed the discussions within the DXAC with great interest but have not participated nor taken a firm position yet. My analysis and current thinking are as follows:

"Mt. Athos was approved as a new country by the Awards Committee (the DXAC did not yet exist) primarily based on separate administration. It would most certainly not qualify under the current criteria but application of new rules retroactively is not appropriate. However it seems to me that the Awards Committee was misled or mistaken as there is little, if any, evidence of separate administration. The most convincing argument against separate administration is contained in a lengthy letter to the DXAC by the most ardent supporter of Mt. Athos, Doninik, DL5EBE, where he states that Mt. Athos has Greek Police, Greek PTT and Greek stamps. Also Monk Apollo has a Greek license.

This does not qualify as separate administration, in my mind, any more than our neighboring city of Rolling Hills, where access is restricted and one must have permission to enter if not a resident, but have the County Sheriff, the FCC and use US stamps, as a comparison. Apparently the 'separate administration' of Mt. Athos is limited to their religious activities. There is a precedent for withdrawals as a total of 11 countries have been withdrawn over the years. However, my mind is still open to other arguments and I would like to hear any comments your Club members may have on this subject." Many thanks to the Northern Arizona DX Association for forwarding the above information.

Turkey (TA)

A group of contesters from the German Rhein Main area were scheduled to operate in the *CQ* Worldwide WPX Contest the end of March signing with YM3DL, including some time outside the contest. The conditions on the higher frequencies, being rather poor these days, has resulted in my chasing DX on the lower frequencies. A single report on 80 Meters was that of TA2DS on 3.507 MHz working Europeans at 0130 UTC on 25 March. He also works SSB and on 75 Meters he is on occasionally between 3.792 and 3.800 MHz. Look for this one anytime between 2300 and 0430 UTC. Other lower frequency activity included several calls found on 40 Meters:

TA2BD	7.007 MHz	1430 UTC
TA2BK	7.008 MHz	1500 UTC
TA2DD	7.008 MHz	2100 UTC
TA2DS	7.001 MHz	0130 UTC
TA2FE	7.006 MHz	2330 UTC
TA2IJ	7.014 MHz	2045 UTC
TA2ZW	7.005 MHz	2200 UTC
TA3D	7.007 MHz	0300 UTC

WARC band activity produced the following:

TA2ZA	10.102 MHz	2315 UTC
TA2ZW	10.101 MHz	2130 UTC

TA2ZP	18.127 MHz	1445 UTC
TA2ZW	18.073 MHz	1445 UTC
TA2ZY	18.069 MHz	1400 UTC

Finally, there has been some activity on 20 Meters which included at least three calls:

TA2DS	14.006 MHz	1345 UTC
TA2ZW	14.021 MHz	1500 UTC
TA3DN	14.081 MHz	1530 UTC

Myanmar (XZ1N)

The Central Arizona DX Association DXpedition to Myanmar has been postponed. Warren Hill, KF7AY, of the CADXA says that in the immediate future, the door to Amateur Radio in the Union of Myanmar will be closed. There have arisen a number of unsettled regulatory matters between the military and several ministries which must first be sorted out before any further Amateur Radio activity can proceed. It would seem that the same regulatory issues that resulted in the sudden and unexpected postponement of the XZ1R operation lead to the same action for XZ1N.

Marion Island (ZS8)

The *ARRL DX News* says that Chris, ZS5IR, will be on Marion Island signing with ZS8IR through June or July. His operations include all bands 6 through 160 Meters, using CW, SSB and RTTY. For IOTA purposes, in addition to being a separate DXCC country, Marion Island is AF-021. For those of you in the VUCC program, his grid square is KE83.

IOTA

The Barren Islands DXpedition by John, NL7TB, and company is on schedule. If you happen to be near your radio the early part of July try to work this group. Starting around 4 July they planned to activate this group of islands at the entrance of Cook Inlet in Alaska. An attempt was made last year but was foiled by the weather and rough seas. This year access will be via helicopter. ARI Venice Team plans on activating some of the islands in their area this season, all of them counting as EU-131. They had planned operating from La Certosa Island early April, followed by one from Burano Island 7 to 9 June, and from Sant'Angelo Island 13 and 14 September. All operations will depend on weather conditions. Here are just a few of the many IOTA islands that were reported during the month of March:

EU-020	Gotland Island	SM1BIQ
EU-035	Novaya Zemlya	RA1PC/1
EU-054	Egadi Islands	IT9OAO/IF9
AF-019	Lampedusa Island	IT9RAI/IG9
AF-020	Bijasos Island	J56CK
AS-005	Dickson Island	RAØBK
AS-008	Izu Archipelago	7K3EOP/1
AS-018	Sakhalin Island	RKØFWG

AS-077	Kyushu Island	JI6KVR
AS-078	Hokkaido Island	JH8QFQ
NA-041	Prince of Wales Island	WL7LV
NA-055	Moose Island	AA1KS
NA-055	Vinalhaven Island	AK1L
NA-057	Isla de Roat Island	W7TSQ/HR6
NA-069	Pine Island	W4/GUØALD
NA-128	Orleans Island	VE2LDE
NA-149	Ile a Vache	HH6JH
NA-152	Sarichef Island	KL7OH
OC-007	Tasmania	VK7UJ
OC-139	Kangaroo Island	VK5ACY
OC-141	Groote Elylandt	VK8KTC
OC-160	Cumberland Island	VK4FW/P
SA-043	Guaiticas Island	CE7AOY/P
SA-046	Itamaraca Island	PY7ZAQ
SA-078	Isla Palma	HK3JJH/1

For your summer plans look for VK8NSB, who plans to operate from Croker Island as either VK8CI or VI8CI for a brand new IOTA group, which is located in the Northern Territory (Arafura Sea Coast) Centre group. *425 DX News* gives the dates 17 to 24 July for this one.

DX Contest Information

The ARRL Contest Advisory Committee and the ARRL Awards Committee have voted in favor of adding DXpedition scores to the club aggregate competition totals for active affiliated clubs in the ARRL International DX Contest.

The present rules require that single guest operators and the station licensee must be members of the same club. This rule has been waived for DXpeditions only. The present rule says that at least 66 percent of the

DX Prediction — June 1996

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

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

CENTRAL USA

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

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(14)*	***17**	***13**	*(12)*	***16**
12	*(16)*	***13**	12	*(12)*	*(15)*
14	*(19)*	***15**	12	*(15)*	19
16	*(21)*	15	*(11)*	17	22
18	22	*(13)*	*(11)*	18	25
20	23	16	*(21)*	16	26
22	19	19	26	14	24
24	*(16)*	21	27	*(12)*	21
2	*(14)*	23	27	*(10)*	***17**
4	***15**	23	26	*(13)*	***15**
6	20	22	22	16	***14**
8	*(17)*	***21**	***15**	15	***12**

EAST COAST

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

operators in the multi-operator entry must be members of the same club for the score to count for that club. The rule remains in effect, as do all other club-competition rules.

Pirate alert!

The *Ohio/Penn DX Bulletin* brings to attention the activities of 3V8AS. Sources from Europe indicate that this may be a pirate (not even in 3V8-land) and that a scam is taking place. The DXCC Desk does not accept 3V8AS cards at the present. You will be throwing away your green stamps for nothing. Wait until there is a DXCC acceptance. Talk about wasting green stamps! I worked 3V8AS three years ago and sent off a request to his Italian QSL manager. The return card had incomplete information so I had to send it back plus another green stamp. This was all for a worthless card. The consensus at the DXCC Desk is that 3V8AS is really operating from Italy.

The *Ohio/Penn DX Bulletin* also mentions that TT8AK is a pirate, according to Antoine, F6FNU, who says the station is not legitimate and the call has not been reissued. I worked that one too five years ago. Never got a card. The operator said he was a missionary. He had a strong signal and spoke with a New York accent.

DX Convention

The Northern Illinois DX Association will hold the 44th Annual W9DXCC DX Convention and Banquet on Saturday, 7 September, at the Holiday Inn Rolling Meadows, west of Chicago. The program will include guest DX speakers, industry representatives, contests, exhibits, QSL checking, hospitality suites, banquet activities, and many prizes. For additional information contact NIDXA or the chairman, Phil Camera, KB9CRY at 708/343-1696, fax 708/343-4394, or e-mail Iphil@aol.com.

This is the week following the DX convention in New Orleans, so distant attendees might consider attending both as they are back to back. Then to top it off, the weekend following W9DXCC is the ARRL National Convention in Peoria!

QSL routes

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

3B8/DK1RP	—DK1RP	ED1IFA	—EA1BEZ
3C1DX	—EA6BH	ED1ISA	—EA1EAU
3D2RW	—ZL1AMO	ED3VDX	—EA3BT
3DAØCA	—W4DR	EG9AI	—EA4URE
3V8BB	—AA6BB (Note 3)	EM1ØC	—UY5XE
		ER2DX	—KD1CT
3W6GM	—DF5GF	EX2L	—W3HNK
4L8A	—OZ1HPS	FK8FU	—NA5U
4S7BRG	—HB9BRM	FK8GM	—WB2RAJ
4U1UN	—WB8LFO	FOØYOS	—JA3IG
5R8EN	—F6AJA	FP/LA1TV	—LA1TV
5X4F	—KB4EKY	FR5HG/G	—F6FNU
5Z4FV	—NY3Y	FS/NØBSH	—NØBSH
7P8FS	—DK8FS	FT5WF	—F5IZK
7P8MA	—DK8FS	GDØ/AI5P	—AI5P
7Q7SB	—AB4IQ	GH3DVC	—GJ3DVC
7Z5OO	—W1AF	GS7UEG/P	—G7DKX
8Q7CR	—DF5JR	GXØWPX	—G4JVG
9G1BJ	—G4XTA	H44MS	—DL2GAC
9H3SC	—DL5XAT	H88C	—HP2CWB
9H3TY	—DL7VRO	H95H	—HP2CWB
9H3TZ	—DL7VRO	H99I	—HP2CTM
9K2YY	—KC4ELO	HC8N	—AA5BT
9K2ZC	—KC4ELO	HH7PV	—AA5DW
9K2ZZ	—W8CNL	HO1P	—HP2CWB
9M2JJ	—SMØOEK	HR1LW	—JA1LW
9M2TO	—JAØDMV	HSØ/7L1MFS	—7L1MFS
9M6AG	—JA9AG	IKØJFW/IA5	—IKØJFW
9M8AD	—DL3ABL	IKØMHR/IA5	—IKØMHR
9M8CC	—PBØALB	IQØJ	—IKØREH
9M8MH	—DL3ABL	IQ1A	—I1JQJ
9N1SW	—JH1XUP	IRØI	—IKØOZB
9N1UL	—JI4POR	IR1A	—IK1GPG
9Q5GIN	—F6GIN	IU1L	—IK1NLZ
A35GY	—LA9GY	J37K	—W8KKF
AP2JZB	—K2EWB	J3K	—WB8GEX
BOØOKS	—BV2KI	J56CK	—I4LCK
C56CW	—DL7DF	J56DY	—IK4SDY
C56DX	—DL7DF	J68DA	—YT1AD
C94AI	—CT1CKP	JW/LA5HE	—OZ8RO
CEØY/DK9FN	—DK9FN	JW5NM	—LA5NM
CG3CRC	—VA3CRC	JW6RHA	—LA6HRA
CS5EWA	—CT1EWA	JW8KT	—LA8KT
CS5FMX	—CT1FMX	JW9THA	—LA9THA
CT3/PA3GIO	—PA3GIO	KC4USV	—WZØS
CU2/DL3KDV	—DL3KDV	KC6IY	—JF6BCC
CU3FQ	—CU3AV	KC6VO	—JM6VOV
CYØTP	—VE1CBK	KG4GC	—KQ4GC
D68SE	—F6FNU	KHØ/JM4HNS	—JM4HNS
DU1RAA	—DU9RG	KHØ/KN6AH	—KN6AH
EA1CSB/P	—EA5OL	LU/IK1EDC	—(Note4)
MXØAAA	—GØPUB	OHØMB	—OHØRJ
OJØ/OH1VR	—OH1VR	OJØ/OH2KI	—OH2KI
P4ØMR	—VE3MR	P4ØV	—AI6V
PJ2/OH6XY	—OH3GZ	PJ7/ND5S	—ND5S
PJ9Y	—OH3GZ	PQØMM	—PP5JR
PW2A	—Bureau	PYØFF	—PY5EG (Note1)
PYØTI	—PY1UP	PY7ZAQ	—KA2GUY
RA2FJ	—DK4FJ	RK2FWA	—DK4VW
RLØO	—IK2QPR	RX1OX/FJL	—DL6YET
SØ1EA	—EA3NY	SØ2ØR	—EA2JG
S79TT	—DL9XAT	S79UAA	—DL6UAA
SU3AM	—DL5ZBV	SY1MF	—SV1MF
T29HC	—DL9HCU	T3ØHC	—DL9HCU
T31AF	—DL1VU	T31BA	—DL2ZAD
T31BB	—DF6FK	T91A	—DJØQJ
T91DNO	—DL1DAZ	T91ELD	—S51VQ
T91ENS	—DJØJV	T91EVA	—DL3MGW
T91EVC	—DL3MGW	T94MV	—F6HIZ
T94NE	—LX1NO	T94ON	—DL8OBC
T94QE	—DL4KAX	T96LSD	—EI2PAR
T97N	—YU4EA	T97T	—SM5AQD
T99A	—I4QGU	T99T	—DJØQJ
T99W	—DL1QQ	TA2DS	—WA3HUP
TA2FE	—KK3S	TA2IJ	—KB4GID
TA2ZI	—WB6EQX	TA2ZP	—JA2BDR
TA2ZW	—OK1TN	TA4ZM	—DK5WL
TA6ZS	—F5SLQ	TA8N	—TA1KA
TF/ON6QR/P	—ON6QR	TF7/ON6QR	—ON4GO
TI/AA8HV	—AA8HV	TL8CK	—F6EWM
TM5Z	—Bureau	TM7I	—Bureau
TN1M	—DL1YFF	TN2M	—DL7VRO
TN4U	—DL7VRO	TN9DX	—N4ZA
TR8CA	—F6CBC	TR8JH	—W3HCW
TR8SA	—F6FNU	TT8AB	—IK3NAA
TT8FT	—DL7FT	TU2DP	—K4MQL
TU2VZ	—IK3HAT	TU2ZR	—SM3DMP
TU4EV	—WD4IFN	TU4EY	—KE4I
TY1IJ	—DK8ZD	V26AS	—YT1AD
V29AD	—YT1AD	V47HP	—JA1OEM
V85HG	—JH7FQK (Note5)	VI3GP	—VK3ER
VI75RAAF	—VK4LV	VK2BRT	—VK2BEX
VK4FW/9	—VK4CRR	VK4FW/P	—VK4CRR
VK8DX	—N3AHA (Note2)	VK8MI	—VK4AAR
VK9XL/LH	—UAØZDA	VK9XM	—JA1BK
VP8BPZ	—GW8VHI/DA4RG	VQ9XX	—VQ9IO
XE2/AI7B	—AI7B	XU1FL	—I8KUT
XU6WV	—KØTLM	XX9I	—KU9C
Z32XX	—KM6ON	ZA9B	—KE7LZ
ZD9BV	—W4FRU	ZF2AU	—W5AU
ZF2FT	—N5OCD	ZF2JC/ZF8	—NC8V
ZF2LB	—N5OCD	ZK1AAU	—AA8U
ZK1AGW	—AA8U	ZK1MJZ	—AA8U
ZK2ZE	—LA9GY	ZS8IR	—ZS8EZ
ZW2WAL	—PU2LCD	ZY2HT	—PU2LSR
ZY5A	—PP5SZ		

Notes:

1. This route applies for the *CQ* WPX SSB Contest.

2. This route applies for operations in 1996 and 1997 only.

3. This applies only for the period 14 to 24 April 1996.

4. Contacts made on 13 March 1996 go via IK1JJB; contacts made on 19 March 1996 go via I1CAW.

5. This route applies for operations 13 to 16 January 1996.

Antique QSL Department

Last month I mentioned Romeo Stepaneko being disqualified from the DXCC program by the ARRL Awards Committee. This came about from the fraudulent operation of the P5RS7 North Korea operation. This reminded me of another individual, Dr. Donald A. Miller, W9WNV, who had questionable DXpeditions. However, this QSL card dates prior to when Don's DXpeditions began to be questionable.

This was the 1964 Southeast Asia DXpedition where Don and Chuck Swain, K7LMU, were signing with W9WNV/XU from Cambodia where they worked Dave Kennedy, W8BRA, (now N4SU), on 20 Meters, both CW and SSB. The DXpedition lasted for 5 days, 29 September to 6 October, where the duo collected some 7,200 contacts.

Chuck, along with Ted Thorpe, ZL2AWJ, were later lost at sea in January, 1966, aboard the ketch *Marinero* during a DXpedition. After his troubles with the ARRL, Don managed to find troubles elsewhere. He did manage to author a *CQ* book entitled *The Amateur Radio DX Handbook* before he fell from grace in the DX community. I have a copy and consider it a collector's item. As for Don's present whereabouts, there

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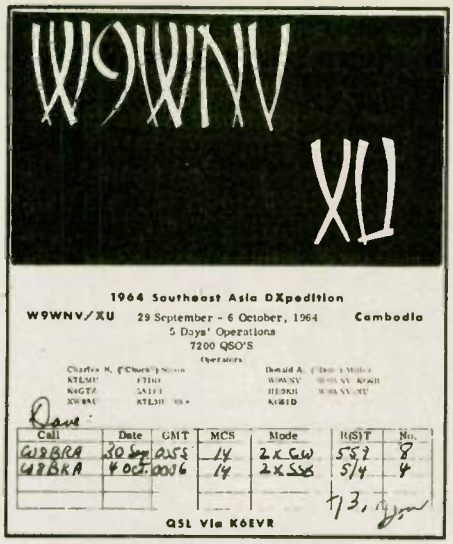


will be conflicting reports. He no longer appears to be licensed.

QSL Bureaus

I received a note from Joseph Carcia, NJ1Q, of the ARRL Outgoing QSL Service. He pointed out that the new rate for outgoing cards is now $3 per pound, or fraction of a pound to ARRL members. Thanks for the correction, Joe.

The American Radio Relay League announced that the Pennsylvania DX Association has assumed the responsibilities of the Third Call Area Incoming QSL Bureau. All envelopes, cards or SASEs that were on file with the former bureau have been handed over to the sorters in the PDXA.

The new W3 Incoming Bureau address is: Pennsylvania DX Association, P.O. Box 100, York Haven, PA 17370-0100. All DXers with a three in your call, regardless of what state you reside in, should be sure to have envelopes on file with them.

QSL addresses

3W5FM —Nikolay, P.O. Box 66, Vladimir, 600011, RUSSIA

FP5AC —P.O. Box 1343, Saint-Pierre et Miquelon Islands, via Halifax, NS B3K 1S0, CANADA

HH6JH —John Henault, Lynx Air Ltd, P.O. Box 407139, Ft Lauderdale, FL

J37LK —Dennis F. Carter, P.O. Box 54, St. George's, GRENADA

JX9ZP —Amateur Radio Station JX9ZP, N-8099 Jan Mayen, NORWAY

YM3DL —Dr Patrick Scheidhaure, DL4VBP, Fontanestrasse 134, D-60431 Frankfurt (Main), GERMANY

ZD7VJ/ ZD8VJ —Andy Chadwick, G4ZVJ, 5 Thorpe Chase, Ripon, North Yorkshire, HG4 1UA, ENGLAND

Many thanks to the following contributors: J37LK, N4SU, KN6TN, WA6TUJ, KC7DA, Western Washington DX Club (WAØRJY), Northern Arizona DX Association, American Radio Relay League (K5FUV), *425 DX News* (I1JQJ), *DX News Letter* (DL9GOA), *The Ohio/Penn DX Bulletin* (KB8NW), *Island News* (W5IJU), *The Low Band Monitor* (KØCS), *DX News Sheet* (G4BUE), *QRZ DX* (N4AA), *Inside DX* (N2AU), and *The DX Bulletin* (VP2ML).

Field Day is just around the corner and plans should be underway with respective clubs. With an interest in "island hopping" now is the time for considering your Field Day site on an island. Any island counts, whether it be offshore, in a bay, in a lake, or in a river. Every state must have an island somewhere. Have a nice summer.

