Worldradio
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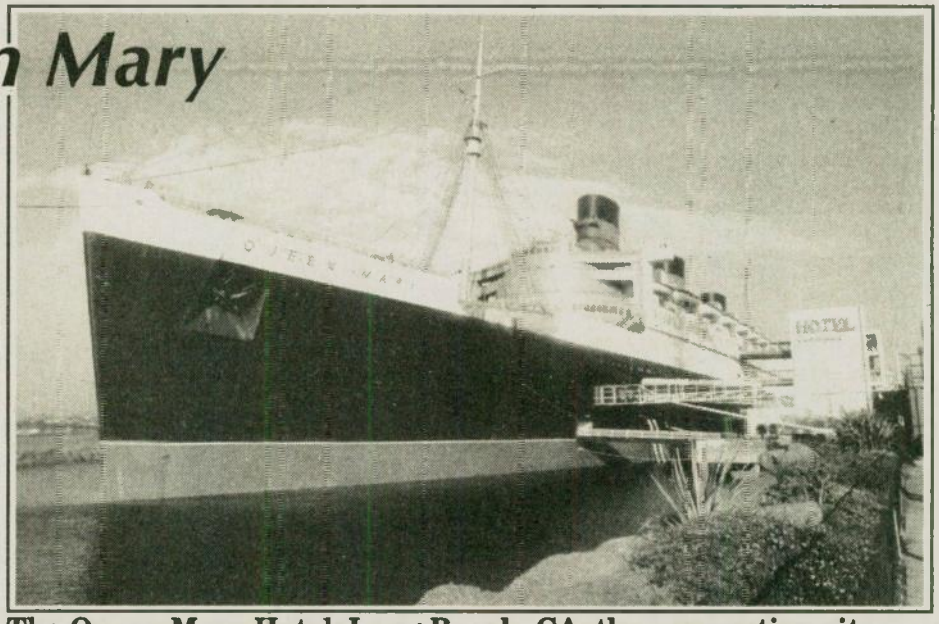
On the *Queen Mary*

ARRL Southwestern Division Convention

Norm Brooks, K6FO



The Queen Mary Hotel, Long Beach, CA, the convention site.

It was ten years ago that we were on that Royal Lady of the Seas, the ocean liner *Queen Mary*. The 1985 ARRL Southwestern Division Convention was held there. Now retired from traveling, she is permanently docked in Long Beach, CA, and operating as a fine hotel and convention center. There are so many fine convention locations in the Division, we are fortunate to be able to see the Queen once in a decade. Now, in 1995, over 3,000 Amateur Radio operators, spouses and friends also thought as we did that the Queen was again worth a visit.

Things started happening at noon on Friday, 1 September 1995. From then to noon Sunday, 3 September, there were workshops, forums, examination sessions, commercial product displays, transmitter hunts, many valuable prizes, visits to the W6RO radio shack, alternate activities for spouses or non-amateurs, a Grand Banquet, a Wouff Hong ceremony and, of course, an ARRL Forum.

Worldradio was there. We had a booth in the commercial exhibit area, and we attended some of the activities and will report on them here.

Six Meters

The Six Meter Club of Southern California was very much present on the *Queen Mary*. They had a booth in the exhibit area. Their vice president, Wilson Anderson, AA6DD, put on a Six Meter Forum.

Wilson showed pictures of old six meter equipment that is still usable on the band, even quoting the amount to pay for it at flea markets. If you're buying new equipment, consider getting one of the new HF transceivers that includes the six meter band. If you already have modern HF equipment, but just lack the six meter band, consider a transverter. A transverter converts your lower frequency transmit signals to 6 meters, and converts your receive 6 meter signals to the same band you have set in your transceiver.

You'll be hearing and seeing more about the 6 meter band in the future.

(please turn to page 11)

Worldradio columnist honored

Worldradio FM and Repeater columnist and *Newsline* producer Bill Pasternak, WA6ITF, has received the highest honor that the American Radio Relay League can bestow. ARRL President Rodney Stafford, KB6ZV, has presented Bill with the ARRL National Certificate of Merit.

The presentation was made at the ARRL Southwestern Division Convention Grand Banquet on board the *Queen Mary* in Long Beach California the evening of 2 September. In making the presentation, President Stafford took note of Bill's lifelong service to Amateur Radio through thirty-one years as a feature writer and an Associate Editor of *73 Magazine*. He also cited the numerous articles written by WA6ITF that appeared in numerous Amateur Radio publications including the league's own *QST* magazine and ***Worldradio.***

Bill was also cited for such films and videos as "Moving Up to Amateur Radio," "The World of Amateur Radio," "Amateur Radio's Newest Frontier," "SAREX — The Shuttle Amateur Radio Experiment," the award-winning "New World of Amateur Radio" and "Ham Radio in Space."

The award also takes note of Bill as co-founder of the Westlink Radio Network — now called *Newsline*. Most important, it recognizes WA6ITF as the person who conceived of and instituted the Newsline Young Ham of the Year Award.

This is the second such honor for Bill. Back in 1989 he was named as the recipient of the Dayton Amateur Radio Association's "Radio Amateur of the Year" award for his lifelong contributions to ham radio. WR

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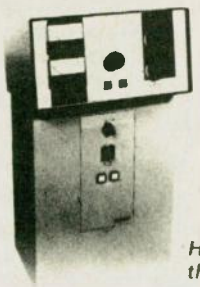

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Worldradio NEWSFRONT —

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

FCC budget cut

A Senate subcommittee voted a 20 percent cut in next year's budgets for the Federal Communications Commission. That could have a devastating effect on the agency and on the services it governs including Amateur Radio. The Appropriations Subcommittee on Commerce, State, Justice and Related Agencies adopted the plan as part of a $26.49 billion appropriation in fiscal 1996. It is $1.6 billion below the House version.

For 1996 the FCC budget would be at $148 million. That's down from $185 million in 1995. Subcommittee chairman Phil Gramm, a Republican from Texas drafted the plan. In response to objections that the FCC's heavy workload could not stand a 20 percent cut, Gramm said he would consider an amendment in full committee to keep the agency at the 1995 funding level but would not consider any sort of long term increase in agency funding.

Reacting to the Senate subcommittee proposal, FCC chairman Reed Hundt said that these tentative budget cuts will cripple his agency's ability to adequately protect consumers from regulatory abuses.

The FCC chairman added that hundreds and hundreds of FCC employees will be terminated if Congress accepts the subcommittee's proposal. Hundt stated that the proposed cut also would jeopardize the FCC's ability to conduct airwaves auctions and make it impossible for the agency to implement telecommunications reform if pending legislation becomes law.

For Amateur Radio it would probably mean an end to all services including routine regulatory changes and any enforcement. In fact, such deep funding cuts could lead the FCC to deregulating Amateur Radio and other personal radio services in the same way as the agency deregulated Class D citizens radio almost two decades ago.

DX Sunspot

Astronomers at the California Institute of Technology say they have identified the first new sunspot in what could be the start of the next sunspot cycle. Scientists at CAL TECH's Big Bear Solar Observatory in Big Bear City, California, photographed the spot on 12 August.

The CAL TECH researchers say that the sun has been in a quiet period through much of 1994 and this year, with a few spots showing up near the equator. The new sunspot appeared at a solar latitude of 21 degrees, and its magnetic polarity is opposite to that seen over the last decade. Scientists stated that this is a key to identifying it as the manifestation of the start of a new cycle.CAL TECH says that they expected an early beginning to Cycle 23, but not this early. The researchers say that sunspots in the new cycle should rapidly become more common and reach a high level of activity in 1998 or 1999.

(more NEWSFRONT on page 18)

Accident kills Montserrat ham

Well known Montserrat DXers Bobby and Mae Martin, VP2MO and VP2MN, were involved in an automobile accident on 27 August. Mae was killed and Bobby was seriously injured.

The Martins had temporarily relocated to Antigua following volcanic activity that began on the Montserrat in late July.

They were back on Montserrat when the accident, involving a British military vehicle occurred. Bobby Martin, VP2MO, has been known for many years as one of the Caribbean's most active amateurs. In 1990 he received a knighthood for his relief efforts in the wake of Hurricane Hugo, which devastated Montserrat in September 1989.

Family friends have reported that Bobby continues to recover from his injuries.

Privatizing TVI fixes

The FCC says that it is considering privatizing the resolution of radio frequency interference to consumer electronics devices. Under the plan, private repair shops would be used to fix problems in the field.

FCC representatives spelled out the Commission's concept at a recent meeting in Tampa, Florida. The commission says it is not feasible for it to attempt to resolve these complaints — most of which come from Citizens Band operation.

They have come up with a new system. Under the proposal, and depending on what the local repair facility found, either the shop would fix the equipment or, in the case of a violation of FCC rules, the service shop would refer the case back to the FCC for possible FCC action. The question of who would pay for these services has not yet been addressed.

The FCC says that over the past several years it has been unofficially out of the RFI business. Parties who contact the FCC about an interference problem are asked to work together toward a solution.

The ARRL was represented at the meeting by several local volunteer officials, in consultation with headquarters Laboratory Supervisor Ed Hare, KA1CV.

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features

departments

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Worldradio (USPS 947000) is an international conversation. You are invited to participate.

Our goal is to be a valuable resource of ideas and experiences beneficial to the Amateur Radio community. We publicize and support the efforts of those who bring the flame of vitality to this avocation.

You readers are participants — an alliance of active radio amateurs concerned with reality, using radio as a communications tool to develop the skill, quality and full potential of Amateur Radio.

We emphasize the positive aspects of this great activity, and desire your contributions dealing with dramatic, personal and humanitarian uses of Amateur Radio.

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Editor ..... Lou Ann Keogh, KB6HP
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PUBLISHER'S MICROPHONE

Over the years amateurs have been honored during the Saturday evening banquet at Dayton. Achievements in the technical, recruiting, public service and other avenues have been chronicled.