73! de John N6JM. WR

QSL managers

1995 CQWW SSB Contest

Call	Manager
2W0AF	GW0LFO
3A/IK1SLP	I1YRL
3A100GM	3A2LF
3A2RPR	3A2LZ
3B8/F5PXQ	F5KDZ
3D2CU	SM7PKK
3D2EK	N6EK
3D2HI	JA1KJW
3D2HK	JR1LVB
3D2ID	JE1XXG
3D2KZ	JA8VE
3D2LF	AA6BB
3D2MU	7M1QAP
3D2OQ	SM5BOQ
3D2PN	OH5UQ
3D2SH	JA1JQY
3D2VJ	G4ZVJ
3D2XC	JE1DXC
3DA0CA	W4DR
3F0T	HP2CWB
3F3C	HP2CWB
3W1AS	W3RGD
3W5FM	UA0FM
3X9HCW	DK7PE
3Z0PLC	SP3PLC
3Z2BUC	SP2BUC
3Z4DCR	SP4DCR
3Z4EAK	SP4EAK
3Z75KW	SP9ZKN/ SP9HZW
3Z9MAV	SP9MAV
3ZOCDP	SP6CDP
4D63RG	DU9RG
4F2IR	DU3DO
4H1TR	I2CBM
4J0/IK2BHX	IK2MRZ
4J0FR	F6AJA
4K50V	UD6DC
4K6DFT	UA9AB
4K7FA	OE3SGU
4K8DX	DL7ABL
4K8F	UA9AB
4L2M	DJOIF
4M5Z	WS4E
4N0AV	YU7AV
4N1Z	YU1AVQ
4N4L	9A2AA
4S7DRG	DK9DR
4S7PVR	G0USK
4S7ZNG	DK1ZN
4U0/KC0PA	VE9RHS
4U50UN	W8CZN
4X/G0MEU	ON9CGB
4X/OK1JR	OK1AJN
4X0A	4X6UO
4X41FR/M	4X4FR
4X41JU	4X4JU
4X42FR/M	4X4FR
4X42JU	4X4JU
4X43FR/M	4X4FR
4X43JU	4X4JU
4X44FR/M	4X4FR
4X44JU	4X4JU
4X45FR/M	4X4FR
4X45JU	4X4JU
4X47ID	4X1BQ
4X4JP	WA1GZY
4X6NJ	WA4WTG
5A1A	LZ2UA (CW)/ OM3JW (SSB)
5B4AFJ	F6EAY
5H1CK	IK4CWP
5H3EH	OH2BBF
5H3RW	DL7AXA
5K5J	HK5MRJ
5N0/OKIMU	OKIDCH
5N0T	F2YT
5N35/OKIMU	OK1CDH
5N35ALE	DJ2VZ
5N35JHE	5N0JHE
5N35KWO	WB8QFB
5N35PYL	F2YT
5N5FSR	DF8QB
5N9KWO	WB8QFV
5NILAZ	DG3LAV
5R8DS/Y	PA3BXC
5R8EU	JF1MGI
5R8FA	JE8BKW
5T0AS/P	IT9AZS
5T6E	F6FNU
5V7BC	F5KPG
5V7GL	EA5WX
5V7MD	AB7BB
5W1AU	W6KNH
5W1GEH	K8VIR
5W1VJ	G4ZVJ
5X1G	ZS6WAL
5X1MW	KB4EKY
5X4B	DL8AAM
5X4F	KB4EKY
5Z4BZ	F5IBZ
6D2X	K5TSQ
7JIAWO	KQ4GC
7L3TDU/6	JH6RTO
7Q7AN	PA3DUU
7Q7DC	WA6IJZ
7S3OWG	SM3CVM
7S6NL	SK6NL
7S6SAQ	SK6DK
7W5J	7X5JF
7X2VZ	OM3CGN
7Z5OO	W1AF
8P6AM/QA	KU9C
8P9CR	LA4LN
8P9CU	KU9C
8P9FC	GM3AVA
8P9GU	DL7VOG
8P9HT	K4BAI
8P9HU	K3KG
8P9II	DL7DF
8P9MIP/8P9Z	K4BAI
8Q7AI	DL1IAI
8Q7AS	DL2EAS
8Q7BE	DL8NBE
8Q7BL	DL3NBL
8Q7BV	HB9DIF
8Q7BY	JA0BYS
8Q7CW	DK7PE
8Q7IG	JA3IG
8Q7RJ	JA9PRJ
8Q7VJ	G4ZVJ
8Q7WD	G4RWD
8S0ITU	SK0CC
8S3BG	SM3CER
9A17A	9A1AKL
9A17ST	9A1CBM
9A4A	9A4AA
9A5D	9A1BHI
9A5Y	9A1CCY
9A6V	9A1BST
9A95K	9A2EU
9G1YR	G4XTA
9H1AW	GW3LDH
9H3AM	G3VLX
9H3GQ	DK4SW
9H3ID	PA3CGX
9H3IE	PA0BEA
9H3ON	PA3BIZ
9H3QH	PE1KNL
9H3SB	DL5XAT
9H3TD	PA0TPN/ PA3TPM
9H3UD	DL80BC
9H3UF	DH1OAH
9H3UJ	PA3CRA
9H3UK	PA3DES
9H3UL	PE1NWI

9H3UT DL9GDB
9H3VG G4PDG
9H3VV OE2GEN
9H50PIE 9H1DE
9H50RAF 9H1KK
9H5OVE 9H1ARC
9I30A JH8BKL
9J2AE F6FNU
9J2CW JF2XTZ
9J2RD IK2SGQ
9K2CA ON6BY
9K2MA W3HCW
9K2ZV KC4ELO
9L1PG NW8F
9M0A JA9AG
9M2IY JA1INP
9M2JJ SM0OEK
9M2REC DK0BZ
9M2WA G4IOQ
9M6P F6BFH
9M8BC HL5AP
9M8CC PD0ALB
9N1ARB KV5V
9N1CT/NQ JA2NQG
9N1SXW G3SXW
9N1UB UY5XE
9N1WU JA8MWU
9Q2L PA3DMH
9Q5BXN OZ9SIG
9Q5FH EA1FFC
9Q5JM EA2URD
9Q5LAC DL5LAC
9Q5PL OE7MCJ
9Q5ZP LA2ZP
9R1A PA3DMH
9U/EA1FH EA1FFC
9U5MRC G3MRC
9V1ZW JR1NHD
9X/ON4WW ON5NT
9X/VE9OM VE1RSA
9X1A ON5NT
9Y4/J37UE N4SQP
A22BW DK3KD
A35VJ G4ZVJ
A43GI A47RS
A61AF N1QMM
A61AH KA5TQF
A92EF WA6ZEF
AA4VK/C9 WA4DAN
AH0AV/KH2 JH6RTO
AH0T JA6VZB
AH8F G4ZVJ
AY1A LU4AA
AY1I I0WDX
AY5VCI LU1VZ
AY9F LU9FHF
AY9VCI LU1VZ
AZ3HAE LU3HAT
BS7H/MM JA1BK
BT1DX BY1PK/ WA3YVN
BV2BT I0WDX
BV3BW AA7AN
BV4AS KA6SPQ
BV9G BV8BC
BV9P KU9C

BY95WMI JA6CYQ
BZ4REB BY4RSA
C40M 5B4AFM
C40MI 5B4KH
C47W FQA/ PA3ERC/ ZS5PJP
C53GB GM4HNK
C56WW G0UCT
C6AFP N4JQQ
C6AGN W1SE/ KM1E
C94AI CT1CKP
CE0Z K0IYP
CE0ZAM CE3ESS
CE9/G0NKZ G0SZO
CE9AP CE2LOL
CF6AFD VE6SRC
CG7D VE1FO
CJ1MA VE1AGF
CJ2AWR VE2AWR
CJ2MCZ VE2QK
CK7K VE7ETK
CN16DKH CN8MC
CN2EME F6BGC
CN2HW I5JHW
CN2JA DL2EAD
CN2NI F6NII
CN2SN/R I5NSR
CN5I I5JHW
CN8DN/M G4LUE
CN8LL F1HGR
CN8UX EA2LU
CO0OTA CT1ESO
CO2JD HI3JH
CQ1C CT1EWA
CQ1P CT1EXE
CQ2C CT1EEB
CQ2S CT1FMX
CQ3X DL7MAT
CQ4I CT1CFI
CQ5B CT1FMX
CQ5I CT1CFI
CQ6L CT1BWW
CQ7M CT1FMX
CS1E CT1EEB
CS2B CT1AHU
CS4EEP CT1BWW
CS4PV CT1EIF
CS6ECF CT1ECF
CS7B CT1EKD
CS8EPV WA3HUP
CT3/CT1DNP DJ0MW
CT3BX HB9CRV
CT5CRA CT1BWW
CT7B DJ0MW
CT9M CT3DL
CT9MAD CT3FF
CU1AC W2FXA
CU1CB KN6BT
CU3DX CU3AN
CU3P CU3AK
CU6PI CU7AM
CU9B CU3AV
CX5BBI KA5TUF
CX8BBH LU8DPM

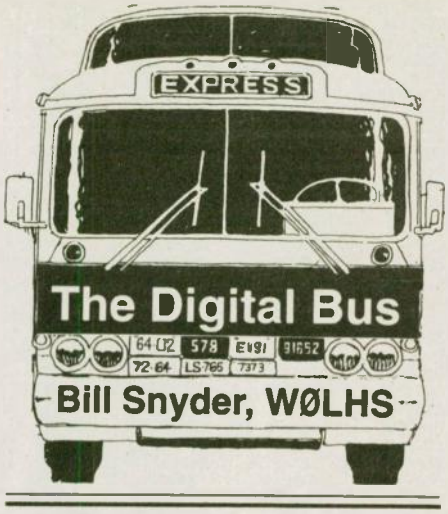
CY2OX/P VY2OX
CY3IARU VE3FOI
CYOTP VE1CBK
CZ9TK VO1TK
D2/YO3YX YO3YU
D2EV DL3KBQ
D2RL G0DBH
D3T ON5NT
D61NW IK2GNW
DA0IMD DL3YBP
DA0ITU DL8CZG
DA0TOR DL5YSM
DA0WCY DK4LI
DA0ZH DL9ZEA
DF5JT/HK0 DF3CB
DS0DX/2 HL1XP
DU1RAA DU9RG
DU8/AH8F G4ZVJ
DU7LA KD6QV
DU97RG DU9RG
E050HZ W3HNK
E050LA UR7LD
E21AOY/8 DL9MDZ
EA1AAD/P EA5OL
EA1AGZ/P EA5OL
EA1AHP/P EA5OL
EA1ALA/P EA1BEZ
EA1BTA/P EA1EK
EA1CAI/P EA5OL
EA1CSB/P EA5OL
EA1EK/P EA5OL
EA1FCI/P EA5OL
EA1FEO/P EA5OL
EA2/EA1FCH EA5OL
EA2SNI EA2CMW
EA3AOK/1 EA5OL
EA3AOK/5 EA3BT
EA3BT/P EA3FBM
EA3GDE/P EA5OL
EA3IDP EA3ESZ
EA40L/P EA4CWN
EA4CBA/P EA5OL
EA4ENK/P EA5OL
EA4OL/P EA4CWN
EA5CDD/P EA5OL
EA5EQ/P EA5OL
EA5FD/P EA5OL
EA5GOU/P EA5VM
EA5KT/1 EA5OL
EA5KT/P EA5OL
EA5RKX/P EA5OL
EA6DM/P EA5OL
EA6OH EA5OL
EA6PN EA5OL
EA6QB/P EA5OL
EA6SF/P EA5OL
EA7BR/P EA7CWA
EA7GYJ/P EA7GMC
EA7JB/9 EA5OL
EA8BWW/P EA8BGY
EA8RG DFODX
EA9PD/P EA5OL
ED0VDA EA5OL
ED0VPV EA5OL
ED1GSS EA1DO
ED1IBA EA1BEZ/

EA5OL/
EA1EBK
ED1IDM EA1ATT
ED1IPA EA5OL
ED1IRA EA1BEZ
ED1ISA EA1EAU
ED1ITU EA1AVI
ED1MC EA1MC
ED1PA EA1MK
ED1PAL EA5AEM
ED1RAV EA1JJ
ED1RDS EA1EXR
ED1SMI EA1AAA
ED1SPA EA1JJG
ED1SPG EA1FDG
ED1URS EA1EB
ED1VFA EA1CCC
ED2IZO EA2LZ
ED2JAE EA2CBY
ED2SAI EA2CIK
ED2SNI EA2CHW
ED3IDB EA3ESZ
ED3IMP EA3CCN
ED3MNF EA3KO
ED3QBC EA3DUF
ED3TCV/5 EA3GHQ
ED5GCT EA5GCT
ED5IPE EA5OL
ED5IRM EA5VM
ED5MCC EA5FLE
ED5MMM EA5KW
ED5REC EA5GQZ
ED6EIP EA6VC
ED6FPG EA5OL
ED6IB EA3FP
ED6ISC EA6ACB
ED6JEM EA6ARM
ED6ZXM EA6ZX
ED7IDC/MD EA7FR
ED7JEM EA7GW
ED7PRFW EA7ESH
ED7SAF EA7OY
ED8BIE EA8BIE
ED8IST EA8BGY/W
EDIISA EAIEAU
EDIURS EA1EB
EDIVDX EA1EDN
EF2FSI EA2MJ
EF4HFP EC4AGG
EF5MMM EA5KW
EG1ITU EA1EK
EG1RD EA1NK
EG1UIT EA1KK
EG2ITU EA1FCG
EG2UIT EA2BFM
EG3ITU EA3BT
EG3UIT EA3CCN
EG4ITU EA4BPJ
EG4UIT EA4BUE
EG5ITU EA5AEI
EG5MDE EA5BY
EG5UIT EA5OL
EG6ITU EA6IB
EG6UIT EA6YX
EG7ITU EA7CWA
EG8ITU EA8AKN

EG8UIT EA8BGY
EG9A EA4URE
EG9ITU EA9PY
EG9UIT EA9TQ
EI3IMD EI2WW
EI7M EI6HB
EJ/GMODEQ GM0KVI
EJ1D EI5HD
EJ5CRC EI5CRC
EJ7NET EI6FR
EL2NH EA5GQA
EM0RSE DJ0MAQ
EM3W WB2RAJ
EM5CH UT3UR
EN2H I2PJA
EN5J LY1DS
EO50AA US4AS
EO50BB UX0BB
EO50C UY3CC
EO50CK UT1CZZ
EO50DX RB5DX
EO50EN UR4EWT
EO50FI UX0FF
EO50FI UU5FI
EO50HP UX1HA
EO50HZ W3HNK
EO50IA UT3IQ
EO50ID UB5IFX
EO50II RB4IWN
EO50IK UR7IWW
EO50IS UT7IY/ RB4IRO/ UX5XE/ RB4IRO
EO50IV UX8IXX
EO50IX UX1IA/ US4ID
EO50JB UT5JBP
EO50JK UU4JWP
EO50JN 9JN
EO50JW 9JWC
EO50KA UX2KA
EO50KW RB5KW
EO50LA UR7LD
EO50PA UT4PR
EO50QB US4QWX
EO50QWP UR4QKD
EO50RI US1RI
EO50SU US0SU
EO50UA UT5UPA
EO50WL SP5IUL
ER1M SP9HWN
ER27A ER2BA
ER50A/B GR2VV/ ER1DA
ER50C I8YGZ
ER50M UO5OIV
ER50R/P/T ER1DA
ER5WU I8YGZ
ER7A F5JOE
ES2RW/4 ES2RIQ
ES5RY DJ0IB
ES60B ES4RC
ES60D ES3HV
ES60G ES5JH
ES60I ES4RZ
ES60J ES1RA
ES60L ES6PZ
ES60M ES1QD
ES60Q ES5QA
ES60R ES7FQ
ES60Y ES6DO
ES60Z ES0ZA
ES6Y/0 ES6DO
ESOSM/0 SM0OGX
ET3JR F5OYK
ET3KV DL1VU
ET3MW AD4ES
ET3RP F6GZA
EU5M/F UT2UB
EU5R EU1FC
EV1Y/50 EV1YW
EV50I EW4WW
EV50W EW6DX

EV51V EW1WG
EV5OA EW1WG
EW50L EW3XB
EW9/UX2MM DL3BQA
EX/N0LAZ DL4MFW
EX/V31YM DF8WS
EX0O DF8WS
EX0V WB6EQX
EX2M DL4MFM
EX2U IK2QPR
EX50V DF8WS
EX7MA IK2QPR
EX7MB F5OJO
EX7MM DF8WS
EX7MW WA6NUY
EX8F UM8MY
EY4AA UA9AB
EY50V EY8CQ
EY8AM DF3OL
EZ8AI W3HNK
EZ8AQ UH8AAQ
F5CCO/P F1JRT
F5PFP/GAZA F5PYI
F5PFP/ZC6 F5PYI
FG5GZ F6CLK
FG5HR F6BUW
FJ5OM FJ5AB
FK5DX/8GM WB2RAJ
FK8HC HH2HM/F
FM5BH/FM F6HEQ
FO0DEH F1RLF
FO0PRI K2QXS
FO0SUC F5KFE
FP/N9AU K9GS
FP/ND9O K9GS
FP/W9OP K9GS
FP8NR YU1NR
FR/F5PXQ F5KDZ
FR5HR F5RRH
FS/OKIHOB OK1MKD
FS5PL KF0UI
GB0SRS G0ATX
GB100MR GD3AHV
GB2RRM G0MMH
GB2TI G3JNJ
GB50LIB GU3HFN
GB5SF GW0PUP
GB5VJ G4ZVJ
GI0SSA/P GI7EFF
GM0KDZ/P GOKDZ
GP4IPA GU0ELF
GR0LOS G3VIR
GR2VV G0OOO
GR50RN G0FEK
GR5VE G3OPL
GT3FLH GD3AHV
GW5LP/P G5LP
GWONWR/P GW4PW
GX0NHR/P G3OCA
H33C HP2CWB
H44XF G3TXF
H5ABP A22RS
HA95SVK HA8RJ
HB0/DA1WA DJ0LC
HB0/HA5RT HA6NL
HB0/HB9AON DJ2YE
HB0/KE4TL DL8BDR
HC7SK SM6DYK
HC8A WV7Y
HD2RG HC2RG
HF0PMC SP2BMX
HF65PZK SP7NJX
HG100R HA1KSA
HG3CW HA3KNA
HG47VEK HA3RG
HG55AM/7 HA6URO
HG6Y HA6OI
HG750K HA1KRR
HG95H/Q HA5NK
HH2/KB0QNS KB5IPQ
HH2CL F6AXY
HK1OOGM HK3DDD
HL5KY W3HNT
HO0T/3C HP2CWB

More to come next month!



While looking through my archives recently, I came upon a "Radio News" magazine from February, 1944. It was fat, 452 pages, and it was dedicated to the United States Army Signal Corps in World War II. My mother saw the magazine on a newsstand and bought it because she thought the soldier in the picture on the cover looked like me. The model was dressed in army fatigues with his visible skin daubed with camouflage cosmetics, and was pictured talking into an army SCR-536 "handy-talkie" radio with his right hand while holding a carbine in the other.

At that very point in time, I had just been transferred from the Amphibian Engineers to the Signal Corps to become the radio officer for the invasion of Dutch New Guinea. My mother wrote about the magazine and said she was saving it for my return to the United States. I'm glad she did.

After the war I got my first look at the magazine, and it was heavily jammed with advertising bragging about companies that made capacitors (they were called condensers in those days), resistors, and all the components of Signal Corps radios, but it does have a great deal of editorial stuff about the Signal Corps and the radios of 52 years ago. And for me, that is fascinating.

Now that I have discovered that treasure of radio history again, I want to thank my late mother for saving a bunch of history for me, even if I wasn't the guy on the cover, but I will admit it does resemble me as a young kid on field maneuvers.

When I was called to extended active duty during the war, I was sent to the Engineer Amphibian Command at Camp Edwards, Massachusetts. It was a brand new unit in the army and our job was to run the landing craft for the army — much like the Navy had been doing for years. Where the Navy handled "ship-to-shore" invasion landings, the Amphibs were the "shore-to-shore" landing craft operators. The unit I first was assigned to made actually 84 combat landings during the war in the Pacific.

Now for the radio in the cover picture: the hand-held SCR 536. I used to say when we had them in the Amphibs as our only boat-to-boat link, "I can throw the darned thing farther than I can talk on it after it gets a little sea spray on it." And if you have never been in a 36' LCVP (landing craft vehicle personnel) Higgens boat, you don't know what sea spray can do when you are hit by waves with the ramp on the front end of the boat. It's like a rainstorm downpour when the wind catches the spray and dumps it in the cockpit of the boat.

While browsing through the magazine, I found a picture of a guy using an SCR-536 and it was wrapped in plastic as a "waterproofing" measure. I guess I wasn't the only person to wonder about the handy-talkie and its general use. By the way, when we were training in Australia with the Aussie troops, the Signal Corps shipped us a plane load of the first SCR-300 radios to be used in the theater; however, it was quite a spell before they shipped us the special batteries to run them.

The Signal Corps also had carrier pigeons for communications, and the magazine printed a nice article telling of their use. When I inherited a company commander's job in the 58th Signal Battalion supporting I Corps, we had a batch of flying members of the Army Pigeon Service to keep trained. We hauled those "war birds" all over the Pacific, and to my knowledge, the only real use of them was for a weekly "Pigeon Derby" race held each Sunday in Hollandia, Dutch New Guinea. Thousands of Dutch guilders were bet on the outcome of the weekly "Derby."

So, now that I am in my "nostalgic" phase of life, I have found a gold mine of Signal Corps stuff to include in this column. World War II was such a monument to the United States ability to produce war materials, that it should be fun to reminisce about it with a book full of stuff to bring back our memories.

The RTTY Lady

Dee Crumpton was the owner and editor of the *RTTY Journal* when I was the DX editor. She sold the little monthly magazine to Dale Sinner, W6IWO, and during those years she disappeared from the scene. Recently I got a card from Dee with the following information on it: "Very soon I will be LAØ??! I now call "home" southern Norway! Last year I went around the world — met LA8BF and on 19 January 1996, we were wed here in Larvik!" Congratulations to Dee and her husband. I hope she likes herring.

When my wife and I toured the Scandinavian countries about ten years ago, we stayed in "summer hotels" (dormitories at colleges). The first morning, still loaded with jet lag, we went down for breakfast. My wife looked at the spread of bowls of herring in various sauces, sliced sausage and breads and then turned to me and asked, "Where in the world is the

breakfast?" I was in herring heaven, because I like herring in tomato or wine or mustard or anything sauce!

Mailbag stuff

I received the following letter in response to my column in the April issue. The author is Bob Burchardt, AB5QH, of Crescent, Oklahoma.

"Jerry Mulberg, W2MJP, must have had an exciting time aboard the sea-going tug if he passed Cape Hatteras enroute to New York from Newport News. Man, they must have had some navigator.

"When I was sailing a destroyer out of Norfolk we used to go out the Thimble Shoals Channel, same as any ship entering the Atlantic from Chesapeake Bay. Cape Henry was on our right hand going out and Cape Charles was on our port. Cape Hatteras was SOUTH of there, down around Wilmington, North Carolina.

"Maybe Jerry was referring to the ground swells always encountered at Bouy 3 Charlie 2 near Cape Charles. You just don't go from Newport News to New York via Cape Hatteras unless your navigator is 'Wrong Way' Corrigan!"

Well, I'm not acquainted with the sea-going geography of Newport News, although I once went to a three-week army "Air Transportability" course at Fort Eustice, Virginia which is located quite near the city of Norfolk. My sea-going navigation experiences cover adventures in Army Amphibian units in the Cape Cod area, the Appalachacola, Florida sand bars, and various coastal areas on the northern coast of the island of New Guinea.

As an officer in the Amphibs, I was sent to school to learn piloting and navigation so I could run small landing craft for military operations. We were out in the sound between Martha's Vineyard and Falmouth, Massachusetts on a student run when we accidentally beached the 36-foot cabin cruiser that was our school room on an underwater sand bar. I won't take credit for the beaching because I was taking a little nap in the forward cabin when we slammed into the shoal. My section of the voyage that very foggy day went perfectly, and I stayed out of the way while other students did their turn at the piloting. The best place to stay out of the way was on the bunk in the forward cabin, so that is where I stayed.

It is easy to make mistakes in geography. This thought brings this next bit to mind. I was flying my Cessna Skylane from my home in Fargo to Dekalb, Illinois, on a nice Sunday afternoon when I got very sleepy. I had the air blowing full on my face, I was slapping my face to keep awake and I was all alone. I was flying VFR on top a broken deck of clouds when I reached the decision to land and take a nap before continuing on to Dekalb.

A nice big hole in the clouds came underneath my wings and I saw an airport near the Mississippi river beckoning me. I spiraled down from 9,500 feet and headed for the airport. It looked like LaCrosse, Wisconsin to me, so I called the airport and was advised of the wind and runway information.