Suppose that Radio Grand Fenwick, during one of the international conferences in Geneva, had asked for the entire 20 Meter amateur band allocation for their broadcasts of political philosophy, folk music and recipes. Delivering the U.S. position against such a move would be a golden-throated orator from the ARRL. The persuasive logic would cause all delegates in the world body to vote against the Duchy of Grand Fenwick. The League delegate, savior of our frequencies, would appropriately be in the banquet spotlight.

Here are others who also deserve the spotlight — the latest to become ***Worldradio*** Super-Boosters (Lifetime Subscribers) are:

- **J.Andrew Eden, ZF1EJ, Grand Cayman, BWI**
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•

It's no fun to announce a price increase for subscriptions. But it is quite necessary. There have been, in quick succession, several increases in the cost of paper. One press report called the latest increase "stiff," that was a mild word to use. We're still reeling from the most recent post office cost increase and they have just announced another one in November.

We must increase the price of ***Worldradio*** one dollar a year. At the new price of $15 a year, that means that a month's copy now costs $1.25 each. I'm sure you will agree this cost is quite reasonable for the amount of material presented.

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One reader took me to task for my comments regarding CW being a "filter." He stated that it was a barrier because it was unnecessarily "difficult." I say bravo for difficulty. There should be more of it!

I was recently reading a magazine article in which the personnel manager of a major corporation said they were now requiring college degrees for what previously had been high school graduates.

The reason is so they can get what was the equivalent of the high school graduate of years past.

Talk to the young men just out of their service basic training. If they don't qualify with their weapon no longer do they phase back and keep trying. If they don't complete the longest march with full field pack they don't have to do it again. If they don't want to pull themselves over the walls on the obstacle course they can walk around them. I guess we don't want to disturb their psyches with all that difficult stuff.

There is some talk of making our FCC licenses of lifetime duration. The idea is a good one. The licenses, like passports, had been good for five years. Then both were increased to ten years. Less work for the government agencies involved, good step. The flaw in the radio license proposal seems to be that former amateurs who allowed their licenses to lapse eons ago could come back in with no retesting. Considering that it costs nothing to renew a license except a 32 cent stamp, letting a license lapse is: (furnish your own word here).

Even if those who have massive demands on their time and are not presently active in radio (you would think) might realize that there might come a day when they would not be able to get across the tennis court or golf course and it would be nice to have a nice sit-down activity ready for those days. If they can't figure that out, well, (furnish your own comment here).

•

Whatever your concerns are you can utilize the forum that exists here. Our "Off The Air" column is a platform for divergent views. And, yes, we do print letters that may be at odds with our personally held opinions. The forum is open for free expression and it only serves its true purpose if our own biases do not enter into the selection of letters. In fact, we bend over backwards to assure that all sides are heard. But, please, no "bring back Spark" letters. —Armond, N6WR

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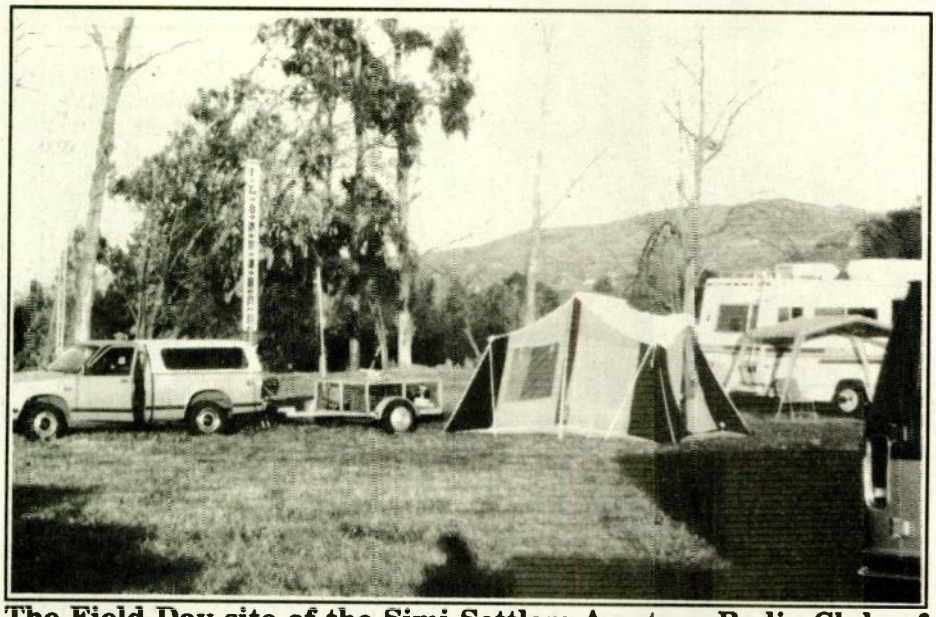


The Field Day site of the Simi Settlers Amateur Radio Club, of Simi Valley, (Santa Barbara section), California, begins to take shape. A few of the Simi Settlers usually set up some tents and hold a small party before the Field Day fun starts.

A long distance to Field Day

James E. Sackey, N9ESM

Travel over ten thousand miles just to attend 1995's Field Day? Yes, it happened.

In February 1995, I was on active duty with the United States Navy and deployed to Jebel Ali, United Arab Emirates. I decided that by hook or by crook, I would attend Field Day where I am a member and a former newsletter editor: The Simi Settlers Amateur Radio Club, in Simi Valley, California.

In 1994, Navy duties prevented me from traveling to Simi Valley for the fun and radio sport. The year 1995 would be different. I am a journalist in the Navy. At present my claim is to be "The Best Journalist on board U.S.S. *Samuel Gompers*." This is a true statement, because I am the *only* journalist stationed on the Alameda, California-based destroyer tender!

U.S.S. *Samuel Gompers* is called a destroyer tender, however the 645' ship tends, or repairs and supplies, a wide variety of Navy and Military Sealift Command vessels. The deployment just completed in 1995 saw the ship operate in the Indian Ocean and Arabian Gulf and provide repair services to nuclear-powered submarines as well as MSC tankers and other ships of the United States.

It was during the in-port period at Jebel Ali, U.A.E., which is about 40 kilometers southeast of Dubai or 150 kilometers northwest of Abu Dhabi, that I decided that I had been a silent ham too long. Around Valentines Day, the decision became crystal clear: If it required official leave or a "special liberty" request, N9ESM would travel to Simi Valley and be with the Simi Settlers during Field Day.

The fulfillment of this decision would take some doing. For starters, the ship was in the middle of a six-month deployment to the Persian-Arabian Gulf. While the ship was scheduled to return to Alameda on May 22, Navy schedules are subject to unplanned and sudden change.

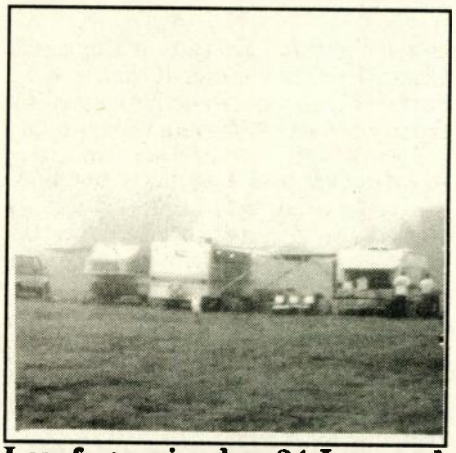
The ship's course took us from Jebel Ali, by way of Phuket, Thailand, to Singapore. After Singapore, the next port-of-call was an anchorage at Benoa, Bali. As you can see, it was not exactly the direct route.

From Bali, there was a stop at Guam and at Pearl Harbor, Hawaii, before mooring at pier 3, Naval Air Station Alameda, just across the bay from San Francisco. It was Friday morning, 23 June!

N9ESM arrived on-site in southern California about 17:00 local time, having left the ship at 08:30. Please, no comments from the California Highway Patrol on elapsed time versus distance. Besides, the ship's legal officer has assured me that the statute of limitations for moving violations has expired.

For years, a group of the Simi Settlers have arrived at the Field Day site the evening before Field Day starts to camp out and have a small informal party and gabfest. This year was no exception. Several tents and motor homes were being pitched or placed when I arrived.

Jerry Crabtree, KC6UIJ, the Ventura County ARES/RACES Emergency Coordinator, invited me to snooze on the couch of his motor home—an invitation which was gratefully accepted. After getting the first of many cups of coffee, we helped with the positioning of the generator and lent a hand to electrician Ed Meyer, KA6OMG. We connected the generator-operated lights for the site and unloaded other important items such as tables, chairs, sleeping bags and more coffee pots and cups. Coffee and late night Spudnut® doughnuts and talking made that Friday evening pass quickly. I had left Simi Valley on Navy orders on 1 June, 1994, and had missed, and been missed by many of the club members. There was a lot of catching up to be done.



Low fog arrived on 24 June and reduced visibility, but the fog was a blessing for those who suffer with allergies from dust in the air.

Grown-up male hams don't get misty-eyed or choked up by emotion, right? Wrong! There had been no one waiting for me on the pier at the end of the six-month Western Pacific—Persian Gulf deployment. But as I looked around and realized that it actually *was* Field Day, and that I was really there with the Simi Settlers, I knew

that this was my true homecoming.

Saturday dawned enshrouded in fog. The fog would prove to be a blessing. Some members of the club have allergies or suffer from hay fever. The moisture settling from the fog kept the dust and spores down. This permitted the hay fever sufferers to participate in the Field Day activities longer, with less discomfort.

Jerry Crabtree, who is a retired Ventura County Fire fighter, awakened me that morning by pouring a cup of

Kathy and Alan at the club's Novice station. Alan "hams it up" for the camera.

coffee right by the side of the couch where I was sleeping. It was a wonderful way to start Field Day, smelling freshly-brewed coffee as a wake up call.