When I squared off for the landing runway, something didn't seem right, I couldn't remember what the runway number given by the airport really was. But I was too sleepy to care, so I touched down on the concrete and taxied to the fixed base operator's parking area. When I got close to parking, I saw a sign that said, "Welcome to Max Conrad field, Winona, Minnesota."

I was embarrassed, but I got out of the aircraft and walked into the office and asked if there was a phone to the LaCrosse radio facility. When shown, I picked it up and said to the LaCrosse operator, "This is the pilot of 3769 Uniform, and I decided to land at Winona instead. Please close my VFR flight plan to Dekalb."

I then borrowed a car from the base, drove under a bunch of trees and took a long nap. After refreshing myself, I topped the fuel tanks in my Cessna and continued to my original destination. I felt like the Northwest Airline pilot who landed in Fergus Falls, Minnesota, instead of Fargo, North Dakota, which is 50 miles to the west. A person really remembers making that kind of mistake.

EAVESDROPPPINGS

MISSED SOME OF YOUR TRANSMISSION BECAUSE THE CAT RAN ACROSS THE DESK AND HIT THE VFO KNOB. . . . NOT MUCH MORE FROM HERE ON THE RTTY BECAUSE MY FINGERS ARE GETTING TWISTED. . . . MY FAVORITE RADIO STATION DOESN'T PLAY ROCK AND ROLL, OR THAT MODERN CLONK AND BONK AND SYNTHIZED KAZOO MUSIC, AND I WISH I COULD SPELL SYNTH WHATEVER IT IS.

Write me: Bill Snyder, WØLHS, 1514 12th St. S., Fargo, ND 58103-4134. My packet address is WØLHS@WØLHS.#SEND.ND.USA.NOAM. 73 DIT DIT. WR

Computers & Basic Stuff

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BASIC antenna traps

With the 63rd running of Field Day just around the corner (22-23 June), now would be a good time to explore another antenna option. This month we'll look at designing coaxial traps for multiband dipoles.

Antenna traps, in the olden days, were made by connecting a coil of wire, usually B&W "minidux" or Airdux brand coil stock, in parallel with a high-voltage capacitor. Values were selected for a combined resonance at the lower end of the band of interest. Normally an egg insulator isolated the two sections of antenna wire and the high-voltage (doorknob type) capacitor was used to bridge the gap. The coil was placed around this, also connected to the two sections of antenna, and a plastic sleeve was often placed over the whole thing for weatherproofing.

In the early 1980s Robert H. Johns, W3JIP, introduced amateurs to traps made with coaxial cable. In the May, 1981, issue of *QST* he claimed that such traps had excellent Q and antennas made with them had relatively broad bandwidth. Gary O'Neil, N3GO, followed with a slight modification of the Johns trap in the October, 1981, issue of *Ham Radio* magazine.

Naturally, coaxial trap construction took off, and various ways of constructing the traps were tried.

```
10 CLS: PRINT: REM "COAXTRAP.BAS" BY KD5DL, 6/96
20 PI=3.141592654: L=990000: U=1010000: INPUT "FREQUENCY ";F
30 C=30.8: T=.105: PRINT "DIAMETER TURNS LENGTH"
40 FOR D=.5 TO 5 STEP .1
50 S=D+T: G=F^2: H=4*PI^2: J=C*PI*S
60 FOR N=3 TO 20 STEP .1
70 X=H*(S^2*N^2/(18*S+40*N*T))*((J*N+C)/12)*G
80 IF X>L AND X<U THEN PRINT USING "###.# ##.# ###.#"; D,N,N*PI*S+1
90 NEXT N
100 NEXT D
```

Within four years Robert Sommer, N4UU, published an article on "optimized" traps in the December, 1984, *QST*.

Sommer claimed that the shortest length of coax necessary to obtain trap resonance also provided the highest trap reactance and the widest antenna bandwidth. He went on to develop an algebraic equation to compute the coil data parameters for this shortest cable length, and provided construction data for the (then) amateur 80- through 15-meter bands, using two popular cable types, RG-174/U and RG-58/U.

While earlier coaxial trap designs usually stuck with RG-58 cable, Sommer claimed that his RG-174/U traps could handle up to a kilowatt of power before showing signs of overheating. He concluded that they should be perfectly safe for power levels of at least 500 watts or so. The larger RG-58/U coax traps could be saved for "legal limit" applications.

Borrowing three of Sommer's equations, I developed this month's BASIC program. The equations are: 1) The standard tank formula, F=1000/(2*PI*SQR(L*C)); 2) the capacitance of length of coax wound into a coil, C=CF*(PI*N*S+1)/12; and 3) the inductance of a coil, L=S^2*N^2/(18*S+40*N*T); where dimensions are in inches, F is the frequency in MHz, L is the inductance in microhenries, C is the capacitance in picofarads, CF is the coax's capacitance in picofarads per foot, N is the number of turns, S is the combined coil and coax diameter and T is coax diameter alone.

These equations are rearranged in program lines 30 through 60 and are solved in line 70. If the solution is within acceptable limits, line 80 prints the coil's form diameter, number of turns and cable length. Selecting a form diameter corresponding to the shortest (or close to shortest) cable length results in an "optimized" trap.

The program assumes you will be using RG-174/U coax, with a capacitance of 30.8 pF per foot and a diameter of .105 inches (the C and T of line 30). *If you substitute another cable type you will need to change these variables.* For Radio Shack's RG-58 use C=28.5 and T=.196; for RG-59 use C=15.6 and T=.242; and for RG-8M use C=25.2 and T=.242.

Run the program and enter your frequency of interest (Sommer used band center frequencies, except on 80 Meters, where he used 3.55 MHz for a lower-end trap and 3.95 for the upper end).

The program then tries any number of form diameters (line 40) up to 5-inches, and any number of turns between 3 and 20 (line 60) to determine trap resonance. If the variable X in line 70 is found to be within a few percent of the input frequency in line 80, the rest of the line prints values for diameter, number of turns and coax length.

To check that the program works, enter a frequency of 7.15 MHz. A number of possible trap designs are given, and four should have the optimum 51.9-inch cable length. One

should use 10.1 turns on a 1.5-inch form, another should show 9.5 turns on a 1.6-inch form, another uses 8.5 turns on a 1.8-inch form and the last uses 7.7 turns on a 2-inch form. Each can be considered optimum (compared to Sommer's 51.7 inches wound 8.5 turns on a 1.83-inch form).

The next step is to build the traps. Sections of thin-walled PVC pipe are fine for the forms, but you can use whatever you have on hand. Wind the coax, using close-wound turns, and connect the center conductor

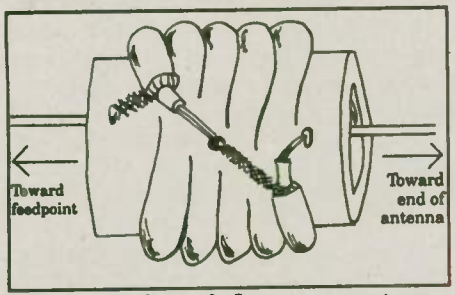


Figure 1. Coaxial trap construction. The Sep '95 issue of *CQ* has an article on the mechanical aspects of trap construction.

from one end of the cable to the braid at the other end of the coil. You might want to drill holes in the form and make this connection inside the coil. And that's how easy it is!

The traps should work fine "as is," but if you have access to a dip meter you might want to check their resonant frequencies. Dressing back the braid a little lowers capacitance and spreading turns lowers inductance. When you're satisfied with the results you can use silicone sealant or tape to hold everything in place.

The traps are connected to the antenna with the unused braid connected toward the feedpoint. The trap's output to the outer antenna

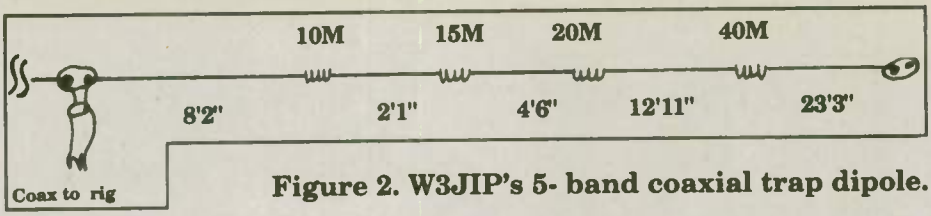


Figure 2. W3JIP's 5- band coaxial trap dipole.

section(s) is via the coax coil's center conductor. Figure 1 shows details.

The standard practice in building a trap dipole is to work on the highest frequency first, pruning the antenna to resonance before inserting the first traps. After attaching the traps and wire for the next antenna section, you prune it for resonance, and continue likewise until all traps and elements are in place.

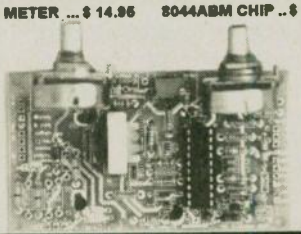
You will find that a dipole with a trap is physically shorter than one without it. This is because the traps' coils act like loading coils, adding inductance that lowers the antenna's resonant frequency. The easiest way to bring the frequency back to where you want it is to shorten the antenna's length.

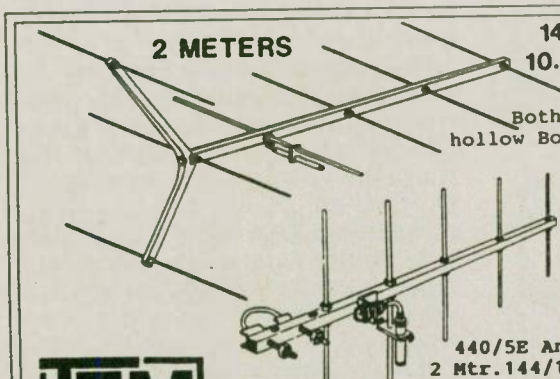
Johns found, however, that the shortening effect isn't nearly as great for a coaxial trap dipole as it would be for one built using wire coil traps. Figure 2 shows the dimensions for one side of Johns' 20-foot high 5-band dipole. The left-side dimensions should mirror these.

Obviously, what you adjust at home will probably be somewhat different out in the field (with different antenna heights, different ground characteristics, different reflections, etc.). If you are concerned about the possibility of your Field Day site throwing the antenna's resonance off a little, take along an antenna matching unit (tuner). Any reactance changes can easily be tuned out, and so can bandwidth problems.

That's it for this month. I hope you and your club get a chance to work this year's Field Day, especially if you've never tried it before. When you do, listen for the Chisholm Trail ARC's WD5IYF call sign, and maybe we'll work each other.

Until then, stay radio active. WR





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"Take them off the air!"

Let's start out by sending congratulations to our national society — the American Radio Relay League — for standing up to the FCC and in effect saying: "Ham radio is furious about your failure to act against the bad guys. It's time to get the rules violators off the air!"

This is the gist of the message sent by the ARRL to the FCC in March as part of comments filed in response to an FCC Notice of Inquiry seeking ways to streamline the Commission's administrative activities. The League says that it strongly believes that the FCC should have statutory authority to suspend ham licenses for up to six months, once the Commission has good reason to believe an operator has grossly violated the rules. The ARRL says that license suspensions — even short-term, six-month suspensions is an effective way for the FCC to address malicious interference and other serious rule violations without delay and at little expense to the government.

The League maintains that suspensions would be a viable deterrent to be used against rules violators. Under the League's scenario, the FCC not only would be able to suspend a license, it also would be able to immediately modify an Amateur Radio license to preclude operation on certain frequency bands or at certain times of day, also for up to six months.

In its filing, the League says that most of the nation's hams behave themselves on the air and obey the regulations. Because of this, says the ARRL, the Amateur Service requires little enforcement effort. However, the League says that in recent years, the FCC — especially its Compliance and Information Bureau — has been "completely ineffective" in providing a meaningful enforcement presence for the few who flout the law. ARRL says that this has led to an increase in instances of malicious interference.

"Since 1983, there have been virtually no enforcement actions taken by FCC in the Amateur Service," says the ARRL. In recent years hams have come to view the FCC as a "paper tiger" that fails to act in even the most egregious cases.

The Florida bootleggers

Why is the ARRL taking a position that could place them in a direct political confrontation with an FCC that really does not care, and which has said so to us hams on numerous occasions? Why is the ARRL taking the chance of alienating high ranking government officials who are under Congressional orders to cut government spending to an absolute minimum, and in the case of the FCC, to only act in cases where public safety is affected?

The following examples speak for themselves.

In Sarasota, Florida, what started out sounding like intermod from a lawn service company on a local repeater turned into a three-week-long mid-February ordeal in jammer chasing. It involved a lot of political legwork by the Sarasota Amateur Radio Association to literally force the FCC to act. The Sarasota Amateur Radio Association sponsors the W4IE repeater. After about a week of listening and recording what was going on, it was obvious that the interference was bootlegging.

The club did what all hams are taught to do in cases such as this. They called the local FCC office — in this case it was FCC's Tampa office, for assistance. Guess what? The FCC said no way would they help.

Needless to say, the Tampa office attitude changed after club officials called the FCC's Wireless Telecommunications Bureau in Washington, DC, and filed a formal complaint. By month's end, the Tampa field engineer-in-charge told the Sarasota hams who had done the tracking that they would be in the area to take on the case.

On the afternoon of 27 February, the FCC told the hams that they had established an electronic fingerprint of the offender's transmitter. In the joint effort that ensued, FCC field personnel and the Sarasota hams physically located and observed the perpetrators that same day. That evening, FCC personnel called at the home of the owner of the lawn service whose workers had been using the W4IE repeater.

The FCC stated the owner was very cooperative. As a result, several radios and the employees alleged to have used them were rounded up. Club members later learned that charges have been filed against the gardening service and the employees involved. As a bonus the FCC investigators had also identified two other people who had been making rude noises on the repeater.

California auto emergency jammed

This incident was posted to packet by KE6TNM. Mark says that he recently had a wheel bearing break on his car, and it was just his luck to have it happen behind a hill on a long, empty road. It was a half-hour's walk to the nearest telephone and his cellular phone was useless because of the hill.

Mark says that he picked up the mike, brought up the Catalina repeater and asked for someone to relay a phone message. Someone did come back, but before Mark could get the message through another person started jamming!

Because of the hill, he could just barely get into one other repeater to get help, but he adds: "I still can't believe that someone would jam an emergency transmission. It has been enough of a problem with the jamming of general conversation, but this is going too far, and the problem has to be solved."

Mark says that he carries a direction-finding antenna in his car and would have tracked this person had the car not been disabled. He urges other legitimate hams to do the same, and help clean up the band "before it becomes another CB."

Blind hams jammed

In Minnesota, Chris Peterson,

KGØBP, writes to tell us via the Internet about a situation in the Minneapolis/St. Paul area. Chris says that for the past 6 months, an unknown operator has been jamming several 220 and 440 MHz repeaters in Minneapolis and St. Paul. There has been jamming of local Skywarn nets, and other emergency traffic. These repeaters also have occasionally been cross-banded to other two-meter repeaters, we believe in an effort to form a split in the Amateur Radio community in the area.

"Since many repeater operators affected are blind, they haven't been able to mount a direct effort to locate and stop this jammer. Efforts have been made to get the local representatives of the ARRL involved, but with little success. We have tried to ignore this problem, but it has increased.

"On several occasions the jammer has driven right past some operators' apartment buildings, jamming repeater outputs as they go by. Some of us are afraid that this individual might, at some point, do more than jamming."

Chris says the jammers obviously know where some repeater users live, and there is fear that the jammer may attempt physical harm of some kind. "This fear has been expressed to the ARRL section manager, and the Dakota division director, but all they will tell us is that we need to ignore him and he will go away." Unfortunately says Peterson, this has not been the case.

Will the FCC act?

The real question is, will the FCC take the ARRL's comments as a needed initiative and begin license suspensions and modifications? Like you, I would like to think this would be the case, but I am not holding my breath.

I see only one way to get the FCC to do its mandated job in the area of enforcement — in our service or any other. It may take a class action law suit on the part of legitimately licensed spectrum users against the FCC. A suit, that if won, would direct the FCC to act immediately against any and all rules violations in any service. It is going to have to contain a court directive that says "you who collect government paychecks for service with the FCC had better do your job, or it will be you who pay." In other words, the bureaucrats get fined for not doing the job that we the people have demanded that they do.

Nurses assisted by hams

On a more positive note, word that members of Pennsylvania, Delaware-Lehigh Amateur Radio Club lent a helping hand to some thirty nurses during the so-called "Blizzard of '96" in early January. Using four-wheel-drive vehicles and keeping in touch via VHF FM repeaters, club volunteers transported nurses to work at hospitals and nursing homes in the Allentown-Easton-Bethlehem area.

Clarence Snyder, W3PYF, a club member for more than fifty years, served as the contact point to coordinate the ride service. Snyder, of Easton, put out the calls for drivers as they were needed. Others in the 450-member club pitched in by keeping in contact to report road conditions and problems. (Tnx ARRL)

Repeater savings

Some good news for repeater operators with autopatch lines in Oklahoma's Southwestern Bell service area. Repeater owners now pay residential rates instead of commercial rates for telephone service to ham clubs' autopatch sites. (tnx *VHF Reflector*)

Autopatch help wanted

KEØI writes that his Amateur Radio club has maintained a VHF voice repeater for nearly twenty years, and some members are now suggesting that a telephone autopatch system be added. Gary says that he has been appointed to a committee to investigate the advantages and disadvantages, and needs to gather the experiences of clubs operating in a similar environment. According to Gary, his is a small club of forty members in a rural town of 6,000 residents. The club has limited finances and their repeater is located in the town in which they meet. It is a toll call to telephone any of the other surrounding communities or the two large cities nearby.

Is your club in similar circumstances and operating a repeater with a telephone autopatch? What are your experiences, good and bad? Are you the control operator or repeater trustee for a repeater with an autopatch? What kind of hassles do you face?

Please send this information to KEØI at his *Callbook™* address, by packet to KEØI@KEØI or via the Internet to gpresley@telemax.jetbbs.com (Via Packet).

Reader feedback

NØOFG via packet commenting on the repeater jamming situation:

"I'm getting tired of the same old story all over the country: Someone is jamming our repeaters all over the area, but when we call the FCC they tell us to use our OOs (ARRL's Official Observer) or they tell us they aren't interested.

Meanwhile the jammers happily interfere unabated. . . .

"Unfortunately, I believe that those who rely on ARRL to resolve this problem with the FCC are disillusioned. This is a problem so widespread from local repeaters to HF contesting. I feel it is time to seek help from our local Senators and members of Congress.

"I have sent letters today to Rep. Brownback and Senator Dole and am writing one to Rep. Tiahart now. Hopefully others will do the same and maybe we can get the FCC off its backside.

"Also, I would like to hear from anyone who has had any success locally in finding and shutting down jammers with the help of local law enforcement. They may not be able to enforce Federal Regulations, but have they helped in your area? de Jon NØOFG." WR

Search And Rescue Communications

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

I'm always in awe of those folk who can design an antenna system, power supply, repeater controller, or other complex circuit and then explain it, so it is easily understood. The people who impress me even more are those who can do all of the above and, when you follow their instructions, have the project work the first time. These people have a keen understanding of components and principles which is coupled with observation and experience — a rare combination!

If you've followed Kurt Sterba's column in ***Worldradio***, you will appreciate his antenna understanding. My file folder of antenna wisdom is packed with Sterba columns and if an idea passes the Sterba test, it must be okay. Two local people I place in the "Sterba" class are Rick Morgan, KD7PB, and Frank Blomquist, N7HIU.

Rick is top notch when it comes to making a radio transmit or in setting up a repeater network. Frantic calls have always resulted in answers you can trust — especially in the middle of the night during bad weather (the situation where you cannot afford to make the wrong decision).

Frank has been a close friend and advisor for many years and I cherish his diagrams drawn on napkins during lunch. Frank calls these "class three" documents. Class one documents are those slick professional drawings done by draftsmen, class two documents (according to Frank) are neatly done on 8½ by 11 inch (usually gridded) paper, and then there are his class three napkins which are done based on need and in response to an ongoing dilemma.

Between Rick and Frank, I've gleaned enormous amounts of technical understanding. Both have also hammered into my personal radio environment the need to do it right the first time and not waste time fixing things over and over. What they've taught me is the need for reliability and dependability and the freedom to move on to other projects by not having to always fix things.

There will be times when lightning strikes, components fail, or someone fiddles with something that may cause Rick or Frank to repair some equipment, but when these two complete a project, you can count on high quality and long years of use. You may know people in your area who have the same project ethic and I don't want to imply that these two are the only quality engineers locally. What I do want to do is to encourage you to be on the watch for these kinds of people and learn from them. When an emergency response occurs, you don't need to be fixing equipment that was meddled with or poorly installed!

Mobile antennas

Too many years ago to count, I operated a mobile HF-SSB radio on Civil Air Patrol missions. The antennas I used were the legendary Webster Bandspanner (which I still use), a Hustler whip, and a homebrew bugcatcher. My radio was the dependable Heathkit HW-18 loaded with tubes powered with a mobile power supply. I don't recall any major problems but I know the radio was pretty forgiving of the antenna system and it got a lot of use for many years.

When I switched to a solid-state radio (the Kenwood TS-430) I quickly fried the output transistors and learned an expensive lesson in antenna matching. An old-timer (whose name and call I cannot remember) told me I needed a capacitor across the antenna at the point the coax is connected. The concept was not clear to me but after a napkin session with Frank, I gave it a try.

In a nutshell, the advice was to gather some capacitors of various

values from 100 pf to 2000 pf. Frank suggested I use high-quality mica caps (so they don't short or arc and toast my output transistors) and do the trial-by-error approach. I would put the 40-meter coil on the car, clip a mid-range cap (about 700 pf) across the coax where it connected to the antenna mount, and then (with the radio on very low power) tune for an SWR dip. I could then adjust the whip for the proper frequency resonance and then try various capacitor values until I hit a good SWR.

It took a little time, but once done, I could operate mobile on 20M or 40M and have a dynamite signal as I traveled Utah, Idaho, Wyoming, and Colorado. I then discovered the MFJ-910 mobile antenna matcher. This is a small black box with two SO-239 connectors and a six-position switch. The switch connects five various capacitors across the antenna which, according to the single-sheet instructions, lowers the SWR by capacitive matching the mobile antenna to 50 ohms.

This system has a drawback, that of limiting you to a narrow bandwidth, but I found this beneficial. I needed to pay attention to my driving and not watching needles and buttons trying to use an automatic tuner. It also forces a little advance frequency planning and coordination if you need to talk to others such as during an emergency event.

My point is this. Quality need not be expensive or complicated but when done correctly, the result is a dependable system that can be placed in use quickly and over a long time. When I responded to handle field communications for a plane search, I could get on the road quickly and be on the air reliably in minutes. There was no fiddling with hookups or wires or testing — the setup simply worked and worked well.

Magic pills

Remember the visit to the doctor? You had a sore throat and the doctor would poke around and either give you a shot or some pills. We became conditioned so that every time we got sick we believed that we needed a pill. Recent news articles have taken doctors to task because they prescribe pills for cases in which medication is not indicated, simply because the patient has the expectation of needing a pill to get well.

Sometimes emergency communications falls prey to the "magic pill" syndrome. I've often heard the commander tell the communicator to "just link the state! We have a mission in progress!" I've been in meetings where individuals spew ideas on how a communications system should be run — and then become "too busy" to help get it all up and running. They simply want someone to reach into the radio bag and put the "magic pill" repeater up that will solve the problems.

Too often the effort required to make a system operational and dependable goes unnoticed. When a repeater works well for a decade, users forget the time there was no repeater and forget the effort it took to design, build, and install the equipment. When a system is broken, it's fun to observe all the effort by many who would demand repairs or suggest ways to make it better, only to disappear when the work party is formed. It is often people like Rick who spend countless hours (alone) who are overlooked when the system works well.

What amuses me is listening to endless debate over minute details while the big picture is ignored. For example, whether or not two or three copies of an application are required for a certification card occupied weeks of discussion with little or no comment on training quality or content. Most groups (like CAP) seem to lose paperwork and records anyway, so the focus should be on giving members knowledge and experience — something headquarters cannot lose.

There are no magic pills. Systems work because they were designed to work right from the start. Systems are dependable because they are not fiddled with until they break. People respond and deal with the situation at hand because they were adequately trained and are adequately prepared. You cannot give someone a piece of paper and make them magically prepared or able to respond.

You can offer quality training and a variety of experiences from which your members can become prepared. You can look at your group's mission, goals, and needs and design a communications system that will meet your needs without continual change. It takes a lot of work to make the system reality — THERE ARE NO MAGIC PILLS.

Until next month, best wishes from Salt Lake City! Thanks for your comments via e-mail (jw@desnews.com) and regular mail. WR

YLs on the Air

Kay Eyman, WAØWOF
Rte. 2, Box 366 • Garnett, KS 66032

Contest News

The results for several YL contests are now in. YLRL vice president Carol Hugentober, K8DHK, has announced the winners of the YL-OM Contest, held in February. In the SSB section, YL winners were: Lois Gutshall, WB3EFQ, first; Connie Schaeffer, KØGAS, second; and Robin LaByer, KR4DI, third; OM winners were: Bob Truhler, W9LNQ, first; Manny Greco, K2LFG, second; and Matthew Wooley, KC5DCD, third.

In the CW section, YL winners were: Ruth White, K5YL, first; Elizabeth Anderson, CF7YL (VE7YL), second, and Ann Santos, WA1S, third; OM winners were: Chris Rust, KC5ALW, first; Bob Schaeffer, KJØG, second; and Bob Truhler, W9LNQ, third.

Carol noted that many of the DX stations had problems in identifying what ARRL sections their contacts were in and several have suggested that states be used as multipliers instead. This will be discussed at the YLRL Convention in Albany in July so if you have any comments or suggestions, you might inform Carol or another YLRL official.

Aimee Tuband, FK8FA, was a three-way winner in the 15th ALARA Contest, sponsored in November by the Australian Ladies Amateur Radio Association. She took honors as (1) Top overall score, (2) Top DX ALARA member, and (3) Top Pacific Island score. Lynda, GØVDR, had the highest UK ALARA member score, and Gwen Tilson, VK3DYL, had the highest VK score.

The top YL scorers in the 24th JLRS Contest were Hiroko Motoyoshi, JR5PWV, in the Phone A section; Kiyo Inoue, JL1XWR, in the Phone B section; Sumie Wakui, JA7EXN, in the CW A section, and JA8UWT, in the CW B section. Chizue Doi, JA5YL, the JLRS President, is planning some special commemorative activities this year to mark the 25th anniversary of the contest, and I'll keep you posted. Congratulations to all the winners.

YL Nets

There are YL nets operating in every part of the world today, and many have been going for decades. I recently ran across some info on the earliest 160 meter YL net, which started in 1941. Esther Davis, W9EFW, in Fort Wayne, Indiana, announced in the September, 1941, issue of YLRL's newsletter *YL Harmonics* that the net would meet each Thursday, during the winter months, at 5:30 a.m. EST, on 1970 kc, from 2 October 1941, until the last Thursday of April, 1942.

Gabi Graeter, DL2BCH, is NCS for the European YL DX net.

The early hour avoided the problem of QRM, but getting everyone on the same frequency was the main difficulty. There were no VFOs, but most of the YLs had several crystals so they could select one to grind down with Bon Ami to get on (or close to) the frequency.

Two months later the December *YLH* issue announced the cessation of all amateur activities but noted that 30 YLs from 20 states had been checking into the 160-meter net. Harryette Barker, W6QGX, who was then Harryette Van Zandt, W9KSA, in North Kansas City, Missouri, was one of those check-ins and when activities resumed she remembers Nita Bien, W8TAY, and Marie Corcoran, W8TPZ, serving as net controls. The regular check-ins were all well known in the amateur community and included Loretta Ensor, W9UA (later WØUA); Ruby Ward, W9TAB (later W6WRT); Anna Marie Tevlin, W9ONW; Helen Zalucha, W9MNR; Louise Baker, W9JTX; Letha Bush, W9DBD; and Bea Austin, W7HHH.

Harryette is still active and checks into the TYLRUN net on 3.942 MHz on Thursdays at 1300 UTC and YL Open House at 14.288 MHz on Wednesdays at 1800 UTC. She always has some entertaining news to report so check in and say hello to her. (Both of these nets meet an hour later when Daylight Savings Time ends, at 1400 and 1900 UTC, respectively.)

If you don't know where the YL nets are meeting, I have a list of the DX nets and one for the North American nets and I'll be glad to send you copies. It's a great way to keep in touch with friends and meet new YLs. You'll always find a warm welcome in any YL net.

YL Updates

Kyoko Miyoshi, JR3MVF, her OM Jiro, JA3UB, and Junichi Nakamura, JH3GRE, went to Viet-Nam for eight days in February to repair the antenna and rig at 3W6AR, the Viet-Nam Post and Telecommunications Training Center, in Ho Chi Minh City. Although their duties took up most of their time, they did manage about 1,000 QSOs on 15, 20, 40, and 80 Meters, using the call 3W6YL. QSL to Junichi, with an SAE and $2 or one IRC. This was Kyoko's second operation from Viet-Nam and another trip is planned although no details are available yet.

Truus Rosenthal, VE3MRS, and her OM Martin, VE3MR, operated from Aruba for a few weeks in February and March. Truus is P4ØTR, and Martin is P4ØMR. QSL to their home address in Canada.

Leena Laine, OH2BE, was scheduled to operate from Christmas Island on April 6-10, with her OM Martti, OH2BH, and son Petri, OH2KNB, using the call VK9XM. QSL to Kan

QSL card for 3W6AR and 3W6YL

Kyoko and Jiro Miyoshi, JR3MVF, and JA3UB at 3W6YL.

Mizoguchi, JA1BK, 5-3 Sakuragaoka 4 Chome, Tama-City, Tokyo 206, Japan.

Leslie Lewis, S92YL, has a good signal on 20 Meters and has been heard around 2000 UTC. QSL direct to Box 522, São Tome, West Africa.

Congratulations to Blanche Randles, W4GXZ, who was just awarded the 1995 Phil Stern Award, by QCWA Chapter #128, the Pelican, for her many services to the chapters she belongs to, as well as to the National QCWA. This is the highest commendation the Pelican Chapter can bestow upon its members. Blanche is also an active member of Chapter #120, the Quarter Century Wireless Women.

Congratulations to Rebecca Franke, KA9ZBA, who was awarded one of the 1995 QCWA scholarships. Rebecca learned the code at age 4 and was licensed when she was 10. She will attend Coastal Carolina University and will study biology and physical therapy.

A YL panel presented a program on "Women in Amateur Radio" in late March for the Greater Cincinnati Amateur Radio Association, which was very well received. Other clubs looking for interesting programs might want to consider something similar.

Don't forget to attend the YLRL Forum at the Dayton Hamvention on Saturday, at 2 p.m. in Room 2. The speakers will be Carol Hugentober, K8DHK, and Mary Harper, AD4HC, and we'll have the latest word on the YL meeting in Berlin and the YLRL Convention in Albany.

I'll be on the air from Ireland as EI7HQ in mid-June and in early July. After the YL meeting in Berlin, the group will tour Germany for a week and then attend the big radio meeting in Friedrichshafen, and I'm told that there will be an opportunity to operate from the station there. Check the bands on June 29 and 30 for some of your YL friends from around the world signing /DL. WR

JOTA Satellites

The ARRL Pacific Division Convention is seeking contacts with satellite stations planning to participate in the scouting Jamboree On The Air in 1996. The show will be hosting a group of scouts at its special events stations, and would like to arrange a few satellite schedules with other JOTA scout groups. If you are planning such a satellite operation, please contact J.C. Smith via the Internet: KC6JI@AMSAT.org.

Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

June is generally a month of gentle summer living. For Army MARS members, however, June is a busy month with two major emergency communications exercises.

The quarterly Federal Emergency Management Agency (FEMA) exercise opens the month with FEMA's test of the National Emergency Communications Net and the testing of its capabilities. Army MARS participates in these FEMA exercises as part of the Federal Response Plan in order to evaluate, test, and improve its emergency support role capabilities. Joint customer/Army MARS operations have become routine, demonstrating the flexibility of the volunteer membership in terms of techniques of operation, modes of operation, and the frequencies used. It is vital to our current customer agencies and to potential ones, that Army MARS demonstrate the capability to interact within a wide scope of variables.

Grecian Firebolt 96 is a month-long exercise also occurring in June. GF96, like its predecessors, is a worldwide joint military communications operation in which Army MARS plays an ever-increasing role. The scenario this year will include an Eastern Area Hurricane disaster relief scenario in which Army MARS members in Eastern Area will directly participate and support roles will be assigned for the rest of the volunteer Army MARS membership.

In connection with GF96, Robert L. Sutton, Chief Army MARS, attended an In Progress Review (IPR) conference in Tallahassee, Florida. His MARS briefing included a thumbnail sketch of Army MARS, its existing network structure, technologies that are available and which would be employed, the Army MARS emergency support concept, and the added value of Army MARS as a communications asset.

In its operations order, Army MARS has been tasked with a number of responsibilities. Via the emergency nets operating in accordance with the Army MARS Emergency Oplan, Army MARS is expected to provide HF radio connection to FEMA for emergency coordination, provide emergency communications support for the National Disaster Medical System (NDMS), establish alternate routing of traffic when key MARS Area Gateway station becomes inoperable, and provide Essential Elements of Information (EEI) reports to the Director of Military Support (DOMS) and to HQ United States Army Information Systems Command (USAISC) Emergency Operations Center (EOC).

Additionally, status reporting of critical MARS stations to HQ USAISC will be coordinated. MARS traffic interface with National Guard units and with SHARES will be another MARS role during the GF96 scenario. Army MARS is proud to have a role in this exercise. Its volunteer membership is highly trained and is committed to a successful completion of the mission.

As Chief Sutton expressed it, "The MARS role in GF96 has fast escalated to the largest and most complex emergency communications exercise that MARS has ever witnessed. That's exciting, and the key factor will be involvement by the membership in the final planning stages within the States as well as the execution by the membership in the field. Interoperability among the three MARS service programs in support of GF96 presents an additional dimension, an excellent training opportunity, and is another key factor that we have worked into the initial planning and was one of the major topics at the DOD Joint MARS Chiefs Panel Meeting."

For those readers who are active on the Internet, questions were raised about MARS participation in the train derailment with propane tank ruptures and fires in Wisconsin. Army MARS members did support the situation and they did so in the proper manner. That proper manner was to submit a flow of EEI reports with information to DOMS who shares the information with other agencies. Army MARS members were not at the scene as MARS members because they were not supposed to be there. Many Army MARS members are active in civilian emergency networks and this is encouraged; but their presence at the scene of this emergency where harm could come to them is not within the scope of MARS member functions.

A news item from Fort MacArthur in San Pedro, California, brings the announcement that the Army MARS station AA6WAH, which operated from that location during the Viet-Nam War, is being replicated as part of the Fort MacArthur Museum restoration. The president of the museum association, Tom Thomas, WA6WPG, was one of the phone patch operators at the station in 1969. He shared many memories of those days among them the realization that such morale and welfare support is often more important to the soldier overseas than many other considerations. As he said, the things that we all take for granted are the things that make life worth living. Jeremy's first tooth, Janey's love for "critters," a one-word message that sealed a relationship (The lady said "Yes.") are all elements that I have seen in my own work with message traffic. It's the little things that count.

In conjunction with the restoration of the MARS station, a Special Event operation will take place from the station on July 13 and 14 using several Amateur bands. All Amateur operators and MARS members are encouraged to support this very special event. More details next month.

"June is bustin' out all over" goes the song. Army MARS' activities this June will be going on all over ... all over the world.

Army MARS members stand proud, professional, and ready. **WR**

Send your pictures & story to us at
Worldradio
2120 28th St.
Sacramento, CA 95818

Visit Your Local RADIO CLUB

ALASKA

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

ARIZONA

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

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

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

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

CALIFORNIA

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

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

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

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

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

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 7:30 p.m., Albany Sr. Cntr., 846 Masonic Ave., Albany, CA. Info: S. Primbsch, (510) 741-8227. 145.110 MHz. 8/97

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

Fullerton Radio Club, Inc., W6ULI. P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Ctr., 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975(-). Info: Bob Hastings, K6PHE (714) 990-9203. 6/96

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

Golden Triangle ARC, (GTARC). Meets 4th Mon./monthly, 7:30 p.m., Sharp Health Care Activities Rm., 25500 Med. Ctr. Dr., Murrieta, CA 92562. 6/96

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

Marin Amateur Radio Club (MARC). W6SG. Box 151231, San Rafael, CA 94915-1231. Meets 1st Fri./8 p.m.; MARC Clubhouse Bldg. 549, HAFB, Novato, CA. (415) 883-9789 (Summer exceptions; contact Pete N6IYU, 924-1578). Sun. AM Club at Red Cross, San Rafael. 8/96

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

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 8 p.m., Our Savior's Lutheran Church, 1035 Carol Ln., Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) 100Hz PL. Info: (510) 932-6125. 6/96

North Hills Radio Club. P.O. Box 41635, Sacramento, CA 95841-0635. Meets 3rd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress, Carmichael, CA. Nets Tue., Wed.,Thur., 145.190(-)(162.2) and 224.400(-). Poc. Tim Lewis, KD6FWD, (916) 722-7037. 3/97

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

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

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

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

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

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

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

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

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. 7/96

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

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

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

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

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 7/96

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

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

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

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

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

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th St. San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.—5 p.m. 6/96

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

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

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

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

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

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. (northwest of Willits). Talk-in: 145.13(-), PL 103.5. 7/96

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

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

CONNECTICUT

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

FLORIDA

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. 8/96

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

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

Saint Petersburg Amateur Radio Club. Meets 1st Fri./monthly, 7:30 p.m., Red Cross Bldg., 818 Fourth St. North, St. Petersburg, FL. Nightly net 6:30 p.m., 147.06(+). Rptrs. 147.06(+), 224.66(-), 444.475(+). Info: C. Wagner, KE4EYI, (813) 894-2393. 1/97

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

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

GEORGIA

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

HAWAII

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elem. Sch., 615 Auwaiolimu, Honolulu. Nets: nightly 7:30 p.m., 146.88 & 146.80. Rptrs: 146.76(-), 146.80(-), 146.88, 146.98(-), 146.94(-). Info: (808) 595-6245. 7/96

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

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-)(PL 107.2)/224.10/224.18/443.75 (PL 114.8). Ham help line: (312) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 6/96

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

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

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 6/96

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

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

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

Wheaton Community Radio Amateurs, (WCRA). P.O. Box QSL, Wheaton, IL 60189. Meets 7:30 p.m., 1st Fri./monthly, College of DuPage, Glen Ellyn, IL. Nets Sun. & Tue. 8 p.m., 145.39(+) MHz. 440 MHz net on Tues., 8:30 p.m. on 444.475(+) MHz. RTTY Net Sun. 9:30 p.m. 145.31(-). 6/96

IOWA

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

MAINE

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

MASSACHUSETTS

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

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

MICHIGAN

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

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

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

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

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

MISSISSIPPI

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

MISSOURI

PHD Amateur Radio Assn., Inc. P.O. Box 11, Liberty, MO 64068. Meets last Tue./monthly, 7 p.m., Gladstone Comm. Bldg. (816) 781-7313, Volunteer Examiner Coordinator. 2/97

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. 8 a.m. & mtg. 8:30 a.m., Country Inn, SE cor. W. Sunset, Valley Verde. Club info: Jim Frye, NW7O, (702) 456-5396 or Leona Wallace, WA6OHB, (702) 247-6450. 7/96

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

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

NEW HAMPSHIRE

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

NEW JERSEY

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

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

South Jersey Radio Assoc., (SJRA). Pennsauken Sr. Hi Sch. at Hylton Rd. & Remmington Ave., Pennsauken, NJ 08109. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed.). Talk-in: 145.29(-) rptr. Club call K2AA. 8/96

NEW YORK

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

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

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

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

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

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

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

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

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

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

NORTH CAROLINA

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

OHIO

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

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

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

Greater Cincinnati Amateur Radio Assn., (GCARA). Meets 4th Wed./monthly, 7:45 p.m., Cincinnati Museum of Nat. History, 1720 Gilbert Ave. Amateur Radio Station W8DZ. Info: WA8STX or (513) 563-7373. 11/96

Lancaster & Fairfield County ARC. Meets 1st Thurs./monthly, 7:30 p.m., American Red Cross, 121 W. Mulberry St., Lancaster, OH 43130. Info net Mondays, 8 p.m., K8QIK/R 147.03(+) rptr. BBS 145.53. 8/96

Northern Ohio Amateur Radio Society, (NOARS). Meets 3rd Mon./monthly, 7:30 p.m., Gargus Hall, Rt. 254, Lorain, OH. Info: rptr. K8KRG 146.70, DX alert rptr. 145.15. 10/96

Toledo Mobile Radio Association. P.O. Box 273, Toledo, OH 43697. Meets 2nd Wed./monthly, 7:30 p.m., Luke's Barn, Lucas County Rec. Ctr., 2901 Key St., Maumee, OH. Contact: Brenda, KB8IUP, 866-5928. 11/96

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

OREGON

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thurs./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. Net Sun. 7:30 p.m. 147.06(+) MHz. Info: (503) 385-1156. 6/96

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

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

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

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

PENNSYLVANIA

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

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

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

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

RHODE ISLAND

South Coast Wireless Society. P.O. Box 1516, Westerly, RI 02891. Meets 4th Tue./monthly, 7:00 p.m., Pawcatuck Neighborhood Center. Info: Dean, N1SXL, (401) 539-0775. 6/96

TEXAS

Brazos Valley Amateur Radio Club, (B-VARC). P.O. Box 1630, Missouri City, TX 77459. Meets 2nd Thurs./monthly, 7:30 p.m., Sugar Land Community Ctr., 226 Matlage Way., 3 blks SW of Imperial Sugar Co. at HWY US-90A & Brooks St. (HWY 58) in Sugar Land, TX. Talk-in: 145.47(-), 442.5(+) rptrs. 7/96

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

VIRGINIA

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

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

WASHINGTON

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

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

WEST VIRGINIA

Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., United Nat'l Bank of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. For info: D. Tenant, N8ZYB, Rt. 1, Box 317, Cottageville, WV 25239. 6/96

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

WYOMING

Sheridan Radio Amateur League, 146.82. P.O. Box 7042, Sheridan, WY 82801. Meets 4th Thurs./monthly, 7 p.m., location varies; Saturdays, 8 a.m. at J.B.'s. Info: (307) 674-6666, WA7B. 7/96

Pat Tice, WAØTDA

HANDI-HAMS on the Web!

With computers becoming an essential piece of equipment in the ham shack, Internet access is the next logical step. Here's how you can use your Internet connection to find HANDI-HAMS on the World Wide Web.

"Our club is running a Novice/Technician Class, and we have a blind person who is interested in joining. Do you know where we can find study materials for her?"

"My cousin visited us and saw my ham shack. Now all he can talk about is getting his Amateur Radio ticket. The problem is that he has a physical disability... I'm not sure how he would control a radio, because he has such little strength in his hands. Who could help us answer some questions about this?"

"My friend was in an auto accident, and uses a respirator to breathe. He needs a lot of care, but would enjoy getting his Amateur Radio license. The problem is that our club doesn't know how to help him out. Is there a place he could go to learn Amateur Radio?"

Questions like these pop up all the time in the ham community. We love to share our hobby with others, so our clubs sponsor classes in Amateur Radio, and we give of our time and talent to "Elmer" newcomers through the Novice and Technician elements. All kinds of people become hams these days, and, as the baby boomers age, more people with physical disabilities become candidates for licensing classes. Now there's a handy new resource that can help you answer some of the questions you might have about helping people with physical disabilities or sensory impairments: the HANDI-HAM World Wide Web Home Page on the Internet!

Chances are someone in your club has Internet access. The first step is to find us at this address:

http://www.mtn.org/~handiham/

Once you log on, you are greeted with a "welcome" page that tells you a bit about the Courage HANDI-HAM system, a non-profit organization dedicated to helping persons with physical disabilities learn Amateur Radio. As with most web pages, there are "links" to other documents. You might be interested in reading a history of HANDI-HAMS. No problem . . . just point your mouse cursor to "The history of HANDI-HAMS," click once, and a concise history appears on the screen. Then surf your way to "Materials on Audiotape," where you find out that there are study materials for all classes of Amateur Radio study available in cassette tape format for blind users. What about adapted equipment? Click on "HANDI-HAM Resources." Questions about taking the examinations after the studying is done? The place to look is "Exam Accommodation for the Handicapped/Disabled."

One of the finest resources available to HANDI-HAM members is the quarterly newsletter *HANDI-HAM World*. Now you can read it on the Web! Just click on the issue you want, and save a tree by reading a paperless virtual copy, complete with photos. There you will find information about HANDI-HAM Radio Workshops, where persons with severe disabilities can spend an entire week learning Amateur Radio, in a completely accommodated setting, with care provided.

Links to other Amateur Radio resources, like the ARRL Home Page, the FCC, and the U.S. Callsign Lookup Page, as well as links to Disability Resources, MedWeb, and Blind Related make the HANDI-HAM Home Page a "must" on your tour of the Web. Come on by and pay us a visit, and don't forget to make suggestions to the volunteer who maintains the page, Bobby Edward, WB5MJK.