Breakfast consisted of the Spudnuts® that had been not been eaten the night before. The remaining doughnuts, donated to the club by the local store owner, were quickly devoured.

Time to help unload the remainder of the stuff, start setting up towers, antenna, tents, solar panels and to greet and talk with friends I hadn't seen in over a year.

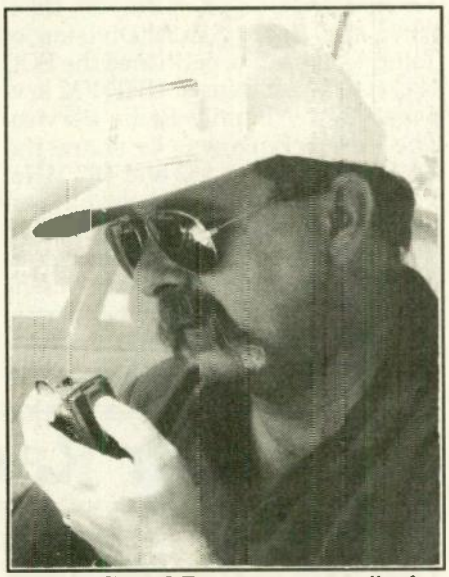
Field Day itself was what Field Day should be. The Simi Settlers' style of operation is to have fun, practice for emergencies, inform others about Amateur Radio, provide training for themselves, demonstrate the value of preparedness and the importance of ham radio communications to nonhams, and again, to have fun!

A lot of the Field Day training acquired during Field Day, 1993, was used by Simi Valley hams on January 17, 1994, when the Northridge earthquake jolted people out of their beds at 4:31 a.m. The Simi Settlers' Field Day site this year was about nine miles, as the crow flies, from the epicenter.

Saturday, and all through that night, the Simi Settlers kept hamming it up. We enjoyed a wonderful dinner that evening, with three long tables loaded

The radios are packed, the antennas are coming down. Soon it will be time to strike the tents and head for home. Field Day was a success.
—photos by James E. Sackey, N9ESM

with tri-tip, chicken, salads, relishes, pork 'n' beans and so on. Anyone who was hungry after dinner only had themselves to blame. High honors to Kathy McClure, KA6All Time Romantic, the Field Day Coordinator. She did a super job. Just ask anyone who was there.



Bill, KC6UQB, gets some "mic-time." Do you suppose the "inverted Vee" moustache was grown especially for Field Day?

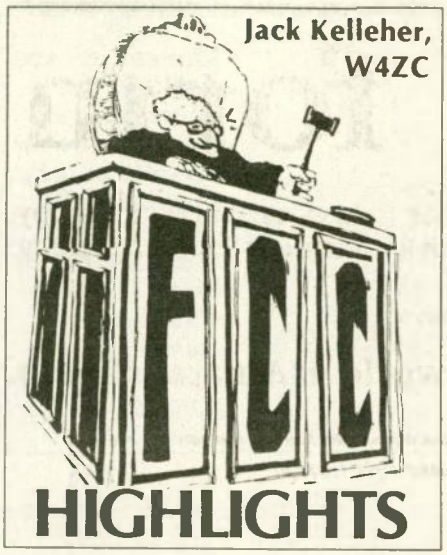
Sunday, it was all over except picking up the toys and packing stuff away. Did the Simi Settlers win? No and yes.

"No" to big scores with lots of multipliers. But that was not the goal. "Yes" to fun, friendship and participation. One of the hams responded to the statement: "They will never win the contest" by saying: "By coming out here and participating, and having fun, each and every one of these hams is a winner!"

For some, this was their very first Field Day. For others it was one more in a long line of Field Days. But for me it was the end of a journey that began west of the Straits of Hormuz in the Arabian Gulf and ended happily in Simi Valley, California.

I don't think anyone else has ever traveled three quarters of the way around the world, just to participate in Field Day. I won't have to any more. I will be leaving the United States Navy later in 1995, and will look for a job as a writer or broadcaster in the Pacific Northwest.

I might return to Simi Valley for Field Day, but I don't expect to have to travel more than five thousand miles to do it! **WR**



This month's column is devoted primarily to Tandy Corporation's proposal for a personal radio service. While this is not an Amateur Service per se, it is kindred to the Amateur Service. (In the past, the personal radio service has motivated many participants in that service to take an additional step into the amateur ranks.) Also, this and a couple of other related proposals seek access to the spectrum by potentially millions of users without requiring operator or station licenses.

Proposed family radio service

What follows is based in part on the an article in the W5YI Report for August 15, 1995, entitled "FCC Proposes UHF-FM Family Radio Service."

The FCC first considered creation of a citizens radio service in 1945, driven in part by development and demonstration of a pocket-size UHF radio by Al Gross, W8PAL. and by the foresight of then-FCC Commissioner E. K. Jett. This led to a Class "A" citizens band radio service in 1947, in the 460 to 470 Mc band. The FCC soon found that business use of the newly-allocated band far outstripped personal radio applications. Over the years there have been numerous adjustments in this region of the spectrum to accommodate changing patterns of use and demand. Today, there are only 30 channels available for the Class "A" personal radio service — which is now called the General Mobile Radio Service (GMRS). There are 16 primary channels (8 in the 462 MHz band, paired with 8 in the 467 MHz band) and 7 additional pairs of interstitial channels interleaved between the "primaries."

A second approach to a citizens radio service occurred in 1957, when the FCC designated 23 channels in the HF band (26.965 to 27.255 MHz) for a Citizens Band radio service. In 1977 the authorizaation was broadened to 40 channels by adding 17 channels at the high end of the band; Channel 40 is at 27.405 MHz. Today, CBers number in the millions. Use of the band is undisciplined, and essentially unregulated.

A new phase began on July 20, 1994, when the Radio Shack Division of Tandy Corporation petitioned the FCC to create an unlicensed UHF-FM low-power 2-way Family Radio Service. The new service was to share the GMRS channels at 462 and 467 MHz.

Tandy said that parents will have an extra measure of security by using FRS to monitor their children at play. Families and friends will be able to maintain close contact at sporting events, shopping malls, parks and between vehicles during trips. Impromptu groups will be able to communicate conveniently using FRS for activities such as fund raising and social events. Tandy proposed 500 milliwatt radios operating on the 16 channels in the GMRS.

The FCC accepted the Tandy proposal on July 26, 1994, assigned it file No. RM-8499 and put the item out for a 30-day public comment period.

In its petition Tandy had characterized the GMRS spectrum as unused and little used. Comments from the Personal Radio Steering Group (An Ann Arbor based GMRS user association headed up by Amateur operator Corwin D. Moore, Jr., WB8UPM) strongly disputed that claim. PRSG said also that alternative spectrum is available at 800 MHz.

The Uniden Corporation said that PRSG is fearful of an expanded user base or the more efficient use of GMRS spectrum.

REACT International (a CB association dedicated to public service) supported the FRS concept but opposed use of the GMRS spectrum — which they also use for their public service activities. REACT feared that the GMRS is not capable of handling the large number of additional users that would result from the Tandy proposal. They also fear that the GMRS 675 emergency channel pair (462.675 and 467.675 MHz, which must be used for travelers or emergency assistance) will be abused by unknowledgeable and unlicensed users.

Motorola supported the proposal,

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 September 1995.

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	AAØZA	KGØYW		KBØTVP
1	AA1OJ	KE1CX	N1VTZ	KB1BTW
2	AA2YK	KG2DW		KB2VRO
3	AA3MK	KE3US	N3WAX	KB3BKX
4	AE4LW	KT4CY		KF4DBD
5	AC5EQ	KK5SM		KC5QOW
6	AC6PM	KO6ZL		KE6YHD
7	AB7ML	KJ7QY		KC7MYR
8	AA8UQ	KG8TG		KC8AXZ
9	AA9QB	KG9DX		KB9LLB
N. Mariana Is.	KHØS	AHØAW	KHØED	WHØABC
Guam	WH2Q	AH2DA	KH2OO	WH2ANN
Hawaii		AH6OE		WH6CYA
Amer. Samoa	AH8O	AH8AH	KH8CJ	WH8ABE
Alaska		AL7QF		WL7COU
Virgin Is.	WP2U	KP2CH	NP2IK	WP2AIA
Puerto Rico		KP4ZY		WP4NBC

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stating that the public interest is better served by the creation of a new, unlicensed personal radio service that offers consumers improved communications options in a cost effective manner.

The Telecommunications Industry Association (TIA) forecast a potentially strong market for FRS with varying applications — TIA argued that for the FRS to achieve broad market appeal it would have to be an unlicensed service.

Both Motorola and TIA agreed that there is a need for a low cost unlicensed very short range two-way voice radio service, and that technical standards can be established to adequately protect GMRS systems.

After studying the preliminary round of comments the FCC issued, on August 2, 1995, a Notice of Proposed Rulemaking, WT Docket No. 95-102. The Commission said: "We believe that this service would provide most small groups, such as families, friends, and associates, with good quality voice communications over a range of a few city blocks. It would facilitate activities where members become separated, either planned or inadvertently. It would also be useful to hunters, campers, hikers, bicyclists, and other outdoor activity enthusiasts. It appears that technology can make such a service very convenient to use and widely affordable. (The only costs to the user would be the cost of the FRS units, estimated to be $100-$150 each, and the cost of replacement batteries.) Further, FRS would create new jobs as well as provide more choices for consumers. We propose, therefore, to amend the rules to establish a Family Radio Service.

"Each channel would be usable simultaneously by many millions of small groups throughout the country. The technical standards proposed by Tandy should provide good quality communications over a range of approximately one kilometer. A number of factors, however, limit the interference potential of these units. First, there is the line-of-sight propagation characteristic of frequencies in the UHF domain. Next, simple antennas that are an integral part of the unit, together with its very low transmitter power, will further restrict its range. Another feature is the capture effect provided by FM emission types. (Capture effect is the phenomenon whereby the strongest signal received on a frequency is the only signal that is demodulated by a FM receiver tuned to that frequency.) We agree that selective calling would help enable this service to co-exist with the GMRS as well as make it possible for user groups to enjoy a modicum of privacy.

"Tandy, Motorola, and TIA state that for the FRS to be attractive to users, there should be no requirements for operator or station licenses. We agree. We can not foresee any regulatory purpose that would be served by requiring operator or station licenses in such a radio service. We propose, therefore, to establish the Family Radio Service within the Citizens Band (CB) Radio Service and authorize operation by Rule 307(e) of the Communications Act (which authorizes the operation of such stations without an individual license). We propose to regulate the usage of the FRS units through technical standards and type certification. We propose to rely only upon four simple operating rules (covering eligibility and responsibility, authorized locations, types of communications, and equipment requirements.)

"We are not persuaded by the claim that unlicensed FRS units are incompatible with the GMRS. We believe that these two services can share certain channels successfully. We also propose technical standards similar to those requested in the petition and the comments. The units would transmit frequency modulated voice emission type F3E only. The authorized bandwidth would be 12.5 kHz. The maximum power of the transmitter would be ½ watt. The antenna must be an integral part of the transmitter, have no gain, and be vertically polarized."

The FCC also asked whether any of the proposed technical standards need to be relaxed or tightened, and whether other standards should be included in the rules. The Commission did not propose to permit telephone interconnection (phone patching) but asked whether it should be permitted, and if so, what restrictions or conditions that should be imposed. Selective calling is not required, but is allowed as an FRS option.

The deadline for comment is 2 October 1995; reply comments, October 16.

"Wireless Internet?"

Two petitions have been filed with the FCC during recent months for a radio service which would be accessible using equipment from any supplier and available to anyone without licensing or air-time charges. Both have been released for comments.

The petition filed by Apple Computer (See RM-8653) asks for allocation of a "NII Band" in the 5 GHz area (NII stands for National Information Infrastructure). The allocation would be for high speed data communications for schools, libraries, community groups, individuals, businesses and institutions. It visualizes community networks resembling Amateur packet networks.

The other petition was filed by the Wireless Information Networks Forum (WINForum) and carries the FCC identification RM-8648. WINForum's filing appears to be concerned mainly with indoor, wireless LAN, and cordless telephone operation. WR

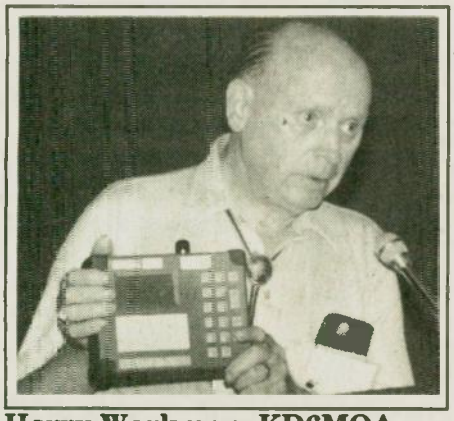
Queen Mary

(continued from page 1)

It seems like all of the big manufacturers are now including the band on their newest lines of HF radios.

2.4 Gigahertz Forum

Harry Workman, KD6MOA, attempted to demonstrate actual communication on the 2.4 GHz band at this forum. At the start of his hour, his equipment was in boxes as he was unable to set up in advance.



Harry Workman, KD6MOA

We learned that the 2.4 GHz crowd generate their signals with 800 MHz radios, then run the output through varactor triplers. Today's trunked radio systems are in the 800 MHz band and there seems to be a lot of that equipment on the surplus market.

We were also reminded that we amateurs now have a dedicated amateur band at 2.4 GHz. You will recall the FCC recently auctioned off commercial portions of the 2.4 GHz band, which means there will be a lot of commercial equipment in the surplus market in the future. For these reasons, 2.4 GHz is *the* band of the near future.

Contesting Forum

If you operate on HF, and have been annoyed by contest operators, you would have enjoyed this forum. It was conducted by Ned Stearns, AA7A, and he had an expert panel to discuss the merits of having a "contest free" frequency zone on the 20M phone band. The expert panel consisted of Jim Neiger, N6TJ, and Dick Norton, N6AA. Both are well known in the contest-DX world. At first, Jim thought the "debate" was just a joke. When he found it was serious, he quickly polarized to the side he was to take.

Dick said he never turns on his radio except to operate in a contest. He feels there are a lot of others like that too. He feels that the complaints are coming from those who use a particular frequency daily, and therefore believe they "own" the frequency. Since they have use of the frequency on all the other days of the year, they can go to other frequencies or bands when the contest is on. The WARC bands are always free of contests.

Jim countered that specific frequency users should not be forced to go to other bands because of contests. They have an investment in antennas, for example, and should not be forced to add more.

Both agreed that a contest-free zone would be difficult, if not impossible to enforce.

Both agreed that if a contester lands on your favorite frequency during a contest, please realize that he is not trying to be malicious. Contesters are not trying to be bad guys.

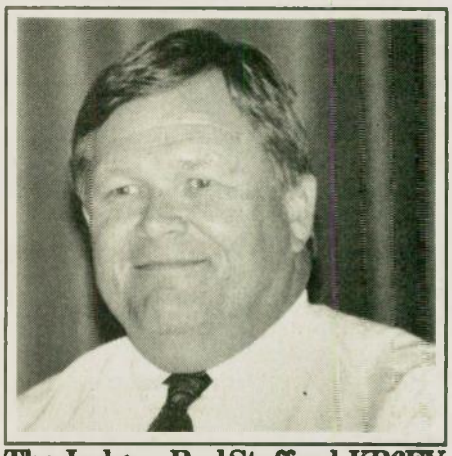
Ned is a new member of the ARRL Contest Advisory Committee (CAC). He is from Arizona. He does his contesting on VHF, where the antennas are smaller and can be taken to mountain tops more readily. He recommends that all new amateurs who do not have HF privileges get active in VHF and UHF contesting.

The ARRL Forum

The forum was conducted by ARRL Southwestern Division Director Fried Heyn, WA6WZO. Fried introduced the ARRL staff members who came to the convention from League headquarters in Newington, CT. They included Rosalie White, WA1STO, who is manager of the Educational Activities Department; Rick Palm, K1CE, Field Services Manager and Chris Imlay, N3AKD, ARRL General Counsel. Southwestern Division Vice Director Art Goddard, W6XD was there. Art had also conducted a forum on his Amateur Radio Safari to Africa.

The convention was honored to have Rod Stafford, KB6ZV, the new president of ARRL present. Rod is the presiding Municipal Court Judge in Santa Clara County, CA. He is a former ARRL Pacific Division Director. Earlier, he had conducted a forum called Alphabet Soup, in which he explained IARU, WRC, ITU and other acronyms.

Rod said that the ARRL Forum should be a place where members could ask questions of their elected leaders, a place where they could tell them their concerns. With that he opened a Q and A session.



The Judge—Rod Stafford, KB6EV

Several questions had to do with the delay in "vanity" call signs. There are other petitions for reconsideration besides that filed by ARRL. In his opinion the League's petition is *not* holding up the start, as the League's petition has to do with a later "gate" in the program. The first gate, which is delayed, has to do with relatives getting a deceased amateur's call sign. One of the audience chided Director Hein by telling him he had better file for a new and shorter call sign. President Rod quickly came to Fried's defense by announcing that Fried finally got his call sign (WA6WZO) memorized last week!

Another question concerned the talk about doing away with the Commerce Department and the FCC and privatizing their functions. Rod assured us that the ARRL will monitor this kind of activity closely, and if anything critical to Amateur Radio gets tossed into the air, the League will be there to field it.

A 67 year old member said that the 20 years subscription rate to become a life member is out of line financially. He asked that the League take a look at the way other organizations have set up their dues structures for older prospective life members. Rod pointed out that older members will have to consider just what commitment they want to make in the support of the League. Also they are not limited to

the number of years they want to subscribe to at any one time.

There was an objection to the elimination of the plastic bag on *QST*. It was eliminated as a cost saving measure. If your *QST* arrives damaged, tell the League, they will send you another. If you feel strongly about returning to the bag, tell your Division Director.

There was a discussion on the need for proper training for operators on how to help in emergency operations.

Is the DXCC program cost effective? No. It costs more money than it brings in.

On frequency coordination and enforcement: The League has produced band plans to use as guidelines locally. The League board has repeatedly said it will not get into active coordination. Coordination has to be local in nature. The League would like to see the FCC support the coordinators more, and the coordinators to work more closely with the FCC. As a result, the League has sponsored a repeater coordinator meeting in St. Louis next month. The League is going to give it its best shot. If, as a result, coordinators can act knowing they have the support of the FCC, Amateur Radio in general will benefit.

The bungee jump

Adjacent to the Queen Mary, there is a huge Bungee Jump. We don't know how he got committed to do it, but word got circulating that at 10:30 a.m. Sunday, Rick Palm was going to make the jump. Your reporter was on hand with his camcorder, and got good video of the jump. A photographer who said he got an excellent shot of it said he was going to send it to *QST*. It will be interesting to see if *QST* runs it! WR

International license update

The FCC has assigned RM-8677 to an ARRL petition for rule making to implement U.S. participation in an International Amateur Radio Permit, covering countries in the Western hemisphere.

As previously reported, such a permit will allow temporary operation in any other country in the Americas that has signed the agreement to people licensed in their own country. WR

Southwestern DX Forum

John F. Minke, III, N6JM

I arrived at the Southwestern Division ARRL convention aboard the *Queen Mary* on 2 September in a roundabout fashion. My family and I traveled to Long Beach, California to attend a pageant in which our daughter was participating, and I was able to take some time from the family schedule to attend the DX forum.