The Courage HANDI-HAM System has several video tapes showing some of the services in action. They make an excellent club program.

"Making Contacts, Making Friends — the Courage HANDI-HAM Story" is a 24-minute showing.

"Courage in the North, Radio Camp Experience" is 14 minutes long.

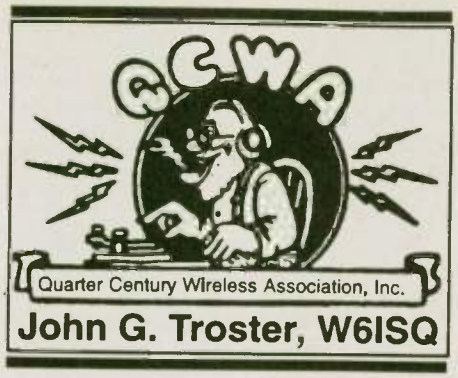
"Courage on the Coast," a California Radio Camp experience, is 8 minutes long.

"Sharing Amateur Radio with HANDI-HAMS: Teaching Amateur Radio to Persons Who Have Physical Disabilities or Sensory Impairments." This is 10 minutes and 32 seconds and is intended for use by clubs interested in recruiting persons with physical disabilities into club-sponsored radio classes.

Please allow three to four weeks for delivery.

To request a loan of these videos, specify the date needed and the title(s). Write to:

Courage HANDI-HAM System
3915 Golden Valley Road
Golden Valley, MN 55422
Phone: (612) 520-0515
e-mail: handiham@mtn.org WR



John G. Troster, W6ISQ

QCWA International Convention

National Capital Chapter # 70, in Ottawa, Canada, is in high gear preparing for a big turn out of QCWAers at our International Convention 4-5 October. Rooms are reserved at the Citadel Inn. Phone: 800/567-3600 or fax 613/237-2351 before 3 September, and mention QCWA. Registration is only US$10, or $13 Canadian. Check page 51 of the Spring, *QCWA Journal* for more info.

Meetings

Another great QCWA weekend was held this March in Bermuda Dunes (that's just south of Palm Springs, California, for you who don't leave the snow). Members turned out from Arizona, Arkansas, New Mexico, much of Northern California and all of Southern. The Leo Meyerson Chapter #154 sponsored the "do," hosted by the duo-with-the-mostest, opera lovers Phyllis and Don Doughty, W6EEN. They know how, and how! From perfect planning, unparalleled meeting skills, pretty and witty decor, entertainment, to generous hospitality, they gave it all to the great pleasure of all who were there. And that's not apocryphal, I witnessed it myself. As did QCWA Board members, president McCoy W1ICP; Veep Jack Kelleher, W4ZC; President Emeritus Leland (Tench Hut) Smith, W5KL; and GM "BJ" Walsh, W7LVN.

The crew at Chapter 154 backed it all up with a gracious welcome and smooth behind-the-scenes action. At this meeting, Don officially retired as president of the chapter, handing the gavel over to the capable leadership of Bob Rose, K6KRZ. But he and Phyllis will be at the fore of plans for the chapter's hosting of the QCWA National Convention in 1998. If this mid-winter's meeting is any indication, we'll be having a great time in a great place. Be there — 1998.

Scholarship fund

We're pleased to report that Secretary-Treasurer Chuck Walbridge, K1IGD, of the Yankee Chapter #112, sent HQ a check for $1,734.13 to be deposited to the QCWA Scholarship Fund. This donation was presented on behalf of the five New England Chapters which joined to produce the National Convention in Manchester, New Hampshire last October, and represents funds from the balance in the National Convention account after all expenses were paid. A class act and many thanks, New England QCWAers.

John Huntoon, W1RW, retiring director

This year, two of our QCWA Board members are retiring, Milt Chaffee, W1EFW, and John Huntoon, W1RW. Some issues back, we introduced you to Milt, the retired banker, ARRL Director, and traffic handler par excellence. Now we'll let you in on a few of John Huntoon's secrets. John was born in Aurora, Illinois, but his family moved to Glen Ellen outside Chicago when John was a nipper. At 12, he learned the code in Boy Scouts, but didn't go for a radio merit badge. However, he did start reading *Short Wave Craft*, and soon built up a one-tube, short-wave receiver, following directions in an article. He tuned all the bands and eventually found the place on the dial where he heard amateurs. It all made sense to him because he already knew the code!

In high school, John met a fellow who knew radio theory. So they exchanged knowledge — John taught him the code and he taught John theory. Working together in the high school radio club, they built a two-tube receiver and were irretrievably bitten by the amateur bug. In August of '32, John and his buddy took the FCC exam; John got the call W9KJY and his buddy became W9KWP. John built a George Grammar 45 TNT rig from the *ARRL Handbook* and a two-tube 01A receiver. Then he strung a 66-foot wire out from his basement operating table and went on the air to work the Midwest and become interested in traffic handling. During the summer of '33, the Chicago World's Fair was in full swing. As an aside, I also visited that fair and saw the ads for Sally Rand and her fan dancing. Of course, I was not allowed to attend a performance. John, however, was interested only in handling traffic.

John Huntoon, W1RW, former ARRL general manager and retiring QCWA director.—*photo by W7LVN*

At the fair, radio W9USA offered to send free messages anywhere. However, there was a terrific noise problem and they couldn't receive. John to the rescue! Only 25 miles away and with a new, more powerful rig, he could be heard, and became the principal relay station for W9USA. John could copy 20 wpm, but the operator at W9USA sent at 30 wpm. The first part of the messages were always the same, so that was easy. At the higher speed, the W9USA operator repeated everything in the text and signature, so, with that, John learned fast. By the end of the summer he was copying over 35 wpm.

Out of high school in 1933, in the middle of the depression, there was no work, so John took a postgraduate high school year. He then landed a job as secretary to the Foreign Trade

Freight Manager of the Baltimore and Ohio Railroad, beating out a half dozen other more senior applicants because he knew typing and shorthand acquired that postgrad year. John stayed active on the air and became fully involved in the traffic handling on the Trunk Line System. John even won one of the Official Relay Stations (ORS) contests.

In '36 there was an ARRL Division Convention in Chicago at the Hotel Sherman. John remembers this convention for two reasons: First, the registration for the three-day convention, including a four-course meal was $2.25!; and second, he placed second in the code copying contest. He also remembers two things from the '38 ARRL National Convention in Chicago: He won the code copying contest at 54.5 wpm (the fellow who beat him in '36 was not there, and, he met several folks from ARRL HQ. A few months later, he was offered a job at ARRL when an opening arose with the death of Ross Hull, Associate Editor, *QST*. John took Byron Goodman's, W1JPE (now W1DX), place as Third Assistant Secretary.

Subsequently, in February of '39, John moved to West Hartford, Connecticut. The other two Assistant Secretaries were A.L. Budlong, W1BUD, and Clinton B. DeSoto, W1CBD. John's duties were to handle routine member correspondence, and host visitors, showing them around the building. He also handled the WAC Awards program and visited radio clubs to speak about the FCC activities and League affairs.

He moved into the same rooming house as By Goodman. By had first call on the radio equipment in that house by right of longevity. He had a pair of 150Ts and a HRO and worked a lot of DX, but then, he had to because he wrote the DX column for *QST*. By also was engaged to a lady named Barbara who had a life-long chum named Pat who was working at a Hartford insurance company. Thus By and John met Barbara and Pat, and the result was inevitable. John and Pat were a perfect team for many years. We're sad to have to add that Pat passed away last November.

Pearl Harbor came, and John tried to enlist in the Army, but was turned down because of his vision. Several months later, however, they changed the policy and John became "1A." By then, he was in charge of the War Emergency Radio Service at ARRL and General Manager K.B.Warner, W1EH, tried to get John exempted to continue the work. The local draft board was not interested. So Warner went to the state board and got the deferment. This miffed the local board so they went to Washington with John's case. Amidst all this, John thought he was deferred, and so he and Pat were married.

Meanwhile, the local draft board, not ones to easily give up a good man, prevailed in Washington, and the President of the U.S.A. himself reclassified John as 1A. John went down the next Friday afternoon and enlisted. He was told to report to the Army Monday morning. Meanwhile, down in Washington, Budlong called John and told him the Coast Guard was begging for Morse code instructors and, therefore he had arranged for John to leave that weekend to become a Chief in the Coast Guard! Never mind that he was supposed to go in the Army Monday. John went to Atlantic City on Sunday and cleared it with his draft board later!

John taught for a year and a half, then asked for a transfer. At the same time the Coast Guard had asked ARRL for someone who could organize civilian amateur operators to search the air waves for espionage signals originating from the U.S.A. John was the man chosen and he transferred to the Coast Guard Branch of Naval Intelligence. Before he went into the service, John was interested in and had written articles in *QST* about cryptography so he began using the Amateur Radio approach he had written about in his *QST* articles and thereby broke some of the codes.

After the war, John became number-two Assistant Secretary of ARRL and Budlong took over as General Manager after K.B.Warner's death.

John is proud, rightly, of his part in the development of incentive licensing. He first pushed the idea with the ARRL Board and then with the FCC. When the program was finally adopted by the FCC in January 1952, however, there were no incentives for Extra Class, a great disappointment to John. Special privileges were not forthcoming for some years. However, just to find out what the exam was all about, John and By Goodman went up to Boston and took the exam a week or so after it began. By got 100% and John 82%, but no extra frequencies.

Budlong retired in January of '61, and John took over as GM of ARRL. His Assistant was Dick Baldwin, W1RU, later GM and QCWA member. John retired as GM in '75. The person who was supposed to be Treasurer of ARRL did not show up, so John accepted that position too.

He checks in with the fellas on the local repeater, and is very active as a volunteer in clearing hiking trails in his part of Connecticut.

I asked John if he remembered QCWA president Lew McCoy, W1ICP, when he arrived at ARRL. "Oh yes," says John. "After we put shoes on him he worked out just fine. At least 75% of what he now says about ARRL is absolutely true, the other 25% is mostly true." John has been very pleased to be QCWA Director. He enjoyed the work. His statements have ever been cogent and well formed from years of service to Amateur Radio. Wife Pat accompanied John to QCWA Board meetings and was one of the chief organizers and hostesses at Convention in Manchester, New Hampshire, last October. We'll all miss her.

John is now retiring, saying that it's time to move on. We've all enjoyed working with you, John, and will continue to be proud to count you as One Of Us, the Enlightened, the Many, the QCWA.

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

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

QRP VHF for Field Day

A couple of years ago our QRP group had the happy dilemma of attracting too many operators for too few operating positions during Field Day.

No matter how we worked the math, some people ended up sitting on their hands waiting a turn while others wailed away in June's annual battle of the bands.

So for last year's ARRL competition we seized the opportunity to add an operating position by venturing from our tried-and-true high-frequency CW and phone haunts to the largely uncharted waters of VHF FM. It was our first serious attempt at QRP 2-meter simplex.

As the lucky operator who drew the straw to build the 146 MHz antenna and plumb the band for points, I can assure you it's a low-power adventure well worth taking.

My radio was a 5-watt HTX-202 handy-talky powered by an external 17 Ah gel-cel battery.

A 5-element homebrew quad served as our antenna, fashioned from a construction article in January, 1995 *QST* magazine by Jim Reynante, KD6GLF, of San Diego. Hand-rotated on a 22-foot mast made from parts of a discarded chain link fence, the system was a textbook demonstration of the Armstrong rotation scheme. Simple R Us. The only things left to be added were a dupe sheet and log.

Using this rudimentary setup, and operating at 7,000 feet in Southern California's San Gabriel Mountains, we managed almost 100 contacts in ARRL sections ranging from the high desert of southern and central California, to the Mexican border. Las Vegas, about 200 miles away, was our best DX.

The points total on 146 MHz was as good as some of our phone scores on the HF bands. I'm certain our lofty location, the quad's excellent gain and 2 meters' immunity to the vagaries of the sunspot cycle were important ingredients in N6GA/QRP's VHF success.

"Why didn't we try this before?," we asked ourselves when the weekend was over. Apparently, though, we were not alone. Field Day reports from many QRP groups show 2-meter FM simplex is often overlooked as an option in the operating mix.

As easy as it is to work 2-meter FM simplex, there were valuable lessons learned from 1995's inaugural experience. Here are some notes we scribbled as reminders for 22-23 June's Field Day '96:

- Before the contest make a list of popular simplex frequencies in the region and program them into the radio. There are lots of points waiting to be harvested there. Frequencies nationally recognized for simplex operation include: 146.535, 146.550, 146.565, 146.580, 146.595, 147.420, 147.435, 147.450, 147.465, 147.480, 147.495, 147.510, 147.525, 147.540, 147.555, 147.570, and 147.585 MHz.
- Remember that the national 2-meter simplex calling frequency — 146.520 MHz — is off limits for Field Day contacts.
- Home-based and mobile FMers swarm out of the woodwork when they hear Field Day activity on the simplex frequencies. Even though they might not be "in the contest," many are eager to give out points. Have a map handy to help identify their ARRL section if they're not sure.
- Use a gain antenna if at all possible. Relying solely on a "rubber duck" or other non-directional antenna will likely reap less-than-spectacular results.
- Elevation, elevation, elevation. (It's a good thing.)
- Because the station being received is noisy or weak, don't assume you can't be heard. You may boom in full quieting at that operator's location. Maybe he's running microwatts into a "rubber duck" in a lousy location.
- If your 2-meter rig has a provision for an external battery, by all means use it. The bigger the gel-cel or lead-acid battery, the better. Even a small HT can deplete a battery pack in almost no time when near-continuous duty is the operation of the day.
- If using an outboard power source is not an option — as is the case with many older HTs — bring extra battery packs.
- With an HT, invest in an external microphone. Lifting the entire rig to transmit — coax, battery cables and all — can be clunky, laborious and downright tiring.
- Make frequent adjustments to your antenna headings. An FM signal can pop clearly out of the noise with only minor tweaks to a beam or quad's position.
- Adopt as a mantra "patience is a virtue." Simplex frequencies can get very, very crowded when Field Day is in full swing. You may find it hard at times to fit in a word edgewise. But resist the temptation to abandon good operating practice — even though oth-

ers on the band may have done so.

• Remember that FM activity tends to ebb and flow. If the band is so crowded you're not making any headway, shut down for a bit and recharge your "human batteries." In 15 minutes things may well be more civil; the band ripe for harvesting once again.

• Develop your own list of operating tips and setup hints. FM simplex operation varies greatly from place to place, and you'll learn quickly what works best from your Field Day site.

• If you'd like a pre-Field Day shake down and tune-up, try your hand at the ARRL VHF QSO Party, 8-10 June.

• Remember that it's never too early to start planning for Field Day 1997. Once you've tried QRP 2-meter FM simplex in '96 you'll likely be chomping at the microphone to do it all again.

New face for the '40A

The popularity of the KC-1 displayless frequency counter/electronic keyer (reviewed in the ***Worldradio*** QRP column in April '96) has prompted designers at Wilderness Radio to offer a new front panel for its NorCal-40A QRP transceiver.

The new face plate is punched, silkscreened and labeled to accommodate the KC-1, in addition to the standard controls for the '40A. Labeling for the KC-1's controls matches the format shown in the kit's manual.

The original panel still comes standard with the transceiver kit. For an additional $6, however, it is replaced by the KC-1 version when the frequency counter/electronic keyer is ordered at the same time. If ordered by itself, the new front panel is $12.

To order, or for more information, write: Wilderness Radio, P.O. Box 734, Los Altos, CA 94023-0734.

New QRP operating awards

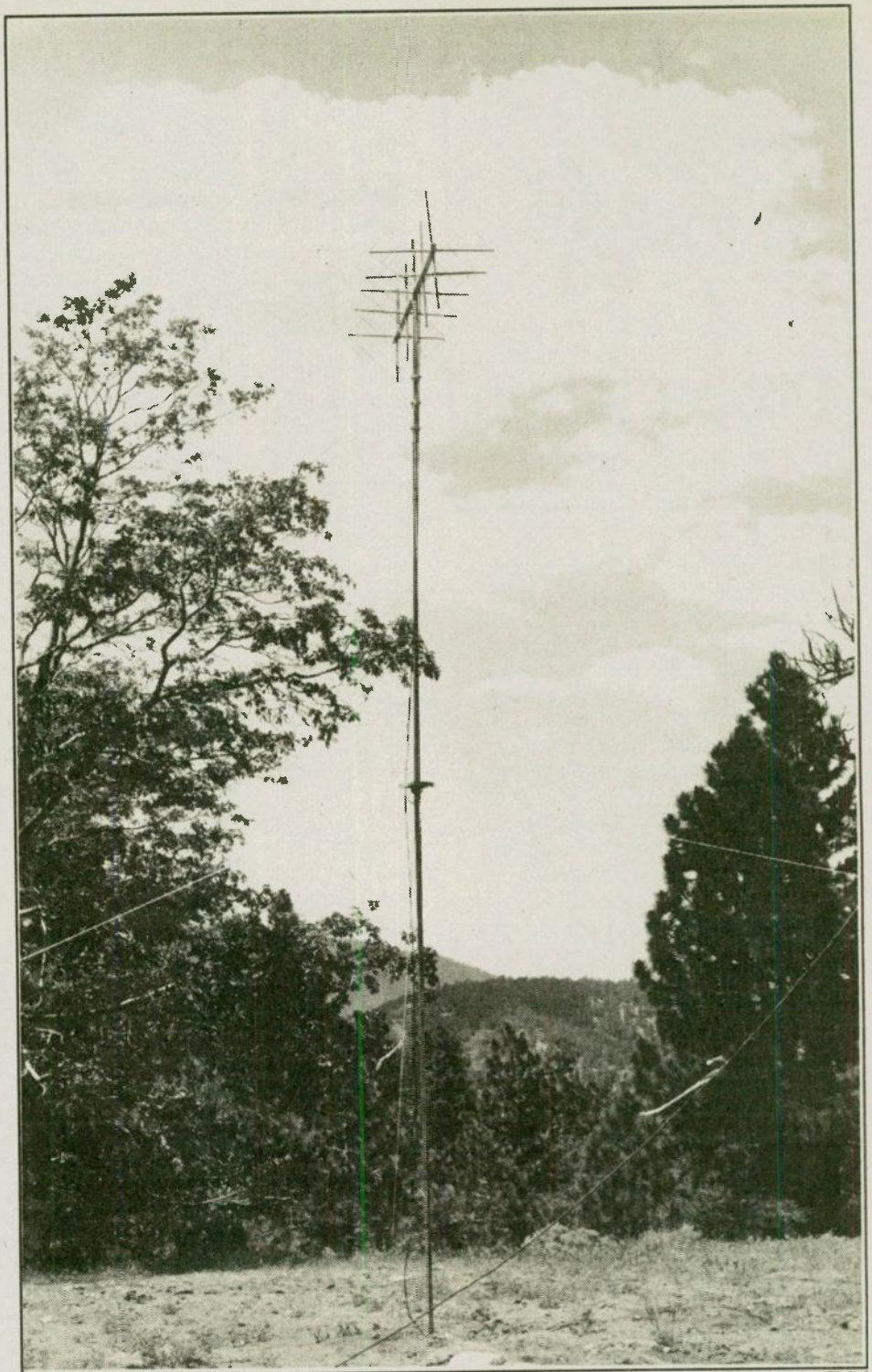
Colin Neal, AA3LM, of Malvern, PA, is sponsoring a series of QRP operating awards recognizing eight levels of accomplishment: working 25 states, 50 states, 6 continents, 25 countries, 50 countries, 100 countries, 200 countries and 300 countries.

"This is an 'on your honor' awards program," Neal writes, because he believes that "hams are honest and QSLing is becoming too expensive. If you made the contact, you can count it for the certificates. Cards or lists are not required." Recognized QRP output levels are: 5 watts CW, 10 watts PEP SSB.

To receive a certificate, send a letter stating that you've made the required contacts and include your name, address and $1 for each certificate.

Band and mode endorsements can be requested, and multiple endorsements can be shown on each certificate. Endorsements can include such specialties as all CW, SSB, QRPp, wire antennas, specific band, specific power, and so on.

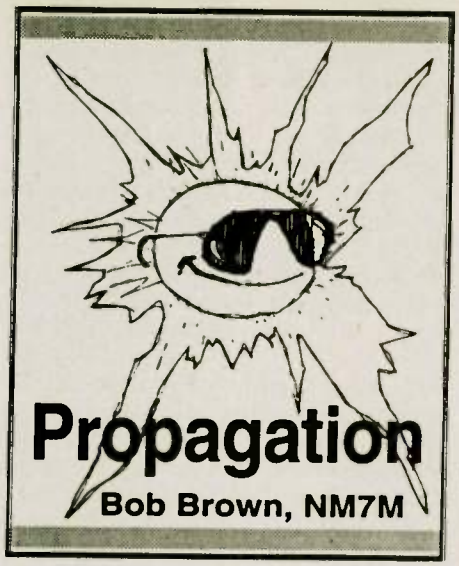
For more information: QRP Operating Awards, Colin Neal, AA3LM, 264 Miner St., Malvern, PA 19355.



The five-element 2-meter quad used on Field Day '95 at N6GA/QRP. ***—photo by KI6SN***

Column index and synopsis

If you'd like to browse through an index and synopsis of ***Worldradio*** QRP columns from April, 1993, to the present, it's yours for the asking. Either send a self-addressed, stamped envelope to the U.S. postal address at the head of this column, or if you'd like to receive it via e-mail, send your request to KI6SN@aol.com and it will be sent electronically. **WR**



One of the most unforgiving things we're exposed to in this world is a computer. Mine tells me that I make all the mistakes, not it; in short, it's always right. So it comes as a surprise to some of us that the strict system of reasoning in computer logic can be made unclear, indistinct, even incoherent. Those terms are all associated with the word "fuzzy" and presumably would be applicable to the new idea, "fuzzy logic" or "fuzzy computing," that is now gaining widespread use.

Certainly DXing is a kind, forgiving affair; nothing but your pride is hurt if you don't make a DX contact. But perhaps your pride would make you loathe to use "fuzzy" in regard to DXing or admit those terms — unclear, indistinct or incoherent — apply to it. In any event, you must admit that the logic in the pursuit of DX does not always follow a strict system. Thus, DXing operates with variable ranges or bounds, physical and social, and involves various approaches in obtaining the desired result, a "New One" in the log.