The forum was moderated by John Alexander, K6SVL, the Southwest Division representative to the DX Advisory Committee. Assisting him was a panel of DXers, which included Ed Stearns, AA7A, of the Central Arizona DX Association; Harry Hodges, WA6YOO, of the San Diego DX Club; Gene Real, K6OJ, of the Southern California DX Club, and Frank De Nuzzo, W6SWM, of the California Central Coast DX Club. John said that there are at least six DX clubs in the division and he had hoped to get representatives from each of them. The other clubs are the Northern and Southern Arizona DX groups. John stated that he was recently appointed to the DXAC which was during the most controversial era of the DXAC and discussed recent happenings of the committee. Most DXers are already aware of these actions but they will be summarized as follows:

•Kingdom of Mustang. This petition for a new DXCC country was denied.

•Scott Islands in the Antarctic. This petition was also denied based on the international agreement concerning the unclaimed areas of the Antarctic.

•Aruba. There is a petition to delete Aruba from the DXCC Countries List. It seems that Aruba still wants ties with the Netherlands, but does not want to be associated with the Netherlands Antilles. There will be no action on this one for the moment.

•Minimum Size Rule. This one is being considered only based on the minimum size for human habitation. There was a comment that this would rule out Los Angeles.

•Pratas Island. This issue on adding this one to the DXCC Countries List is to be voted on again in October by the committee as the DXAC Chairman had invoked the rule concerning separation improperly.

•Scarborough Reef. The Awards Committee normally votes on recommendations of the DXAC, but its intention was never to agree on a negative recommendation. As the Awards Committee was in favor of adding this one, the issue goes to the Membership Services Committee. This is the controversial era that John was talking about.

•Palestine. To add this one to the DXCC Countries List has been rejected as Palestine has yet to meet the Point 1 Country Status.

•Mount Athos. Amateur Radio is supposedly not permitted on Mount Athos. A vote to delete this one will be voted on soon.

John, K6SVL, then addressed questions to the panel. His first was their ideas to changes to the DXCC Program. Ed, AA7A, suggested ways to reduce the costs in obtaining QSL cards other than the postal system. He also wanted to know if the DXCC Program made money for the ARRL. Harry, WA6YOO, felt the DXCC Program should be continued as long as the program could pay for itself. Gene, K6OJ, felt that the DXAC should not vote to represent the membership but be concerned with determining the rules in their voting.

Another issue was a new DXCC Program to commence at the turn of the century. Did the group favor this? If so, under what terms?

Input was requested from the floor regarding this restart program which brought the question to how many were in favor of starting a new DXCC program with the provision that it run concurrently and the financial costs be solved. The QSL costs were to be ignored. The proposal went down to defeat, a ratio of 21 to 1; there were only four yes votes.

The panel was then asked on their opinions as to whether there should be more or fewer DXCC awards, including a low power award. Ed, AA7A, said that he already is involved with these awards simultaneously. He also felt that it would be impossible to regulate the one on low power. Harry, WA6YOO, could not see the addition of additional awards to the ones we already have other than those on the WARC bands. On the issue of the low power award, the only way to regulate this one would to ban all linear amplifiers. Gene, K6OJ, was in agreement, and Frank, W6SWM, stated that he hadn't used an amplifier since last year.

At the conclusion of the DX Forum, John, K6SVL, reported that beginning at the first of the year, the DXCC Desk will allow field checking of endorsements in addition to the present initial DXCC applications. Also, any correspondence may be sent to the DXAC on e-mail at DXAC@ARRL.ORG. WR

The Hustler Doublet (Double Hustler)

Tom Miller, K4IC

The purpose of this article is to describe the results of an effort to find a simple and efficient portable antenna that can be used in a variety of fixed and mobile operations.

Some hams benefit from formal education in the avionics fields while most gain their knowledge by individual study and experiments. As a career military officer and naval aviator, frequent moves provided the opportunity and motivation for lots of "cut-and-try" experiments. Since retirement from active military service, more time has been available for Amateur Radio experiments.

For the past ten years considerable experience has been gained from operating in the 80 through 10 Meter amateur bands from portable and mobile locations. Initial operations commenced aboard a motor yacht using a Kenwood TS-430 transceiver and a vertical quarter-wave Hustler antenna. Antenna location and a good ground system proved to be essential in order to tune and operate the antenna effectively. Furthermore, the theory that unbalanced vertical antennas are more dependent on good ground systems than dipole antennas proved to be true.

After considerable effort on each boat satisfactory performance was obtained, but it was obvious that the quarter-wave vertical antenna picked up more noise than most other kinds of antennas. Also, with only 100 watts of power, performance left a lot of room for improvement. This was confirmed by tests using a half-wave doublet antenna and by increasing power to 500 to 600 watts using a Heathkit SB-200 linear amplifier.

Experience over the years confirmed that there is a significant improvement in portable or mobile station performance when power output is increased from 100 watts to 500 or 600 watts. Adding this power made it necessary to replace the standard 300 watt Hustler loading coil with a kilowatt coil. The additional power with the unbalanced quarter wave vertical antenna performed well but did not compare favorably with a half-wave balanced antenna.

Even though the additional power of the linear amplifier provided a significant improvement there was a continuing urge to find a more efficient antenna that was small, easy to assemble for portable operations, and less dependent on a variety of ground systems available in portable and mobile environments. The thought occurred that since the half-wave doublet antenna is about the most efficient simple antenna in common use, why not try two quarter-wave Hustler antennas, coupled base-to-base to form a self-supporting balanced half-wave antenna? Although the Q (frequency sensitivity) of the antenna would be high, the total length would be limited to 12 to 16 feet. Furthermore, it would be light, strong, and easy to assemble and disassemble, and if required, it could be used either horizontally or vertically.

A search of the Amateur Radio magazines and numerous antenna manuals provided no evidence of this being tried previously. During a visit to the local Radio Shack, an ideal bracket for the center support was discovered. Two Mirror/Baggage Rack Brackets (Cat. No. 21-937B) were purchased and assembled as shown in Figure 1. This assembly provided the support for each of the quarter-wave antennas and at the same time provided a clamp to secure the assembly to a vertical or horizontal mast. All this seemed amazingly simple and fairly inexpensive.

The next problem was to determine

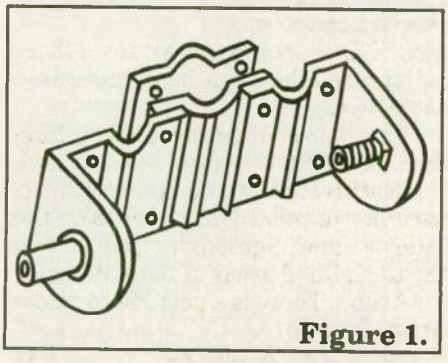
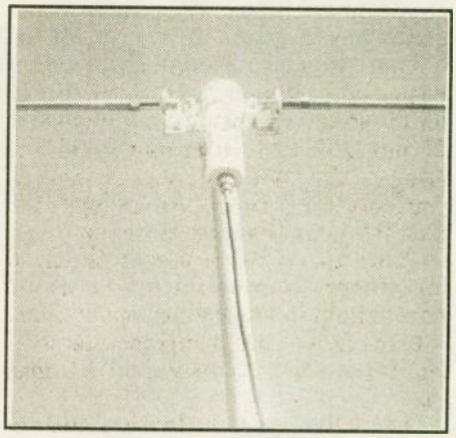


Figure 1.

how to couple the antenna to the feedline. Since the antenna was a balanced center-feed radiator with a center impedance that varied between 40 and 70 ohms, it was considered best to utilize a 1:1 balun at the center of the antenna to couple an unbalanced 52 ohm coax line to the transceiver. A trip



to the local electronics store produced a 1:1 HI-Q Van Gorden Balun. The next choice was to find a way to mount the balun and couple the two leads to the inner terminal of the female coax fitting on the back of each bracket as shown in Figure 2. An eye screw from a hook-and-eye door latch, was screwed into the inner terminal of each female coax fitting thereby forming an eye that could be lined up with the eye terminals on the balun. Using machine screws, lockwashers, and nuts, the two eyes were bolted together to form a sturdy electrical contact and support for the balun.

This completed the construction of the center support assembly and the only task left was to screw the two quarter-wave Hustler antenna assemblies into the center support structure and clamp the antenna to a mast as shown in the photograph.

Tuning the antenna turned out to be relatively simple. Using the output of the transceiver and a standing wave (SWR) bridge or an antenna analyzer, the tuning stubs outboard of the coils were adjusted symmetrically to arrive at a minimum SWR for the desired frequency of operation.

Without sophisticated antenna measurement facilities, antenna perfor-

(please turn to page 16)

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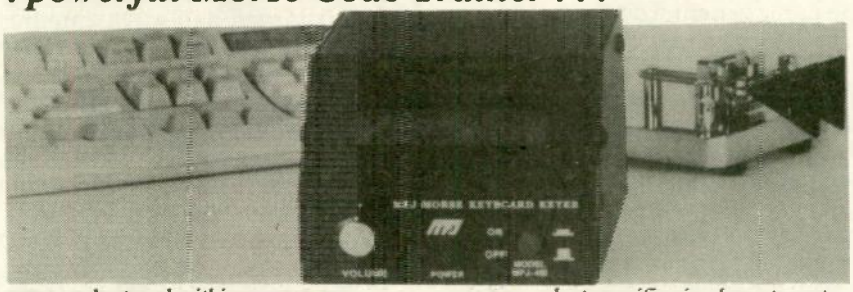

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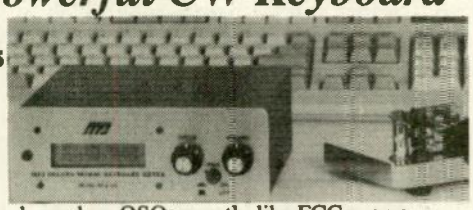

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MFJ's exclusive *AnalogSet*™ speed control lets you *customize* your speed range.