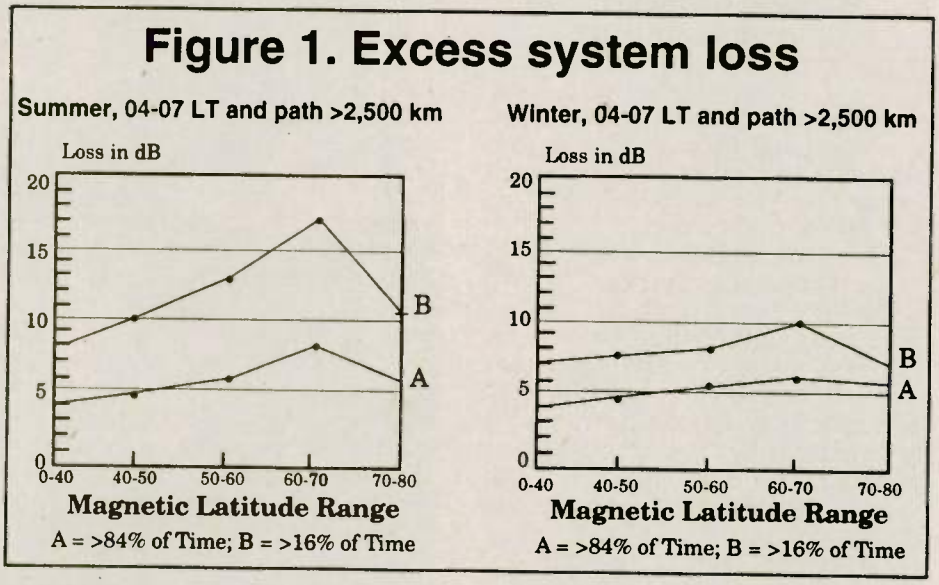
In that regard, we could swallow our pride and apply the term "fuzzy" to DXing, not meaning it in any derogatory sense, just to indicate that it's not always as simple and straightforward as we'd like. If nothing else, when one starts a DX day, the first thing heard on one's receiver is the noise on the band, sometimes a soft, fuzzy sound. But there can be other occasions, depending on from where one operates, when the first thing heard might be harsh, raspy sounds. So there's noise and then there's NOISE! If the latter were the case, it would certainly alter one's approach on that DX day, making is less logical than usual, anything but straightforward.

Also, there's a hidden side to the noise question, what it's like at the other end of a DX path. When it comes to manmade noise, there are distinctions as to noise environment — industrial, residential, rural and remote. In my case, my QTH on a small island in the San Juan Archipelago would qualify it as a rural site, pleasantly quiet when it comes to noise. But what it's like at where one's beam is pointing could be anything from a harsh industrial noise environment in the middle of London to the extreme quiet at a remote site, say on Peter Island in Antarctica. So DXing in the extreme could be FUZZY or fuzzy. Right?

Now we've seen earlier that experimental studies have shown, for a given frequency, the noise power of manmade origin increases by 5-dB steps in going from a rural site toward an industrial environment and falls 14 dB in going to a remote site. And noise power at any site falls exponentially by about 24 dB across the HF spectrum (3-30 MHz). And it should come as no surprise that there is something of a time variation of manmade noise, peaking during local waking hours and often overwhelming DX signals.

But there's still atmospheric noise to worry about too, generated by thunderstorm activity. The components in the lower portion of the spectrum are propagated only short distances in the daytime but far and wide at night when the D-region is absent. The higher HF components suffer less absorption in the D-region but may penetrate the F-region peak if their frequency is too high. As a result, there's an upper limit for the frequency of atmospheric noise heard within the ionosphere. But we talked about that earlier too. Right?

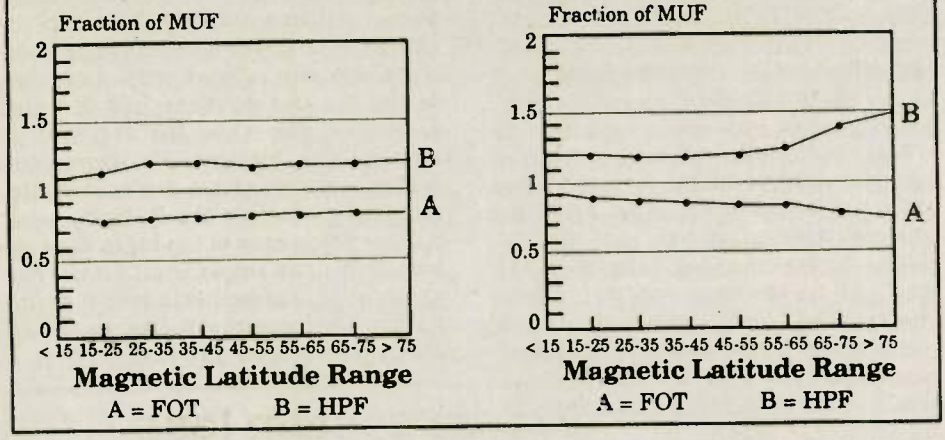
Figure 1. Excess system loss



The seasonal distribution of thunderstorm activity is well known, peaking at low latitudes (equatorial Africa and the East Indies as well as the Caribbean and the northern parts of South America) during the summer months (June, July and August) and then moving southward in the winter (December, January and February). The atmospheric noise which results has been studied across the globe and by seasons. As we know, it can have serious impact on DXing, more so at the lower frequencies. But thunderstorm activity and noise affect the higher bands as well. I've already told you about my experience with ZS stations in South Africa; if you need further convincing, just check your own QSLs for the local times in South Africa for short-path contacts or months of the year for long-path contacts.

So far, the discussion of fuzziness and DXing has been concerned with conditions at the endpoints of paths and those conditions have involved human activity and atmospheric phenomena. But there is also fuzziness of

Figure 2. FOT and HPF Factors



ionospheric origin and in contrast to that discussed up to this point, it is related to conditions all along a path rather than just at its endpoints. So let's deal with that next.

DXers are well aware of the full range of conditions that can be found on the HF bands, all the way from brief periods of "pipe line" propagation to times when it would seem that one's RF has come up against some enduring, impenetrable barrier. That is experience but nowadays one's expectations are more often tied to the results obtained from propagation prediction programs. More often than not, those are from calculations which deal with the average or typical behavior of the ionosphere, not covering the variability or showing the extremes noted in experimental studies.

In regard to the latter, there is a fuzziness in DXing which has to do with day-to-day variations of signal strength, shown when actual signals are compared with values predicted using known loss mechanisms. The major reduction of intensity as a signal radiates from a transmitter is geometrical in nature, due to signal spreading over larger and larger areas as it pro-gresses along a path. Another loss of signal strength results from absorption, largely in the D-region, and there is further loss on wave reflection at the earth's surface.

Given a date, time and SSN (Sun Spot Number) value, the transmission loss on a path can be calculated but it is implicit that the ionosphere is smooth and well-behaved. Actual signal strengths, however, show "excess system loss," something which has hourly, seasonal and solar cycle variations beyond those which were pre-the literature, found largely within reports of the Consultative Committee for Ionospheric Radio (CCIR) of the ITU. Those reports are not exactly everyday reading material but they deal with the problems, a good example being CCIR Report 252-2 (1970) which covers the statistical aspects of excess system loss of signal strength and the critical frequencies of the ionosphere. Other CCIR reports deal with noise, both manmade and atmospheric in origin. Taken together, they show the fuzzy bounds within which effective communication can take place.

By way of illustration of excess system loss, Figure 1 shows statistical data for excess system loss in the summer and winter around dawn (04-07 local time), for paths according to magnetic latitude and greater than 2,500 km in length (but without regard for level of solar activity, i.e., SSN). The lower curves in that figure show the excess system losses found more than 84% of the time, while the upper curves correspond to excess system losses found 16% of the time. While those results show the magnitudes of excess system loss in dB, with greater day-to-day variations in the dawn hours of summer as compared to winter, data for the entire day show that the variability of the width of the statistical distribution is actually greater in winter than summer.

The present discussion is not intended to give details of the observations but to convey the information that signal strengths can and do vary, maybe 10-20 dB below the predictions obtained using the major loss mechanisms. Those variations, when taken with similar results for noise power, show that signal-to-noise ratios will also contribute to the fuzziness of DXing.

Now let's march on, taking critical frequencies next. Their origin is in the electron density at the peak of the F-region and depend on solar activity, the time of day, the seasons and a "wild card" magnetic activity. The last

item certainly contributes to "Fuzzy DXing" not being predictable and only recognized after the fact. We'll leave that one for another day.

The term maximum usable frequency (MUF) is well known in Amateur Radio circles but its real meaning, something that applies to a path 50% of the time, seems to have limited acceptance or appreciation.

Less well-known are the optimum frequency (FOT), useful for 90% of the time, and the highest possible frequency (HPF), useful for only 10% of the time. Within those lower and upper bounds, FOT and HPF, is the range of daily variation of critical frequencies on a path, leading to the idea that a path is open on a particular QRG only a fraction of days of a month.

Beyond the scientific studies which revealed their origin, various engineering studies have been carried out to find the daily, seasonal and sunspot number variability of those frequencies and the results for FOT and HPF are expressed as fractions of the MUF on a path. By way of illustration, Figure 2 shows an example of how FOT and HPF fractions of the MUF vary for 06-10 local time in summer (May through August) and in winter (November through February) at times of low (5-50) sunspot number and on paths according to their geomagnetic latitude.

Examination of that figure shows a fairly limited separation between FOT and HPF up to 45-55 degrees magnetic latitude, summer and winter, but a more significant spread between the FOT and HPF values in winter and at the higher latitudes. A more complete view of the variation of the spread between FOT and HPF values shows a modest variability of critical frequencies in summer; that makes for HF operations which are limited in scope and reach.

In the winter, MUF values are higher, as is the variability of FOT and HPF at auroral and polar latitudes, giving a wider range of frequencies to choose from but with less reliability on high-latitude paths. As would be expected, the situation for the months around the equinoxes, March and April as well as September and October, falls between the two extremes of summer and winter.

In large part, the variability of propagation can be found within the ideas presented thus far. So one can find explanation for just about all the good and bad aspects of DXing for the quiet, undisturbed ionosphere. To do that, however, we must recognize that multi-hop paths may go across several of those regions so the overall propagation will result from the cumulative effects in the latitudes and regions that go to make up the path.

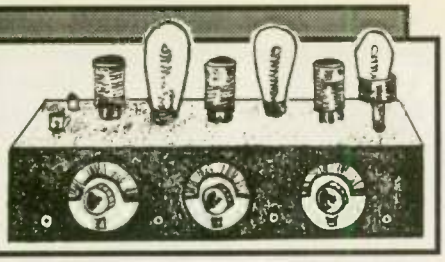
The above remarks could easily be applied to short-path propagation. As for long-path propagation, the narrow range between FOT and HPF at polar latitudes during summer months should be noted. That helps explain why the summer portions of long-path circuits across Antarctica hold up so well, say for winter-time dawn-to-dusk LP from the USA to Africa and Europe via the southern polar cap. And if the termini at the two ends are at latitudes no higher than 55 degrees magnetic latitude, the critical frequencies in the winter hemisphere would behave similarly. Of course, that assumes a high level of solar activity, sufficient to produce critical frequencies great enough for operation on the higher bands, say 14 MHz and above.

Winter, with its higher MUF values, is a favorite season for making nighttime contacts with Europe from the West Coast. In that regard, most of the paths cross the northern auroral zone and critical frequency data similar to that in Figure 2 show a greater spread or variability of the HPF and FOT values in winter than in summer. That serves to explain some of the variability noted on the trans-auroral paths.

When taken together, the numbers for spreads in noise power, excess system loss and critical frequencies give meaning to the idea that there's some "fuzziness" in DXing. But which is the dominant factor depends on the circumstance — probably atmospheric noise on 40 Meters, manmade noise and excess system loss on 20 Meters and critical frequencies on 10 and 15 Meters, especially now at Solar Minimum. While not called "fuzziness," the IONCAP propagation program points out that the availability of a given mode varies with frequency as does the signal-to-noise ratio at the ends of a path.

Nobody said DXing was a "sure thing;" now you can point to all the factors that are involved in DX propagation or just say that DXing follows a fuzzy logic and let it go at that. Okay? **WR**

Old-time Radio



As you get older, it gets better

Bob Beaudet, W1YRC

Ever think hamming is too easy using digital, no-tune transceivers with speech compression and signal processing or automatic memory QSK keying? Ho-hum, it does get boring after a while, huh? Want to appreciate technology? Try it the way we did it in the "good old days."

After playing around in the November CQWW CW Contest for some of two days, the thought teased me. . . I wonder what it would feel like to work CW pile-ups without a digital, multi function-no-tune radio, memory keyer, full QSK, no tune solid state amp and computer logging? You know, like we used to do when we had fun?

Maybe I could get my 40-year-old Viking II and SX-71 to work. I wonder if . . . hmmmm . . . Let's see, where did I see that Dow-Key relay? There it is in the closet. Here's some coax pieces too. Go for it. OK, all hooked up. Turn on the filaments and wait for warm-up. Think the oscillator will work? Yea, it does! Now, peak the oscillator and buffer. Stand back! Here goes the high voltage . . . CLICK. There's a good sign . . . no sparks or smoke. Listen to that power transformer sing. Like music . . . Remember now; dip the final, load the antenna, dip, load, dip. There!

Hey, let's really do it royal. I'll use my old Navy surplus J-38 straight key on 15 Meters. My gosh! The SX-71 doesn't have bandspread on 15 Meters! Of course not. When it was made, there was no 15 Meter band. OK, let's find 21 Mc (Yes, Mc not MHz in those days) on the main tuning and tune the logging scale. I don't know where the band edge is. OK, find the low side of the pile-ups and go up. Ah, here's P4ØW going about 35 wpm on 21 something. Zero beat the VFO. Call him. Hey! Got him with one "snappy" call. He's probably wondering what's wrong with my keyer. Wow, it's work with this old pump handle.

Say, let's give this 1912 Vibroplex bug a shot. Now this is high tech! Fifteen is dying now but at least I'll see if I have all the adjustment screws set . . . call this 9Y4. Whoops, forgot to zero beat the VFO. Gee, why did he get my call as W2CRC? Must be a new op! Can't be my perfect fist!! Ha ha. Band's going out. I'm ready for Broadway now anyway! Switch to 20. Retune oscillator, buffer, dip final, load, dip, load, dip (ALWAYS dip last). SX-71 sets up fine on this band. There was a 20 Meter band then, Listen a little up from the bottom edge. What's the frequency to 2 decimals? Are you kidding? Wind up that bug: 8R1K, VP2E/N4CD, P2SJR, VP9MZ, PYØF, V47G, T12C, P4ØJ, P4ØN in 27 minutes.

Boy, is my hand tired!

Hey, there's a JA! Swing the beam to 330 degrees. Okay go! XM4VV, JR1XFS, JH1OJU, OH7W, JA9AA, JH1AEP, JR2ACL, JA1YDU in 20 more minutes. WOW, imagine that we used to go 48 hours like this? Smell that heat from the transmitter?

Haven't smelled that in years. This is real radio! 40-year-old receiver and transmitter with an 81-year-old key. Makes this old-timer feel young again. Makes me appreciate the IC-765 and Morse Machine more, too. Boy, that was fun with the old rig. Unless you try it, you will never smile the same way I did afterward. Give it a shot. I promise it will give you an entirely new outlook on our favorite hobby!

Good DXing . . . Oh, try to use a Yagi at 94 feet too. WR

10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ
10-10 19636

10-10 Internet update

TENTEN-L continues to grow. The files in the archives have also increased. As a service to those who accidentally erase the "Welcome" message, with its instructions on how to use system commands, the archives now contain a reference copy of that important document. If you are a subscriber to TENTEN-L, you can retrieve an updated copy: send a message to:

LISTSERV@LEHIGH.EDU

with the text

GET TENTEN-L WELCOME.MSG

If you are not a subscriber to the list, you can become one by sending a message to the same address with the text

SUBSCRIBE TENTEN-L <firstname> <lastname> <call>

Note: Even though the column format here divides the message into two lines, put everything on one line of your subscription message.

Also note the importance of having the first name, last name, and call in order. TENTEN-L will now also produce a list of subscribers by call areas, each area in standard-form alphabetized listing by call. However, this list can only be accurate if you subscribe in the correct format, so that the machine can recognize you. Your welcome message will tell you how to get the subscription list.

Resubscribing vs. postponing

Suppose you did not subscribe in the right order, or suppose you are going to change e-mail servers. There is nothing wrong with (and a great deal right with) unsubscribing and then subscribing anew. All such messages go to the listserv address above.

Remember that the e-mail server is a dumb machine. Once you unsubscribe, it instantly forgets you. Hence, resubscribing is really subscribing as if from scratch.

On the other hand, if you are going on vacation and do not want e-mail to pile up in your mailbox at your server, there is a better way. See your welcome message for instructions on postponing and resuming service. This does not take you off the list. There is really no "resume" command; instead you respecify how you want to get your mail. The standard is ACK, meaning that you get a copy of what you send in the distribution. That generally tells you how long it took the system to distribute your message.

New service: www

We have added a new service to TENTEN-L. You may access a large collection of information files via your WWW browser. Simply call up your browser and use this address:

http://www.lehigh.edu/lists/tenten-l

That will put you on the home page, which will then direct you to various subject files. Just click or "enter" on the highlighted subject.

We added the www service to make 10-10 information accessible to nonmembers. Most, but not all, subscribers to TENTEN-L are already members or very active on 10. However, there are many hams who might find 10-10 information interesting and who might be future members. The World Wide Web is a natural avenue to make 10-10 information accessible to them.

Each service — the TENTEN-L subscription list and its FTP archives and the TENTEN-L www home page — has its own unique niche on the information superhighway. One focuses on members and those already serious about 10-meter activity. The other concentrates on potential members and potential hams.

I had a message (actually several) noting that while the sunspots are down, it is nice to have the Internet services, both the list and the www home page, to keep us interconnected and informed between issues of the *10-10 News*. When the sunspots return, there is no telling to what good uses TENTEN-L subscribers can put the list.

As always, 10-10 sends thanks to our host Jim Eshelman and Lehigh.edu, who provide our Internet connection.

10-10 at Dayton Hamvention

10-10 will be at the Dayton Hamvention with a 10-10 Forum on Saturday, May 18, 1996, from 11:15 a.m. to 12:45 p.m. The forum will be held at the high school gym. This year the Hamvention committee has expanded the forum locations to include the local high school gym facilities in order to provide more space for the attendance in forums.

There will be free bus transportation from the arena to the high school. Departure time is approximately 20 minutes prior to the start of the forum. The information contained herein supersedes the information published in the schedule of Hamvention events program.

Linda Barnes, KJ4FM #43299, will be the moderator of a panel discussing "10 Meters is Alive and Well. . . Somewhere." The panel will consist of Tom Henderson, K4CIH #33233, President, and Chuck Imsande, W6YLJ #19636.

If you will be at the Dayton Hamvention, plan to meet many of your 10-10 Net Officials at the forum.

Board meeting — 1996

The 1996 Board of Directors meeting will be held on Saturday, 8 June 1996, at the Oakbrook Marriott Hotel, Oakbrook, IL, a Chicago suburb.

All local 10-10 members and any others who may be in the area at the time are encouraged and welcome to attend an open house from 8-10 p.m. on Saturday evening. Come to meet your 10-10 Officers and Directors in person and hear a first-hand report on 10-10 and the Board Meeting. Please RSVP if you plan to attend, so that adequate preparations may be made for the group size. Send your RSVP to: Jack Miller, W9WYN #6894, 10-10 Director, PO Box 123, Brookfield, IL 60513-0123 or phone: 708/485-5990.

Special event station

The Garden City Amateur Radio Club of Dearborn, Michigan, will have

a special event station on the air from 1400-2200Z on 15 and 16 June, 1996. The event celebrates the American Automobile Centennial Anniversary from the Henry Ford Museum. 10-10 members can talk to other 10-10 members on 28.380 and can receive the special event certificate for an SASE to: G. C. A. R. C., PO Box 482, Garden City, MI 48135.

Hill Country gathering

The 8th Annual Hill Country gathering will be held on May 19, 1996, at the home of Jack Moore, K4NF #50708. Everyone is welcome. For details contact Jack at: 371 Ridge Creek Ln., Bulverde, TX 78163 or call 210/885-2194. On packet at: K4NF@ K3WGF.#SAT.TX.USA.NA

Information about 10-10?

If you would like information about 10-10 and how you can become a member and receive your very own unique 10-10 number, send $1 plus 2 first class stamps and an address label for the return of your information package to: Mike Elliott, KF7ZQ #54625, 10-10 Information Manager, 9832 Gurdon Court, Boise, ID 83704-4080.

No SASE please as the information package requires a 9 x 12 envelope. You will receive a copy of the 8-page Prospective New Member Brochure which contains everything you want to know about the 10-10 organization, a listing of all 10-10 chapters, their day, time and frequency of net operation and an application form. Also enclosed will be a copy of the latest issue of the *10-10 International News*, the 32-page, 10-10 quarterly magazine.

If you have lost, or forgotten, your 10-10 number, the same as above to Mike will get you the information package along with your original 10-10 number. If your membership in 10-10 has expired, send your dues ($10/year) to 10-10 International Net, Inc., 643 N. 98th Street #142, Omaha, NE 68114-2332. You will become an "ACTIVE" member again and receive all of the benefits of 10-10 including the quarterly *10-10 International News*. Remember 10-10 numbers are issued for life and your originally issued number is always yours. WR

IQ Test

Mensa or Densa?

Please take this test. If your score is high enough you will be allowed to gather each month with the brightest hams.

There are 20 questions, (five points each) and a 20-minute time limit. After you send in the test and the $15* processing fee you will be notified within 4 to 6 weeks. Good Luck. If you don't pass the first time you may study for a second try.

[1] Name _____ Call _____

[2] Address _____

[3] City _____ ZIP_____

[4] The two-letter abbreviation for my state is _____

[5] In USA, licensing authority is: FBI CIA FCC CAF AOL KGB

[6] Morse Code came from: SFB Morse Don Ameche W. Green

[7] Marconi antenna inventor: Marconi Watson-Watt TA Edison

[8] Volt was named after: Voltaire Volta Travolta Upper Volta

[9] The radio prefix for Japan is: JA AJ XX YY ZZ DD EE

[10] The radio prefix for France is: F G H I J K L M N O P

[11] In Moonbounce, amateurs aim their antennas at the _____

[12] In Frequency Modulation, the Frequency is modulated. T F

[13] Triode invented by: Dave Bell Lee DeForest B. Pasternak

[14] RG-8 coax cable is 8 ohms, runs to speakers from amps. T F

[15] My Visa M/C Amex # is: _____

[16] The expiration date is: _____

[17] This is a: New Subscription Renewal

[18] The Square Root of my five-digit Zip code is _____

If question above [18] can't be answered, you may substitute #19.

[19] In SSB the number of SBs is: 1 2 3.14 4 5 6.28 7 8 9 10

[20] The wavelength of 50 MHz (in Meters) is: 6 60 600 0.6

Mail your test to **2120 28th St., Sacramento, CA 95818.** Notification of your passing score will be a copy of ***Worldradio*** showing up in your mailbox each and every month for a year.

**(Processing fee for non-USA zip codes is $25)*

Wires & Pliers

Adapters made from recycled film containers

Barry L. Gold, N9BS

I'm a green ham. No, I'm hardly a novice to Amateur Radio; actually, I've pursued this avocation for over thirty years. Rather, I use the term "green" to describe being environmentally friendly whenever an opportunity presents itself.

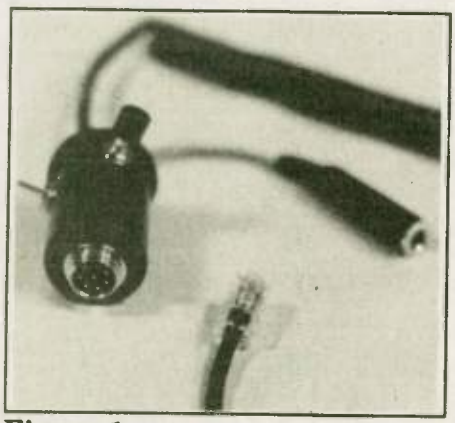


Figure 1.

In addition to recycling the usual newspapers, plastics, glass, motor oil, etc., I save 35mm film plastic containers. They are perfect for small elec-

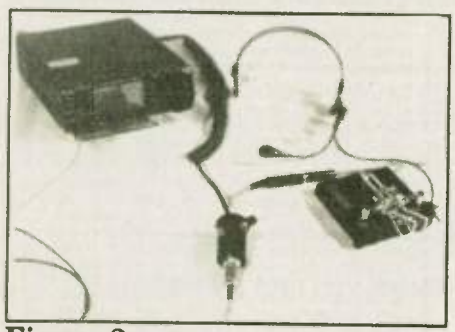


Figure 2.

tronic projects and storing small parts.

I recently obtained an ICOM IC-706 for mobile use. I wanted to adapt my headset and various mobile microphones to the new 8-conductor modular microphone connector. Additionally, I wanted the adapter to provide Up/Down frequency and memory control as well as momentary and lock Push To Talk.

The IC-706 has a neat feature where the internal CW keyer can be keyed by the Up/Down buttons on the microphone provided. ICOM does this by either grounding pin 2 directly (Up/Dash) or through a 470-ohm resistor (Down/Dot). I always have a paddle key hooked up when HF mobile. When hooked up to the microphone connector, the paddle key can also provide the Up/Down frequency and memory control, in addition to keying the internal keyer.

Figures 1 and 2 show the completed adapter made from the recycled film container. The coiled cord is a Radio Shack 278356 which provides one shielded and three unshielded leads. The cord is especially well suited to the IC-706 project; after connecting the mike lead, shield, ground, and Push To Talk leads, there is still one remaining lead to handle the shared Up/Down and CW keying through the in line ¼" stereo-type female phone connector.

The push button and toggle switches are SPST types providing the momentary and lock Push To Talk control.

Figure 3 shows other adapters

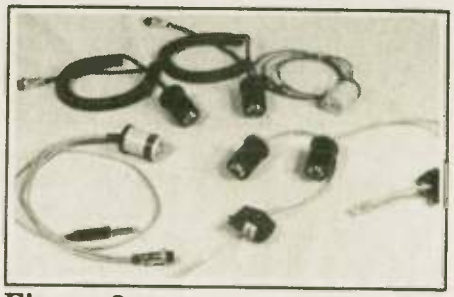


Figure 3.

made from recycled film containers. One adapts older 4-pin Kenwood microphones to the newer 8-pin microphone connector. Several of the others configure a multimode digital controller to various HF and VHF radios.

Color me a green ham and proud of it! WR

Here's another construction tip. . .

EZ audio amp for in-car HT use

Mike Greenfield, N9JIY

It's easy enough to hook your 2M handheld to a mobile antenna and 12V power supply. But how do you get enough audio volume out of the tiny thing? It's a pain and a problem!

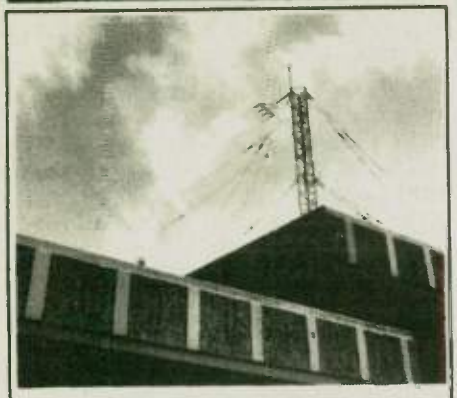
Here's a *very* easy solution . . . if you have a cassette player in your car radio. Radio Shack offers a device that lets a portable CD player dump audio into an in-car cassette player. It has a ⅛" stereo plug on one end. The other end looks like a tape cassette. It uses no batteries!

To use it, you slip the "fake" cassette end into your cassette player, plug the stereo plug into your portable CD player, then let your car radio audio amp do all the hard work.

You can also plug the stereo plug into the earphone jack on your HT! You'll get 2M audio out of half your car's speakers, but that's plenty, and you'll have all the amplification you can stand.

Radio Shack calls this device a "Compact Disc Cassette Adapter." It's stock number 12-1951, and will set you back about $20. A deal! —*The SATERN Ring*

Do you have a construction idea that you would like to share with other amateurs? Send it in with photos and figures and have it published here in our "Wires and Pliers" department.



AERIALS

Kurt N. Sterba

The World-Wide Prefix Contest, sponsored by *CQ* magazine, over the weekend of 30-31 March was, as always, a grand event. It's a fun contest which was made much more enjoyable this year through the use of an MFJ 784B DSP Filter. All the hash and trash was just gone, a remarkable device indeed!

Some of the smooth operators heard included KP4XS and NP4Z; WE9V and VD3EJ were highly impressive; VO1MP was outstanding. The best was HC8A.

Tuning up and down the band I listened to a non-contest QSO where the discussion was about how good the Austin VHF mobile antennas were.

Back a few months (Feb. '96) I wrote in this column: (quoting the RSGB's *Radio Communication Handbook)* "Claimed gains in excess of 6dB are at variance with the laws of nature." That was about the Cubical Quad and is on page 12.87.

I then went on to say, "Thus you can see that the double-digit claim made by one particular manufacturer for the four-element quad is empty nonsense. . . ."

Such drew (to ***Worldradio***) a card from a Kurt Kritic in Denver, CO. "Your 'antenna expert' that hides behind a Sterba Curtain made a big booboo. A 4-el Quad has, wow, four elements. BUT a 'cubical quad' usually built on a 'spider' center support only has two elements per band. A cube is a box, a 4-el Quad wouldn't fit in a box equal on all sides. Duhh....Can he be a little less arrogant. OK? It's getting too overbearing."

So as the point would not be missed a second card (from the same person) came in saying in part: "Please tell 'Kurt N. Sterba' that a 4-el Quad has nothing to do with a cubical Quad which is inherently a 2-el Quad. Sheesh!!"

So there is another Kurt Kritic and I know that nothing I (or anyone else) can ever say will ever change his mind. We could use an analogy asking, would you also say that a 4-element Yagi has nothing to do with a 2-element Yagi? His mind is made up, like so very many, and no matter who talks to them or what they read, that's it.

But for the others, let us return to the saga of the four-element Quad with the claimed gain of 15dBi. Such translates to 13dB over a dipole.

(Yes, there is a fraction of a dB missing. I understand that I was recently chided for dropping a tenth of a dB. Well, at HF one-tenth of a dB is about as important as when the news announcer talks about the stock market going up three one day or down two another day when the average is at 5,600 or so.)

First, for those with open (or even semi-open) minds, of course a 4-element Quad has "something to do" with a 2-element Quad. A Yagi also has "something to do" with a dipole. A rough rule of thumb is that when boom length is doubled, (and appropriate elements added) the gain raises 3dB. That is, 3dB over what existed before, which is rated relative to a dipole.

(To the gang who will say it is really 3.1dB or those who will say it's really 2.9dB, save your cards and letters.)

So what is the gain of a 4-element Quad? I asked the ***Worldradio*** staff to call around for me and query the real experts. The experts then mentioned those who they felt were even more knowledgeable than themselves. The trail led to John Koszeghy, K2OB, Lexington Park, MD, who has written a book titled "Thirty Years of the Quad." He said, as actually measured on a range, it was 9dBd tops.

Out on the West Coast the leading figure seems to be Leland Lowrance, KI6QZ, who said he would go with 8.5dBd.

Are the people claiming 13dBd misinformed? Or what? The very fine GemQuad company claims for their 2L about 6dBd and for the 3L about 7dBd. Has Diogenes found the honest man?

QST will not carry ads containing gain claims for ads. Possibly they should stretch that policy to cover the catalog materials that are sent out in response to the ads.

If a recent graduate of the excellent antenna studies offered at Penn State decided to get a ham license and received that Quad company's literature he would think that he was in cuckooland.

Sadly, we have charlatans on one hand and defenders of drivel on the other.

I am dismayed. There was a time when hams were honorable men. Now a good number are lying skunks. Maybe the hams who are priests and ministers should take the Good Book, opened to the appropriate chapter and verse, into various booths at ham conventions.

There are liars and gasbags. I find it nauseating. Many in the antenna field have made it an immoral place. If hams had any sense of decency or

conscience or courage or justified outrage they would shout at these dirty companies.

You are not lied to when you buy a watch, camera, refrigerator, hi-fi system, etc. In ham radio itself, if you buy a 100W xcvr, when you take it home it will put out 100W. The receiver specs will meet (usually exceed) the published claims, but antennas have turned into a field which organized crime itself would find distasteful.

Companies that lie to you are a disgrace to Amateur Radio and should be utterly despised and treated with derision, contempt and scorn, but it appears that I'm the only one who feels that way.

It makes me sick that there is so much lying (there is no other word for it), and I have received so many letters from hams saying that they don't want to know.

The following appeared in "The Radio Wave," monthly newsletter of the Endless Mountains Amateur Radio Club, Wyoming County, PA.

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Antennas — what's the BEST?

BILL SILL, KD3XR

New hams, especially, are disappointed to find this question cannot be answered.

(Some of my friends understand that the best antenna is a Log Periodic! Just kidding!)

People are often surprised to learn that even those with bottomless pockets whose antenna farms appear on the covers of *QST* cannot answer the question in any useful way. Fact is, the best antenna for today is not the best tomorrow; the best for you is not the best for me.

No single antenna works well on all bands, advertising puffery notwithstanding. The antenna that works great for DX will be worthless next week when the conditions change. And perhaps most important: when the band is dead, the finest antenna money can buy will not get you through.

To answer the question for yourself, you have to decide what bands you want to work. Decide what you can afford in the way of tower, rotators, cable, etc. Check into zoning restrictions (a fact of life for many folks).

Then invest a few bucks in a subscription to ***Worldradio***. Make it a habit to read the AERIALS column by a sneaky dude who calls himself Kurt N. Sterba (not his real name—we think we know who he is, but we won't say!) This guy is sort of a Johnny-One-Note when it comes to antennas, howling like the prophet Jeremiah about the lies and half-truths told by advertisers of antennas. But, like Jeremiah, he knows whereof he writes.

You can save yourself the price of the subscription many times over by heeding "Sterba's" caustic advice.

•••

From high in the sky Kurt's SOG satellite picks up a conversation being held a long way offshore (away from prying directional microphones).

There is Louie, played by Daniel DeVito.

There is Dewey, played by Andrew Griffith.

And Hooey, played by Airtie Horton.

LOUIE: My new advertising campaign claims our mobile antenna is exactly 61.80339887499dB better than our competitor.

DEWEY: That Krockodile Kurt will come after you.

HOOEY: I don't like him, all he does is knock people trying to make a buck. So they stretch the point, so what, we're all hams.

LOUIE: Hey, we made a real test and our stick is better than their stick.

DEWEY: I'll bet you a mint julep at the Kentucky Derby that you didn't win by no 61.80339887499dB.

HOOEY: But what does it matter if it didn't? Louie is a nice guy.

LOUIE: All right. Here's the proof. We put our antenna on a car that went onto a huge barge made of flashing copper, which was then towed to the middle of the Great Salt Lake.

We put our competitor's antenna on a fiberglass bumper with no grounding at all. The dielectric of the coax connecting to the rig had turned green with age. At the prearranged time, that test car, from the very bottom of the Grand Canyon transmitted. Here, at our receiving site in Salt Lake City, it registered that our antenna beat the competitors by exactly 61.80339887499dB.

HOOEY: Well, that proves it. I'm going to write that up. What band was it on?

LOUIE: It was on 160 Meters at exactly high noon.

DEWEY: Sounds good to me. But, what if that guy you sent to the very bottom of the Grand Canyon spills the beans to that Kurt?

LOUIE: Who cares? Hey, them hams is so dumb you can say anything you want. They can't figure it out. Then, the few that do just write to that Sterba and complain that he spends too much time going after us. We win again.

DEWEY: Yea, Louie, some of that stuff you wrote at the last antenna company you worked for was spectacular.

LOUIE: Yea, that was really creative stuff. I got my training writing for the supermarket tabloids. You know, "I met Elvis Presley when I was abducted by the space aliens." One of my best was "Amelia Earhart was rescued by a German U-boat and she and Adolph Hitler spent their last years together in a condo in Hackensack, New Jersey."

DEWEY: Yea, but that was just warming up for the antenna writing wasn't it.

HOOEY: Oh, get off it, hams aren't as gullible as the people reading those goofy papers!

LOUIE: Hey, don't be so sure. I didn't earn the dough for this yacht just selling 23dB gain antennas to Road Buzzard. Those gold plated faucets and old master paintings on this yacht came about from Ks, Ws, Ns, WAs, KDs and the like.

DEWEY: But, don't you sometimes just feel a little bad about the claims you make?

LOUIE: Hey, if I want to say that this coathanger gives you nine dB, that comes under freedom of speech. And if some sucker, ooops I mean "sincere ham" thinks he's nine dB stronger, he's happy and so who's hurt?

HOOEY: Say, you've got a point there.

(KNS goes by his disguise monicker for the same reason that the Lone Ranger wore a mask.) WR

Contest Corner

Don Durk, KA1DWX

786226.1414@compuserve.com

Level playing fields

Kudoos to *CQ*! The 1996 CQWPX Contest rules include 3 new categories for contesting: Rookie (licensed 3 years or less); TS (1 Tribander for 10/15/20 and 1 single element on 40/80/160) and BR (Band Restricted — that is, you are licensed for less than the six contest bands on both modes. e.g. Novice, Tech etc.). The gurus of contesting may now find more participants really competing with these fairer environs!

A nice e-mail from Paul, EI4DI, to let you know to check his web site for his logging programs SD (Super Duper) — a generic contest logger and SDI (Super Duper IOTA) which Paul says is the only logger devoted to the July IOTA (Islands On The Air) contest. Try Paul at http://www.iol.ie/~okanep

User comments are available via the links at his site. Both SD and SDI are available via anonymous ftp from ftp.iol.ie located in the /users/okanep directory. Good luck!

Thanks for your understanding while we get the information inputs for all these contests to flow in routinely. The possibility of errors will decrease with your cooperation so thanks for the help — and keep the info coming!

Next month we will open up a can of worms and ask about contest ethics with a series of "what if" questions for you to ponder and comment upon.

A letter from W5OZI came in requesting that we publicize a 18 June-2 July, 6 Meter DXpedition to CY9AA, Sable Island by Mike Smith VE9AA. Most DXpeditions are always appreciative of funding.

Most contests require separate logs per band, check sheets for over 200 Qs (contacts), 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.

Late May 'tests

(see May *Worldradio* for details)

•*CQ* WPX CW 'test

25 May 00:00-26 May 2400

(RST+number)

June 'tests

•RSGB Nat'l Field Day CW

1 June 15:00-2 June 15:00

(RST+number)

UK stns work all others. RSGB Contest Manager c/o RSGB.

•Portugal Day SSB 'test

8 June 07:00-24:00

(RS+number for CT stns, county(18) or number)

Q 1x per band. Score-Pts (1 for DX stn, 2 pts for CT1, CT4 special CT prefixes and EA1-EA7 Qs) x mults (CT counties+DXCC countries + continents). Single op only. REP contest manager c/o REP.

•ANARTS WW DIGITAL/ RTTY 'test

8 June 00:00-9 June 24:00

(RST+CQ Zone+UTC time)

RTTY, AMTOR, FEC and SWL. 80-10M. 30 hour single op max. 48 hr ok for multi. Score: Points (Based on unique exchange point table which is not provided. Reference is to arcane places — *QST* 4/93 p.20 or RTTY Contesters Guide p.24) x mults (DXCC and each call district in VK, JA, VE and W per band; Q w/ur own country not a mult) x (up to 6 mults for 6 continents, 1 per continent) then add for ea VK Q on 80M-500 pts; for ea VK Q on 40M-400 pts; for ea VK Q on 20M-100 pts for ea VK Q on 15M-200 pts; for ea VK Q on 10M-300 pts. Awards. List time on/off on log. VK2BQS.

•ARRL VHF QSO Party

8 June 18:00-10 June 03:00

(Grid Locator)

Q ea stn 1x per grid square per band. Keep 50.100- 50.125 for Intercontinental Qs. Scoring- Pts (1 for 50 and 144 MHz; 2 for 222 and 432 MHz; 3 for 1296 MHz; 4 for 2.3 GHz or higher) x mults (grid square total for all bands-each different grid square counts as 1 mult on each band). No repeaters. Single op, 1 band; single op, multiband; single op, QRP portable; Rover; multi op; Ltd multi op. Check *QST* for details. Awards. ARRL.

•SMIRK Phone/CW QSO Party

15 June 00:00-16 June 24:00

(SMIRK# and GRID SQUARE)

Above 50.125 Qs on voice between the 48 contiguous states Qs. For CW above 50.125 or below 50.100. 50.100 - 50.125 is for DX Qs. Score- Pts (2 for SMIRK member and 1 for non-SMIRK) x mults (total grid squares worked). Certs. The old requirement that you must be a paid up member is discontinued. W5OZI.

•ALL ASIAN CWDX 'test

15 June 00:00-16 June 24:00

(RST+ AGE or zero if you chose)

160 -10 M. Single op single band; single op multi band; multi op, multi band. Score-Pts (1 pt for ea Asian Q 7-28 MHz; 2 pts for 3.5 MHz and 3 pts for 1.8 MHz; x mults (Asian prefixes Qd per WPX rules). Separate logs per band. JARL, PO Box 377, Yokyo Central, Japan??

•ARRL Field Day

22 June 18:00-23 June 21:00

(Operating class {A-Club or non club portable; B-1 or 2 person portable; C-mobile; D- home station, commercial power; E-home station, emergency power}+Section)

Q 1x per band segment. Each phone and CW segment is considered a separate band. Class A and Class B stns who do not begin set up until 18:00 Saturday may operate the entire 27 hrs. Others may not begin set up earlier than 18:00 Friday and can operate only 24 consecutive hrs. Scoring: CW/RTTY/ASCII 2 points, phone 1 pt x various power multipliers and bonus points. Please review *QST* FD rules for complete details.

•RSGB 1.8 MHz CW 'test

22 June 21:00-23 June 01:00

(RST +number) UK stns work all others. RSGB Contest Manager c/o RSGB. WR

Hamfests June

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

California

The LIVERMORE AMATEUR RADIO KLUB (LARK) will sponsor the East Bay area Amateur Radio/Electronics/computer Swap Meet on 2 June from 7 a.m. to 12 noon. Swap held in open parking lot, rain or shine. No setup until 7 a.m. at Las Positas College in Livermore, north of I-580 at the Airway Blvd. Admission and parking are free. Sellers pay $10 space fee. Refreshments are available. Contact Noel Anklam, KC6QZK, at 510/447-3857 eves or leave message days at 510/783-2803. Talk-in on 147.045(+) (PL 94.8) from the west and 145.350(-) (PL 100 receive and send) from the east.

Colorado

The NORTHERN COLORADO ARC will hold a superfest swapmeet on 1 June, from 8 a.m. to 3 p.m. at the Larimer County Fairgrounds, 700 S. Railroad in Loveland. Features include commercial exhibits, VE session, forums, and refreshments. Admission is $3 and tables rent for $8 each (contact Jeanene Gage, NØYHY, 303/351-7327). For general information, contact Michael Robinson, AAØUB, at 970/282-1167. Talk-in on 145.115(-).

Georgia

The ALBANY ARC, INC., will hold their 1996 ARRC Hamfest and Computer Show on 14 June (5-9 p.m., vendors noon) and 15 June (9 a.m. to 5 p.m., vendors 8 a.m.) at the James H. Gray Civic Center, Oglethorpe Dr. (Hwy 82) at the Flint River, in Albany. Features include Saturday ARES, MARS and packet forums. Special ARES EC Conference on the 15th. VE testing on Friday at 7 p.m. Cost is $6.05 (checks only). Rooms for conducting radio and computer forums are free. Admission is $5 per person at the door.

Illinois

The SIX METER CLUB of Chicago will hold a hamfest, 30 June, from 7 a.m. at the DuPage County Fairgrounds in Wheaton. Features include free parking (limited overnight), ARRL and dealer displays, food and prizes. Admission is $4/advance, $5/gate. No alcoholic beverages permitted! For information, contact our 24-hour hotline 708/442-4961. For advance tickets, write Mike Corbett, K9ENZ, 606 S. Fenton Ave., Romeoville, IL 60446 or send check payable to Six Meter Club of Chicago and SASE to 7109 Blackburn Ave., Downers Grove, IL 60516 (before 10 June). Talk-in on 146.52(S) or K9ONA 146.97(-) , PL 107.2 Hz.

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The SANGAMON VALLEY RADIO CLUB will hold a hamfest on 1 June, 8 a.m. to 1 p.m. at the Illinois State Fairgrounds, 4-H building. Large covered flea market area, dealers, indoor tables available, VE session (9 a.m.), food, free parking. Admission $5, indoor tables (advance only) $10. Contact Don Pitchford, WD9EBK, RR#1 Box 104, Springfield, IL 62707; 217/789-4519. Talk-in on 147.315(+), 224.68(-), 444.75(+) (all 103.5 Hz tone).

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The LAKE COUNTY ARC will hold a hamfest 16 June, from 8 a.m. (vendors 6 a.m.) at the Lake County Fairgrounds in Crown Point. Features include VE testing at 9 a.m. and refreshments. Admission is $4 and tables are $6. For information, contact Dave Snell, N9WLP, 833 Schilling Dr., Dyer, IN 46311; 219/865-6131. Talk-in on 147.00(+).