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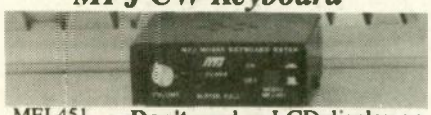
MFJ CW Keyboard



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$49.95

MFJ Deluxe Iambic Paddle feature a full range of adjustments in tension and contact spacing, self-adjusting nylon and steel needle bearings, contact points that almost never need cleaning, precision machined frame and non-skid feet on heavy chrome base. For all electronic CW keyers.

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Here's a **Compact** *Speaker/Mic that fits comfortably in your hand and has a* **full** *size speaker for crystal clear audio.*

No need to remove your handheld from your belt to talk or monitor calls. Clip it near your ears so you can easily hear every call with the volume turned down.

First-rate electret mic element and full size speaker gives superb audio on transmit *and* recieve. Earphone jack, PTT, lightweight retractable cord. Gray. 1¼x2x3 in.

MFJ-284 fits Icom, Yaesu, Radio Shack, Standard; **MFJ-286** fits Kenwood.

MFJ-284 or MFJ-286 **$24.95**

Mini Speaker/Mics

These **tiny** *MFJ Speaker/Mics are so small and so lightweight you'll forget they're there -- until you get a call.*

Excellent audio from electret mic element and speaker. Has swiveling lapel /pocket clip, PTT button with transmit LED, earphone jack, lightweight retractable cord. Available with L or regular connector. *Tiny* 2x1¼x¼ in.

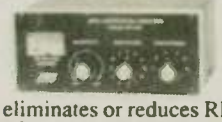
Order MFJ-285/MFJ-285L for ICOM, Yaesu, Alinco; **MFJ-287/MFJ-287L** for Radio Shack, Standard, Kenwood; **MFJ-283** for split plug Alinco; **MFJ-285W** for IC-W2A.

MFJ-283, MFJ-285, MFJ-285L, MFJ-285W, MFJ-287 or MFJ-287L **$24.95**

L Connector also available - order L model.

MFJ Artificial RF Ground

MFJ-931 **$79.95**



Creates artifical RF ground that eliminates or reduces RF hot spots, RF feedback, TVI/RFI, weak signals caused by poor RF grounding.

Greatly improves your signal if you're using a random wire or longwire antenna with an ineffective ground.

Electrically places a far away RF ground directly at your rig by tuning out reactance of connecting wire.

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Throw this *tiny* MFJ 20 Meter CW Transceiver in a corner of your briefcase and enjoy DXing and ragchewing wherever you go. You get a high performance superhet receiver, crystal filter, RIT, AGC, vernier tuning, sidetone, speaker, up to 5 watts output, semi/full break-in, much more. *Free* manual. See *free* MFJ catalog for 40, 30, 17, 15 Meter versions, keyer, audio filter, power pack, tuner, antennas.

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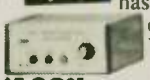
"World Radio TV Handbook" says MFJ-1024 is a "first rate easy-to- operate active antenna...quiet...excellent dynamic range...good gain... low noise...broad frequency coverage... excellent choice."

Mount it outdoors away from electrical noise for maximum signal, minimum noise. Covers 50 KHz - 30 MHz.

Receives strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED. Switch two receivers and aux. or active antenna. 6x3x5 in. Remote has 54 inch whip, 50 ft. coax. 3x2x4 in. 12 VDC or 110 VAC with MFJ-1312, $12.95.



$129.95 MFJ-1024

Cross-Needle SWR Meter

MFJ-815B **$69.95**

Peak/ average Cross-Needle SWR/ Wattmeter. Shows SWR, forward/ reflected power in 2000/500 & 200/50 watt ranges. 1.8-60 MHz.

Mechanical zero. SO-239 connectors. Lamp uses 12 VDC or 110 VAC with MFJ-1312, $12.95.

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$39.95 MFJ-1701

$21.95 MFJ-1702B

$59.95 MFJ-1704

Select any of several antennas from your operating desk with these MFJ Coax Switches. They feature mounting holes and automatic grounding of unused terminals. One year *unconditional* guarantee.

MFJ-1701, $39.95. 6 position antenna switch. SO-239 connectors. 50-75 ohm loads. 2 KW PEP, 1 KW CW. 10x3x1½ in. DC-60 MHz.

MFJ-1702B, $21.95. 2 positions plus new Center Ground. 2.5 KW PEP, 1 KW CW. Insert on loss below .2 dB. 50 dB isolation at 450 MHz. 50 ohm. 3x2x2 in. *MFJ-1702BN, $31.95, N connectors, DC-1.1 GHz.*

MFJ-1704, $59.95. 4 position cavity switch with lightning/surge protection. Center ground. 2.5 KW PEP, 1 KW CW. 50 dB isolation at 500 MHz. 50 ohm. 6½-x4¼x1¼ in. *MFJ-1704N, $69.95, N connectors.*

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$59.95 MFJ-264

MFJ-260C, $29.95. VHF/HF. Air cooled, non-inductive 50 ohm resistor. SO-239 connector. 300 Watts for 30 seconds, derating curve. SWR less than 1.3:1 to 30 MHz, 1.5:1 to 650 MHz. 2½x2½x7 in. *MFJ-260CN, $34.95, N connectors.*

MFJ-264, $59.95. Versatile UHF/VHF/HF 1.5 KW load. Low SWR to 650 MHz, usable to 750 MHz. 100 watts/10 minutes, 1500 watts/10 seconds. SWR is 1.1:1 to 30 MHz, below 1.3:1 to 650 MHz. 3x3x7 in. *MFJ-264N, $69.95, N connector. MFJ-5803, $4.95, 3 ft. coax/ PL-259.*

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Suppress TVI, RFI, telephone and other interference by reducing unwanted harmonics going to your antenna. 9 poles, MFJ's exclusive *Teflon® Dielectric Technology™* capacitors, hi-Q inductors, ground plane shielding, RF tight cabinet gives excellent TVI/ RFI protection. Full legal power 1.8-30 MHz. Mounting tabs.

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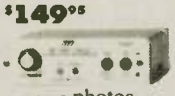
MFJ-1214PC **$149.95**



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MFJ-564 **$49.95**

MFJ Deluxe Iambic Paddles feature a full range of adjustments in tension and contact spacing, self-adjusting nylon and steel needle bearings, contact points that almost never need cleaning, precision machined frame and non-skid feet on heavy chrome base. For all electronic CW keyers.

MFJ/Bencher Keyer

MFJ-422C **$134.95**

The best of all CW worlds --a compact MFJ Keyer that fits right on the Bencher iambic paddle!

Iambic keying, speed (8-50 wpm), weight, tone, volume controls. Automatic keyer or semi-automatic ("bug")/tune mode. RF proof. 4⅛x2⅝x5½ in.

MFJ-422CX, $79.95, keyer only for mounting on your Bencher or MFJ paddle.

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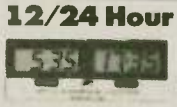


$19.95 MFJ-108B

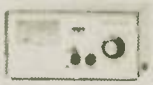
$24.95 MFJ-112

MFJ-108B dual clock has separate UTC and local time displays. Huge 5/8 inch LCD digits are easy-to -see. Brushed aluminum frame.

MFJ-112 shows hour/minute/ second, day, month, date, year at any QTH on *world map*. 12 or 24 hour display. Daylight saving time feature.

VHF SWR/Wattmeter

MFJ-812B **$29.95**



Covers 2 Meters and 220 MHz. 30 and 300 Watt scales. Relative field strength 1-250 MHz, SWR above 14 MHz. 4½x2¼x3 in.

Code Practice Oscillator

MFJ-557 **$24.95**

MFJ-557 Deluxe Code Practice Oscillator has a Morse key and oscillator unit mounted together on a heavy steel base so it stays put on your table. Portable. 9-volt battery or 110 VAC with MFJ-1305, $12.95.

Earphone jack for private practice, tone and volume controls for a wide range of sound. Speaker. Adjustable key. Can be hooked to transmitter. Sturdy. 8½x2¼x3¾ in.

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Use your rig's 12 VDC power supply to power two HF/VHF rigs and six or more accessories with this MFJ *high current* multiple DC outlet.

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Hustler Doublet

(continued from page 13)
mance was evaluated over several months at several locations, both fixed and mobile. Comparative signal reports taken during normal amateur SSB operations on the 40 and 20 Meter bands indicated that the Double Hustler antenna performed significantly better than the quarter-wave vertical. In general, signal reports averaged between 10 to 15 dB stronger. This was surprising because past experience had shown that vertical antennas usually perform very well on the 40 Meter band.

The Double Hustler has continued to perform exceptionally well at a variety of fixed-portable and marine mobile locations. The antenna has proved to be less dependent on ground systems and its light weight, size, ease of assembly, and portability make it a pleasure to use. Noteworthy was the fact that the standard 300 watt Hustler coils operated satisfactorily in the Double Hustler mode up to 500 to 600 watts. WB6KQE has used this antenna on top of a recreational vehicle for more than six months with identical results. A third ham, K6DUE, is now using one as well.

It is important to recognize that this concept would most likely work equally well with other commercially built or self-built quarter-wave mobile antennas. In my case, the Hustler antennas were already available.

For those who would like to experiment with this antenna concept there are a number of possibilities. For instance, spider fittings could be attached to each end thereby providing multi-band operations without having to change coils. Other possibilities exist for the use of a horizontal mast that would permit easy rotation for either vertical or horizontal polarization. And finally, additional similar dipoles could be put together and tuned to act as a reflector or director or both. Good luck and have fun! WR

DX friendship triggers medical assist

Bob Josuweit, WA3PZO

It was May of 1992 when Mike Pilotti and Nick Bortnik first met on the Amateur Radio bands. "CQ North America, CQ North America. This is UXØZZ in Nikolaev, Ukraine calling and listening."