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The WHITEWATER VALLEY ARC will host a fly-in, drive-in hamfest/computer show on 30 June from 8 a.m. to 3 p.m. (setup on 29th from 3-5 p.m. and 30th from 6-8 a.m.) at the Richmond Municipal Airport, south of Richmond on State Route 227. Commercial vendors and flea market all inside. Refreshments available. Admission is $3 (over 12 years of age). Tables are $5 plus admission. Free parking and handicapped accessible. Contact Ken, KN9UO, or Janet, KB9UP, 3425 Woods Dr., Richmond, IN 47374; 317/935-2853. Talk-in on 147.27(+).

Kentucky

The NORTHERN KENTUCKY ARC will hold a "Ham-O-Rama '96" 9 June, from 8 a.m. (vendors 6 a.m.) at the Erlanger Lions' Park. Features include indoor vendors and exhibit area, prizes, forums, extensive outside flea market, food and refreshments. Admission is $4/advance, $5/door. Children under 13 are free. Flea market spaces $2 (tables not furnished); indoor space $15 per table (provided). For information, contact N8JMV, c/o NKARC, P.O. Box 1062, Covington, KY 41012; 513/797-7252 (evenings). Talk-in on 147.255(+) or 147.375(+) repeaters.

Maine

The PINE STATE ARC will hold a hamfest 1 June from 8 a.m. to 1 p.m. at the Hermon High School. Features include: Food, free parking, flea market, dealers, and VE exams for all classes. Admission $3 (under 12 free). For information, contact Roger W. Dole, RR #2, Box 730, Bangor, ME 04401; 207/848-3846. Talk-in on 146.94(-) or 146.52(S).

Michigan

The MONROE COUNTY RADIO COMM. ASSOC. will hold a hamfest on 6 June from 8 a.m. to 2 p.m. at the Monroe County Fairgrounds. Admission is $5 at the door. Indoor vendors and tailgaters welcome. Overnight space available. Contact Fred Van Daele, 313/242-9487 for information. Talk-in on 146.72(-) and 444.825(+).

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The INDEPENDENT REPEATER ASSOCIATION will hold a hamfest 8 June, from 8 a.m. to 3 p.m. (vendor setup on 7th at 8 p.m. or after 6 a.m. on the 8th) at the Hudsonville Fairgrounds, near Grand Rapids. Features include dealers, sellers, eyeball QSOs and VE exams. Admission is $4/advance, $5/door. Tables $8, trunk spaces $5. Contact Tom, KA8YSM or Kathy, KB8KZH, at 616/698-6627 or write the IRA at 562 92nd Street S.E., Byron Center, MI 49315.

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The CHELSEA AMATEUR RADIO CLUB, INC., will hold a swap 'n shop 2 June from 8 a.m. (vendors 6 a.m.) at the Chelsea Fairgrounds. Features include flea market, special handicap parking, food. Admission $3, YLs, XYLs and kids under 12 free. Table space $10 per 8'; trunk sale $3 per space. No VE testing. For information, call or write Alan Robbins at 313/878-0363; 3800 Hooker Rd., Pinckney, MI 48169. Talk-in on 146.98(-) repeater.

New Jersey

The BERGEN ARA will hold a hamfest on 2 June at Fairleigh Dickinson University. Features include VE testing, plenty of parking and food. Admission is $3 (XYLs and harmonics free). Vendor spaces $10 each, $20 with power included (reservations required for power). For information, contact Jim Joyce at 201/664-6727 before 10 p.m. For VE testing, call Bob Neukomm at 201/427-3568 (before 10 p.m.).

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The RARITAN VALLEY RADIO CLUB, INC., will hold a hamfest 15 June, 7 a.m. to 2 p.m. at Columbia Park, near intersection of Route 529/28. Admission $5, sellers $10, $5 each additional space. For information, contact John Manna, WA2F, 908/722-9045 or Bob Pearson, WB2CVL, 908/846-2056. Preregistration: Guy Glaser 908/968-0297 (before 8 p.m.) Talk-in on 146.62(-) repeater or 146.52(S).

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The SPLIT ROCK/WEST MORRIS RADIO CLUBS will hold a hamfest on 8 June at the NJ National Guard Armory on Newark Pompton Turnpike (Route 23) in Riverdale, NJ. For information or reservations, call Bernie, WB2YOK, fax/voice 201/584-5399 (24 hrs); or e-mail 75503,3221@ COMPUSERVE.COM

New York

The HALL OF SCIENCE ARC will hold a hamfest 9 June from 9 a.m. (vendors 7:30 a.m.) at the New York Hall of Science parking — Flushing Meadow Park, 47-01 111th St., Queens. Free parking, prizes, food and refreshments. Admission $5 (vendors $10 per space). Contact during evening only, Arnie Schiffman, WB2YXB, at 718/343-0172. Talk-in on 444.20(+) repeater or 146.52(S).

North Carolina

The FORSYTH ARC will hold a hamfest and computer fair, 8 June, from 8 a.m. at the Dixie Classic Fairgrounds in Winston-Salem. Dealer exhibits and flea market. Free parking, seminars, VE exams. Both open and covered tailgating available with free camping on Friday night. RV hookups available for small fee. Admission $6/advance, $7/door. Send SASE to Winston-Salem Hamfest, c/o Forsyth ARC, Inc., P.O. Box 11361, Winston-Salem, NC 27116, 910/723-7388 (24 hrs). Visit our website at http://www.rbdc.com~kq4lo/farc.htm. Talk-in on 146.64(-).

Pennsylvania

The BREEZESHOOTERS will hold a hamfest on 2 June from 8 a.m to 4 p.m. on the Butler Farm Showgrounds just north of Butler. Parking is free; facilities are handicapped accessible; food vendors. Admission is $2 per person, under 12 free. Tailgating spaces $5 each. Vendor tables $15 per table, rented in advance. Send check for $15 per table and an SASE to George Artnak, N3FXW, 3350 Appel Rd., Bethel Park, PA 15102 or call Breezeshooters' hotline at 412/854-5593. Talk-in on 147.96(-).

South Dakota

The BLACK HILLS ARC will hold a hamfest 28-30 June at Surbeck Center on the campus of South Dakota School of Mines & Technology, 501 E. St. Joseph St., Rapid City, SD. Features include flea market, Amateur Radio equipment vendors, VE exams, QCWA meeting, forums, fun and yet-to-be announced activities and plenty of time to ragchew with friends in the Black Hills. Admission is $8/advance, $10/door. Include large SASE for confirmation and latest details to P.O. Box 294, Rapid City, SD 57709.

Virginia

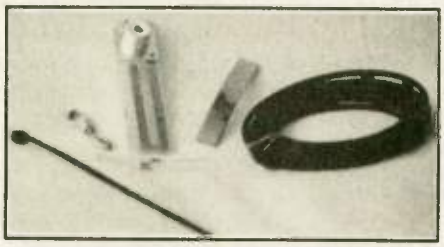
The BLUEFIELD HAMFEST and COMPUTER FAIR will be held 15 June, from 9 a.m. to 3 p.m. at the Graham Middle School in Bluefield, Virginia, on U.S. 460, 2 miles west of the West Virginia State line. VE exams at 9 a.m. (walk-ins accepted). Admission $5, Senior citizens $4, children under 12 free. Tables $5 each. Inside flea market and dealers. Parking and handicapped accessible. Fast food located nearby. SASE to Bluefield Hamfest, 412 Ridgeway Dr., Bluefield, VA 24605 or call Don Williams, WA4K, at 540/326-3338. Talk-in on 145.49 (BR54) repeater. WR

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

"Jade-Poles" antenna kits

JADE PRODUCTS, Inc., introduces its revised "Jade-Pole" antenna kits. The kits now include a PC board that simplifies building and provides frequency accuracy. The detailed manual makes this antenna kit the easiest, most fun and most affordable J-Pole antenna kit to build. 50 MHz Kit (Model AN-16) costs $21.20 PP; 144 MHz-440MHz *dual bander*, 220 MHz, 440 MHz (Model AN-04) costs $17.20 PP.

The antenna is a conventional J-Pole antenna using ladder-line technology. It is constructed of heavy-duty #18 copper-clad steel transmission wire and comes with a silver-plated SO-239 connector. The antenna is rated at 300 watts and is usable over the entire band of operation for the higher frequencies; for the 6-meter version it offers a 2-MHz wide band that can easily be "tuned" without tools.



For information on all Jade Products, write Jade Products, Inc., P.O. Box 368, East Hampstead, NH 03826-0368 or telephone 603/329-6995; orders 800/523-3776, e-mail: djade@hampstead.k12.nh.us or visit us on the web at http://www.hampstead.k12.nh.us/~djade/

OPTOLINX PC-Radio Universal Interface

Optoelectronics, Inc. is proud to announce the latest advancement in computer interface products. The OPTOLINX universal interface adapts a wide variety of radios, scanners, decoders, frequency counters, GPS receivers and other devices for connection to an RS-232C personal computer serial port. Both full and half duplex devices can be connected simultaneously using software to switch between them.

Incorporated are special provisions for connecting the AR2700 and AR8000 to a PC for full-featured computer controlled scanning, allowing the user to control multiple radios at one time, all while switching back and forth between the different radios. Interface the AOR AR3000A with our DC440 decoder to allow for decoding of DCS and CTCSS tones and DTMF characters.

The OPTOLINX can interface with an NMEA 0183 compatible GPS or LORAN receiver. Use the OPTOLINX, GPS receiver and any communications receiver to receive longitude and latitude coordinates for any signal that your scanner receives.

The OPTOLINX will interface to the Optoelectronics Scout Frequency Recorder for downloading of Scout frequencies to a PC using the disk supplied with the Scout, then check the frequencies against the FCC database using the Spectrum CD-ROM. Also, the Optoelectronics M1 Frequency Counter, using Optolog software, can be interfaced to the OPTOLINX for computer controlled data logging of all frequencies that the M1 captures. It will also computer control the ICOM R7000, R7100, and R9000 receivers.

Features

- Computer control the AR2700 and AR8000 using the supplied FFC cable, and ICOM R7000, R7100 and R9000 using the supplied mono cables.
- Download Scout frequencies to the PC and check frequencies against FCC database using Scout Spectrum CD-ROM
- NMEA-0183 interface for GPS or LORAN receivers
- Interface the AOR AR3000A to the DC440 for tone decoding
- Audio input with Data Slicer Circuitry to demodulate FSK data with applicable software
- Interface M1 Frequency Counter for data logging with Optolog software
- Switch between full and half duplex radios using remote or external switch
- 9-pin mini DIN connector for single

cable custom radio connection

• Interface multiple radios in a star network configuration

• Optional NiCad battery for portable operation

• Exclusive built-in squelch status input for higher scanning speeds of AR8000 and R7000.

The price for the OPTOLINX universal interface is $129. For information or to order the OPTOLINX, write Optoelectronics, Inc., 5821 NE 14th Ave., Ft. Lauderdale, FL 33486; 800/327-5912 or 954/771-2050.

AL-800H 1500 amplifier

Ameritron, the "High Power Specialist," announces the newest to its line of high power, rugged linear amplifiers, the AL-800H and AL-800.

The AL-800H uses two Eimac tubes, 3CX800A7s, and boasts 1500 watts. AL-800 uses one Eimac tube, 3CX800A7 and powers up to 1250 watts.

The amplifiers feature the following:

• Operates on all bands, 160-15 meters, including WARC bands. The amplifiers are user modifiable for 12 and 10 Meters.

• A tuned input circuit

• Output network

• Tube protection

• ALC control

• Vernier reduction drives which tune and load and make adjustments smooth and easy

• Heavy duty power supply

• Multi-voltage operation

• Air-cooled ventilation systems keep tubes safely cooled

• Dual-illuminated cross-needle meters that read peak forward power, reflected power, SWR high voltage, grid current and plate current.

• A Step-Start Inrush Protection™ program stops damage from inrush currents to your amplifiers

• An attractive Lexan front panel decal and a compact desktop size at 8.5 x 16.5 x 14.25 inches.

• One year warranty

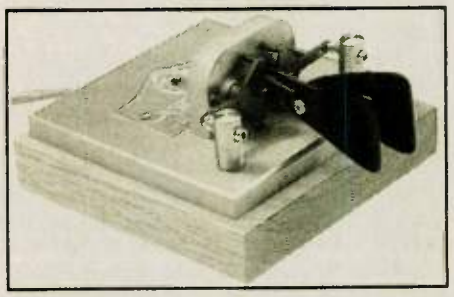
Call 800/647-1800 for an Ameritron dealer nearest you or order direct at 601/323-8211, fax 601/323-6551 or write Ameritron, 116 Willow Rd., Starkville, MS 39759.

Square Brass Racer

The Square Racer is the latest model in the Vibroplex® Brass Racer line. The design is a distinctive iambic paddle, crafted from solid lacquered brass and mounted on a base of polished hardwood. The Square Racer has the famous brass Vibroplex logo plate with a unique serial number pinned to the top of the base with stainless steel pins. With the logo plate attached, the new Square Racer is destined to become the latest Vibroplex collectable.

The initial production run of the Square Brass Racers are now being assembled. The first 500 manufactured will have consecutive serial numbers. Orders will be filled on a "first come-first served" basis so the early orders will get low serial numbers.

All of the Brass Racers have unique mechanical action — there are no springs! The key action is purely magnetic. Traditional iambic key designs all use springs to set the contact lever tension. Springs provide a linear response over the short distances involved in keys. By setting the contact lever tension with magnets, a "snappy" make and break action is achieved that is impossible to attain with springs. Many high speed (and regular) CW operators prefer the "snap" of the magnetic action as it makes sending high speed CW a breeze.



The Brass Racer is very easy to adjust, with three adjustments each for the dot and dash sides of the key. Adjustment one controls the pivoting of the contact lever, and can be set from "loose" to "stiff" pivoting. The second adjustment is the contact post spacing, which, in conjunction with the contact lever pivot adjustment, sets the total action of the contact lever. Adjustment three is the magnetic adjustment. By setting the spacing of the magnet from the lever, the operator can precisely control the "feel" of the key, which is essential for sending good Morse code.

Retail price of the Square Racer is $129.95.

For information, write The Vibroplex® Co., Inc., 11 Midtown Park, E. Mobile, AL 36606-4141; telephone 800/840-8873 or fax 334/476-0465. WR

VE exam schedules

As a service to our readers, ***Worldradio*** presents a feature listing those VE exams, times and locations which are sent to us.

Please remember that our deadline for publication is three months in advance. For example, if your VE group is scheduling an exam for October, please have the information to us by mid-July.

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.

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

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

Date	City	Contact	Notes
Arkansas			
8/17/96	Gassville	Phil, AB5ZU 501/425-7406	p/r pref.
California			
8/04/96	Chico	Jackie, W6YKU 916/342-1180	p/r pref.
8/22/96	Colton	Harold, AB6RN 909/825-7136 days or 909/685-6073 eves	
8/04/96	Concord	Gene, WW6H 510/254-5090	w/i only
8/31/96	Culver City	Scott, K6PYP 310/459-0337 or Dave N3BKV 818/559-2572	p/r pref.
8/17/96	Cupertino	Emmett, AE6Z 408/243-8349	p/r
8/31/96	Escondido	Harry, WA6YOO 619/743-4212	p/r
8/31/96	Fairfield	Dick, AB6EY 916/791-0268	w/i pref.
8/06/96	Fremont (TP)	Greg, KJ6EP 510/791-6818	w/i only
8/10/96	Glenn Ellen	Jim, 707/996-6461	p/r pref.
8/03/96	Lancaster	Adrienne, WA6YEO 805/948-1865	p/r
8/07/96	Lake Isabella	Tom, KN6TS 619/379-2947 or KD6YNX 619/379-5236	p/r pref.
8/03/96	Murphys	Lynn, AC6CY 209/736-4337	
8/31/96	Pomona	Don, WA6HNC 909/949-0059	p/r
8/25/96	Redwood City	Joe, KB6OWG 408/255-9000	w/i only
8/07/96	Sacramento	Jim, AB6OP 916/334-4887 or Larry, KD6OLN 916/361-2476	p/r pref.
8/10/96	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
8/14/96	Santa Ana	Red Cross, 714/835-5381 x140	w/i
8/17/96	Stockton	Mark, W6DKI 209/465-7496	w/i
8/10/96	Sunnyvale	John, KG6XF 408/255-9000	w/i only
8/10/96	Torrance	Joe, WB6MYD 310/328-0817	p/r pref.
8/10/96	Denver	Glenn, WØIJR 303/366-9689	p/r pref.
Colorado			
8/96	All Colorado	VE exams recording 303/360-7293	
8/03/96	Sterling	Blaine, WAØJTB 970/522-5787	p/r pref.
Florida			
8/17/96	Melbourne	Bill, WB9IVR 407/724-6183	p/r pref.
Georgia			
8/17/96	Marietta	Joanne, AC4JQ 770/955-3171	w/i
8/05/96	Marietta	Delaine, KM4FV 770/993-9758	w/i
Idaho			
8/07/96	Athol	Bob, N7GHV 208/683-2094	p/r
8/10/96	Boise	Lem, W7JMH 208/343-9153	p/r pref.
8/10/96	Priest River	Russ, AA7XM or Chris, AA7XN 208/264-4534	p/r
Illinois			
8/20/96	Aurora	James, N9UZC 708/879-3042	w/i
8/17/96	Loves Park	Dennis, W9SS 815/877-6768	p/r pref.
8/17/96	Morton	James, NT9C 309/266-6756	p/r pref.
8/10/96	Oak Forest	David, NF9N 708/448-0580	p/r pref.
8/22/96	Villa Park	Lyle, WB7EED 708/325-5694	w/i pref.
Indiana			
8/18/96	Lafayette	Bob, W7YE 317/423-1035	
8/04/96	Terre Haute	Fred, K9EBK 812/466-2122	p/r pref.
Iowa			
8/31/96	Council Bluffs	Lorraine, AAØBS 712/322-1454	p/r pref.
Maryland			
8/27/96	Annapolis	Lois, KA3VVQ 410/647-4178	p/r pref.
Massachusettes			
8/23/96	Holyoke	Dave, N1MHP 413/592-4978	w/i
8/17/96	Melrose	Scott, WB1F 617/665-7654	p/r pref.
Minnesota			
8/03/96	St. Paul	Jay, KØQBE 612/222-7253	p/r pref.
Missouri			
8/03/96	Kimberling	Jim, NQØG 417/739-2888	p/r pref.
New Jersey			
8/10/96	Cranford	24 hour hot-line 201/377-4790	w/i pref.
8/15/96	Bellmawr	Bill, NT2N 609/933-1500	w/i pref.
8/14/96	Ft. Monmouth	Gerry, WB2GYS 908/532-5354	p/r pref.
New York			
8/17/96	Long Island	Les, AA2FJ 516/364-0030 or 516/922-0947	p/r pref.
8/13/96	Long Island	Bob, W2ILP 516/499-2214	w/i pref.
8/04/96	Yonkers	Emily, AC2V 914/237-5589	p/r pref.
8/25/96	N. Lindenhurst	Walter, KA2RGI 516/957-0218	p/r pref.
Ohio			
8/03/96	Cincinnati	Herb, WA8PBW 513/891-7556	p/r pref.
Oregon			
8/19/96	Medford	Dale, N7IXS 541/772-6865 or Rick, KG7PX 541/779-3404	p/r pref.
8/14/96	Roseburg	Dick, AA7GC 541/672-7564	p/r pref.
Pennsylvania			
8/03/96	Erie	Norma, W3CG 814/665-9124	p/r pref.
8/17/96	Mercer	Dennis, WM3H 412/347-5960	w/i
Rhode Island			
8/08/96	Providence	Al, NN1U 401/231-9156 or Judy 401/454-6848	w/i pref.
Texas			
8/17/96	Austin	Jim, AB5EK 512/327-6184	w/i pref.
8/13/96	Houston	Harold, ND5F 713/464-9044	p/r pref.
Virginia			
8/31/96	Glouster	Harry, N4THN 804/642-3517	p/r pref.

License suspended

The FCC has suspended the Technician Plus license of Irvin J. Foret, Jr., KB5UJD, of Metairie, Louisiana, after receiving numerous complaints about interference to Amateur Radio operations in the New Orleans area. The action came 5 April 1996, after Commission personnel monitored and documented Foret's transmissions in December, 1995, and January, 1996. The FCC said some of Foret's transmissions on 29 January 1996, "constituted willful or malicious interference to the transmissions of other Amateur Radio stations," in apparent violation of FCC rules.

The FCC also contended that, during an inspection of his station, Foret "was lacking in candor and misrepresented material facts" to Commission personnel by stating that he did not make the transmissions the Commission observed. The FCC also said some of Foret's transmissions were unidentified, included music or were obscene or indecent, the alleged indecent transmissions occurring at a time when there was a reasonable risk that children were in the audience.

The FCC suspended Foret's license for two years, and ordered a final determination based on the issues in the case and whether to impose a fine against Foret. If he files a timely request for a hearing or a written statement, the suspension of his operator license will be held in abeyance pending a Commission decision. Otherwise, the suspension order takes effect within 30 days of his receipt of the FCC's order. —tnx FCC

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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. F896

WANTED REPLY COUPONS of all types, IRCs & others. Buy, sell, trade. JIM NOLL, P.O. Box 3410, Escondido, CA 92033. 396-397

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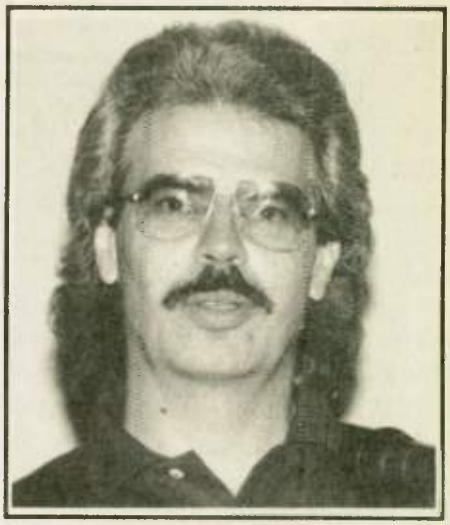

Among DXers flocking *to the International DX Convention in Visalia, CA 12-14 April 1996 were (from the bottom left, clockwise): Bill Taylor, K6TQ; Mike Fulcher, KC7V; "Zorro" Miyazawa, JH1AJT; Chip Margelli, K7JA and Lew McCoy, W1ICP. See next month's issue for a full report on the convention.*

Late Flash! Vanity call sign Gate 1 opens 31 May 1996

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