"UXØZZ, this is N3IRZ in Phoenixville, PA. How do you copy?" replied Mike Pilotti, a member of the Mid-Atlantic Amateur Radio Club. With that exchange, a unique friendship was born, 5000 miles from each other. During the next several months, Mike and Nick repeatedly and unexpectedly ran into each other while conversing with other ham radio operators.

It was uncanny, even though there is an eight-hour time difference between us, we kept bumping into each other," says Pilotti. Something clicked between Nick and me," continued Pilotti, "We found we have a lot in common. When conditions permit, we talk for hours." Nick can be heard on 20 Meters working the world. Pilotti is now Nick's QSL Manager.

Nick, who is thirty-one years old, married, and the father of a one-year-old baby boy, was stricken in late 1994 with a strange illness. He is currently unable to work to support his family and although he has been to many different hospitals, doctors are unable to diagnose his illness. "You have to remember, Ukraine lacks medical technology, their hospitals are equivalent to what we had in the U.S. in the 1930s and CAT-scans and MRIs are non-existent," said Pilotti.

Nick's health continued to decline rapidly. He spoke with Mike weekly and explained that he feared for his life. "It began to gnaw at me. I wanted to help him, but didn't know what I could do," Pilotti said. He explained to Nick that although he could raise funds for his airfare to and from the U.S., it would be difficult to find a U.S. hospital willing to donate testing and treatment services. However, within a few days medical and hospitalization assistance were obtained.

Nick Bortnik, UXØZZ

Nick is currently in the process of obtaining his visa from the U.S. Embassy in Kiev and Congressman Jon Fox's office is helping to expedite the matter. Pilotti is in the process of raising the funds for Nick's airfare. The Mid-AtlanticARC has agreed to sponsor the trip and has raised and donated half of the money required. "The Mid-Atlantic Amateur Radio Club has been great. They really came through for me just as I was about to give up. A project like this demonstrates the true spirit of Amateur Radio as a world-wide fraternity. I think it's the greatest hobby in the world," Pilotti said.

Pilotti hopes to raise enough money to bring Nick to the area. While Nick's health is the primary concern, he would also like to bring his wife and child over to keep him company during his hospital stay. If you would like to make a donation to assist with Nick's expenses, donations can be sent to: The Mid-Atlantic Amateur Radio Club, P.O. Box 352, Villanova, PA 19085. Make checks payable to MARC, Attn: Nick.

One of MARC's founding members, Bob Josuweit, WA3PZO, of Philadelphia explains that MARC members have always been available to help the public in times of need. Members have helped provide communications during major weather emergencies. "It is really great to be able to help someone in a time of need." WR

New Orleans International DX Convention, Aug. 25-27, 1995

John F. Minke, III, N6JM

Belize DXpedition

Mike Mayer, W5ZPA, was first on the program that Friday afternoon with a video presentation of a DXpedition to Ambergris Cay, IOTA reference NA-073, off the coast of Belize. Mike and other members of the Delta DX Association had combined a vacation to a resort area with that of a DXpedition.

Log periodic design

John Uhl, KV5E, presented the group with the design of high frequency log periodic antennas, with the array made of wire elements and wire feeders. John stated that the design procedure included much calculation to come up with such an antenna. The procedure was greatly reduced by the use of a Lotus program that he had written. He showed us how changing any of the parameters could change the design of the antenna. John says this antenna is rotatable, but must be done so by walking the end around a pole that supported the front end of the wire boom. John did prepare a handout of his design. A design of a similar antenna was in a 1986 issue of *QST*.

HSØAC DXpedition to Thailand

A video presentation was of a visit to club station HSØAC in Thailand by Gary Jones, W5VSZ. Gary is a professor at a university in Mississippi. The date was August 14 through 23, 1993. As many DXers do not have Thailand worked via RTTY, Gary decided to make this an RTTY DXpedition.

For years very few had permission to have their own stations, even though they may have a license to operate. Local Thai amateurs do enjoy social gatherings. To be able to operate from club station HSØAC one must become a life member of RAST, the Thai national society. Membership amounts to about $80 U.S. which includes newsletters. The guest operator now receives such a license which is good for 14 days. HSØAC is located at the Bangkok Science Museum. The station was started in 1988 and is presently being relocated. Thailand does not allow their amateurs to operate on 80 or 160 Meters. Two positions are for HF work and include a TS-950, lacking the necessary filters, and an IC-781 with an amplifier running a maximum of 500 watts. They can work VK/ZL in the afternoons and as the sun sets, they work into the Pacific. North American signals come in the early morning. There is another station active in Thailand signing with HSØA, but that is mainly a contest station. The call probably is now E2ØA as that is a prefix that is now being used.

TN4U/TN2M DXpedition

One thing about the New Orleans DXers is that they are flexible. Such was the added presentation by Holger, DL7VTM, on the German DXpedition to the Congo. In planning their DXpedition, Holger stated that they had applied for two licenses, as they wanted a special call for the YL operators. Many DXers needed a YL contact with the Congo, and addition there were many that needed a contact for a new one on RTTY. The DXpedition team consisted of five operators: Holger, and his XYL Birgit, DL7VTZ; Fritz, DL7VRO, and his XYL Gerda, DL7VYL; and the fifth operator (the QSL card shows six operators). Two calls were used, TN2M and TN4U, for an operation of four days netting some 13,000 contacts. The presentation was a video with Holger narrating.

4J1FM Malyj Vysotkij Island

Another video presentation was the 4J1FM Malyj Vysotkij Island DXpedition by Frank SmithAHØW. Frank also holds the call OH2LVG and several other calls. In the real world Frank is a vice president with Merrill Lynch. The team was nearly prevented from getting through at all. When they stopped at the Russian customs they did not have "bring a car through" stamped on their visa. Had they travelled via helicopter it would have been O.K. So, they had to return to Finland where a few telephone calls were made. One of the Finns received a telephone call on his cellular phone and said to Frank, "it's for you." Suddenly they were on their way back and through customs without any problems.

Frank said that between the contest and the DXpedition the team made some 15,000 contacts. The boat that serves the area had to make a special trip to the island. The fare for the team was $8 round trip. They were so grateful that they tipped the skipper $10, which caused some fury with the Russians.

Welcome and remarks

The official portion of the New Orleans International DX Convention began at 9:00 Saturday morning with the welcoming and opening remarks by Wes Strauch, W5VBX, the convention president. He in turn introduced several recognized DXers of the Delta Division, including Rick Roderick, K5UR, Delta Division DXAC Representative; Gary Jones, W5VSZ, who spoke the previous evening; Joel Harrison, WB5IGF, Delta Division Director, and Bill Moore, KC1L, from the DXCC Desk. Bill, KC1L, spoke briefly and said that the DXCC Desk is working towards have field checking for DXCC endorsements. Presently, only the initial application can be field checked, with the exception of 160 Meter DXCC.

3D2CT Conway Reef DXpedition

Northern California DX Club's Gary Shapiro, NI6T, was the last speaker prior to the lunch break. This was the famous 3D2CT Conway Reef DXpedition which has previously been presented at Visalia. Gary said that the DXpedition was basically put together in only two months. If you will remember it was this group that got dumped twice while trying to land on the reef.

9G5VT Ghana DXpedition

Vince Thompson, K5VT, spoke that afternoon. Along with the Central Arizona DX Association he led a team of DXers to operate as 9G5VT in the 1994 CQ Worldwide DX Contest. Ghana had been off the air for several years and this one was decided as a good one to

activate. They made some 5,380 contacts for 10,094,922 points making them fifth or sixth worldwide.

Banquet

This was the highlight of the convention.

The evening program began with a DX countdown to see who had the most DXCC countries worked. The honor went to Ed Benkis, W2HTI, with a total of 374 DXCC countries (this includes deleted countries, of course).

Al Hermandez, WA3YVN, spoke on the recent DXpedition to South Georgia Island. Al was involved with the South Sandwich Islands DXpedition a couple of years ago and found that the same ship, the *Abel J*, a 106-foot research vessel, was available for charter. It took them about eight weeks to prepare for the DXpedition for the VP8SGP operation. Team members included Al, Vince, K5VT, VP8BFH, and Jan, WA4VQD. They had requested VP8SGP as the call, but found out when arriving at the licensing office on the Falklands, that this required a "special reason" to apply for a specific call. As they had VP8SGP on their baseball caps that sufficed for "that's a special occasion" and they were issued the VP8SGP call. The operation from South Georgia Island was the site of an old whaling station that at one time housed 900 men. North America was to the north and they were operating from the other side of the island with a mountain in between them. When they prepared to leave they left behind the tribander for Patrick and Sarah, resident Amateurs on the island. The team had made about 18,000 contacts, and of that 56 percent was North America and 30 percent with Europe. The trip back to the Falklands was not at all eventful, with 20' swells, 70 m.p.h. winds for four days.

At the conclusion of the evening Vince Thompson, K5VT, was named the convention's DXer of the Year award presented to him by Wes Strauch, W5VBX. In recognition Rick, K5UR, said that Vince visited some 67 countries beginning in 1966. He always left his mark as a good ambassador — a good relationship for us all. WR

NEWSFRONT
(continued from p. 3)

NY fire heroes

Ham radio operators on New York's Long Island saw a lot of action as a pair of brush fires became devastating fire storms and ravaged thousands of acres before being contained.

The first fire broke out on Monday, 21 August. Due to tinder dry conditions it spread very quickly and became the worst fire disasters to hit the area in almost ninety years.

Over 2,000 firefighters, some coming from as far away as New Mexico and Washington state were brought in to fight the blaze. Providing primary communications for the firefighters and relief operators were ARES operators and RACES volunteers.

Andrew Feldman, WB2FXN, is the District Emergency Coordinator and state RACES Officer for Suffolk County New York. He says that about eighty radio amateurs participated in this communications emergency. Feldman, who has served in ARES since he was a teenager adds that years of training on the part of the ham radio community really paid off.

Feldman says that much of the communications effort utilized the facilities of three area repeaters. One of these was the WB2DRK repeater operated by the Suffolk Police Amateur Radio Club. Two other 2 Meter repeaters were used during the fire emergency.

These were the W2DQ machine owned by the Suffolk Amateur Radio Club and the W2OQI system operated by the Rock Hill Repeater Association.

Japan tries to control yen

Japan says that it is going to try to stop the rising cost of goods that it exports by placing several controls on its currency. This is good news for hams who have been contemplating the purchase of new equipment but have been waiting for prices to stabilize.

International monetary analysts are still pessimistic that much can be done to reverse the upward spiral of the yen and the devaluation of the dollar. They say that the measures taken were a positive step, but will probably not be enough to change the basic causes of the yen's rise in value versus other currencies. The yen's escalation the past two years has taken a major toll on Japan's corporate profits and added to fears that nation's sluggish economy may soon slip back into recession. It is also the cause of an estimated 18% price increase on almost all goods — including ham radio equipment — imported from Japan since 1 January of this year.

Don't look for prices on goods from Japan and other Pacific Rim nations to fall, however. There is a lot of catching up to do on profits that were lost before any price reductions begin. More increases are expected before year's end.

The bottom line. As expensive it is, that new radio you want might be a better bargain now than under the Christmas tree in December. Some say an estimated 10% better bargain now, than at the end of 1995.

WRTC-1996 set

A second World Radiosport Team Championship is scheduled to be held the weekend of 13-14 July 1996, in the San Francisco Bay area. Sponsored by the Potomac Valley Radio Club and the Northern California Contest Club the competition will run in conjunction with the IARU High Frequency World Championship.

The first WRTC was held in Seattle in 1990. A Washington, D.C. group, headed by the Potomac Valley Radio Club had begun plans for a second WRTC event to be held in July 1995, but that event did not materialize.

Now WRTC 96 co-chairman Bruce Sawyer, AA6KX, says that the Northern California Contest Club expects to make a number of changes to the team selection criteria the Potomac group had planned to use.

The WRTC pits two-person teams comprised of some of the world's top operators in head-to-head competition. To emphasize operator ability, each team runs the same amount of power and operates from stations having similar antenna systems and area located in the same geographical area.

For more information about WRTC-96, contact Rusty Epps, W6OAT, at 651 Handley Trail, Redwood City, California 94062 or via e-mail at epps@netcom.com. WR

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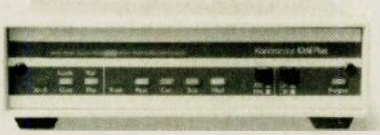
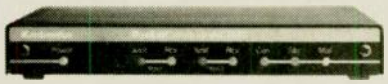
THE ULTIMATE DATA CONNECTION

KAM Plus™
HF and VHF Dual Port
Multi-Mode Controller



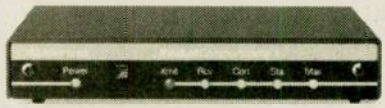
The definitive multi-mode TNC, the KAM Plus features an HF port and a VHF port, so it easily operates any HF mode and VHF packet at the same time. Operates G-TOR™, PACTOR, AMTOR, PACKET, RTTY, CW, ASCII, and NAVTEX/AMTEX and offers G-TOR monitoring without additional monitoring software. The KAM Plus supports GPS operations and is APRS compatible. Equipped with 128K RAM, configure your KAM Plus mailbox space to more than 100K. The battery-backed RAM saves all parameters and mailbox messages. The KAM Plus uses standard shifts and is programmable for any shift. Operates RS-232 or TTL. Can be accessed and controlled remotely, features on-line help messages for each command, and comes with software to help you get started. Very low power required: 9-15 Vdc @ <260 mA. 1-3/4"h x 6"w x 9"d. 2-1/2 lb.

KPC-9612™
9600 and 1200 Baud
Dual Port Packet Communicator



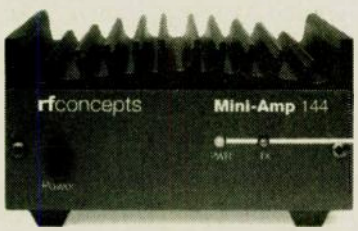
The leader among dual-port, dual-speed TNCs, the KPC-9612 can operate at both 9600 and 1200 baud at the same time. The 9600 baud port can even be configured for 19,200 baud. The KPC-9612 supports GPS operations and is APRS compatible. And with Kantronics' new K-Net networking option, the KPC-9612 can operate as both a networking node and a TNC at the same time. Choose a 32K or 128K RAM version, and configure your full-featured PBBS to more than 100K of mailbox space. Battery-backed RAM saves all parameters and mailbox messages. Can run on a 9-volt battery, can be accessed and controlled remotely, features on-line help messages for each command, and comes with software to help you get started. Very low power required: 6-25 Vdc @ <45 mA. 3/4"h x 6-1/4"w x 6-1/4"d. 13 oz.

KPC-3™
1200 Baud
Packet Communicator



The hottest TNC on the market, the KPC-3 is the perfect 1200 baud packet TNC. Choose a 32K or 128K RAM version, and configure your full-featured PBBS to more than 100K of mailbox space. Battery-backed RAM saves all parameters and mailbox messages. Kantronics provides the most flexible GPS operations available in a TNC, and the KPC-3 is APRS compatible. With Kantronics' new K-Net networking option, the KPC-3 can operate as a networking node and a TNC at the same time. Can run on a 9-volt battery, can be accessed and controlled remotely, features on-line help messages for each command, and comes with software to help you get started. Very low power required: 6-25 Vdc @ <40 mA. 3/4"h x 5-1/4"w x 5-1/4"d. 11 oz.

ENJOY THE BEST



Mini-Amp 144

2m and 70cm HT amps

For the 2 meter and 70 cm bands, rfconcepts' new Mini-Amp™ 144 and Mini-Amp 440 are perfect for hand-held radios. Both amplifiers are available with preamps producing 10 to 15 dB gain, and both will accept 1 to 6 watts in. They are very small and lightweight and can easily be equipped with mounting brackets, so they are ideal for portable use.

Model #	144	144P	440	440P
Power In:	2W/3W		3W	
Power Out:	20W/30W		20W	
Max. Input:	6W			
Gain (typical):	–	15dB	–	10dB
Current:	5A			
Size (inches):	4 x 2 x 6			
Size (cm):	10.2 x 5.1 x 15.2			

Mini-Amp 144P with preamp

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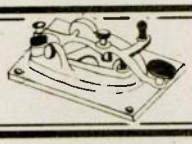
SILENT KEYS



Lee Brown, N4DTB

Lee Brown, N4DTB, became a Silent Key on 4 June 1995. Lee was a former Air Force MARS member and was an Army MARS member at the time of his death. He was very active in the satellite communications mode and had given such a presentation to the members of CFARS of Fayetteville, North Carolina. Lee had a 2 Meter repeater installed on the Veterans Hospital of Fayetteville, one of our highest locations. He was also very active in the "Possum Trot Net" on 10-10 net and 2 Meters.

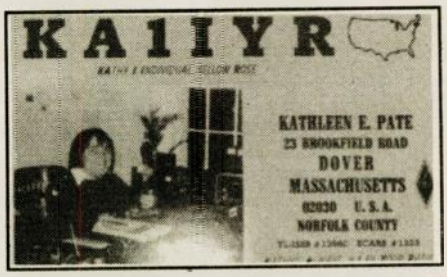
Lee will be missed by our radio community. *submitted by Jim Mulhall, WA4KBI*

Kathy Pate, KA1IYR
A double tribute

Kathy Pate, KA1IYR, a life-long resident of Dover, Massachusetts, became a Silent Key in November 1994. She was very active in her church, but the hams around the Boston area will remember her as Net Control on 146.64 repeater during the *Going In* and the *Going Home* shows each week day. She always remembered everyone's name and call sign with a friendly word for all and was always ready to give directions and make emergency calls to the State Police.

Each June, Kathy and her family invited all her ham friends to her home for a party. Kathy was a Life member of both the Waltham Amateur Radio Association and the WellesleyAmateur Radio Society. She will be missed by all who knew her.

On 5 June 1995, the Wellesley Amateur Radio Society presented 24 ARRL publications to the Dover Library, dedicated to Kathy's memory. Present were Kathy's parents Mr. and Mrs. Charles Pate, and her sisterAnn Pate. Representing the Wellesley Club



were: Barbara Holdridge, N1ICQ, President; Arline Berry, N1OMA, Secretary; Jerry Driscoll, NV1T, Treasurer; Jack Logan, N1TPU, and Paula Young, Library Director.

The Waltham ARA met on 17 June at the Crotched Mt. Rehabilitation Center in Greenfield, New Hampshire, as a step in keeping Kathy's spirit alive, they presented a gift to the Center. Kathy's parents had donated her station equipment to the ham station at the Center. It is hoped that her call sign will be assigned to the Center at a later date. The group had a very inspirational ceremony followed by a picnic and a tour of the Center. — *submitted by Arline F. Berry, N1OMA*

Bob West, WB4ILA

Bob West passed away on 17 June 1995. He was a General Class licensee and worked at Dynalectron in Washington, D.C. Bob was a charter member of the Fayetteville North Carolina Amateur Radio Society.

Poor health prevented him from being very active during the last few years.

Amateur Radio has lost a dedicated man and operator. His death is deeply felt by many, and I still want to call him sporadically as per our schedule. —*submitted by Jim Mulhall, WA4KBI*

George Heitzman II, W7AHX

George Heitzman II, W7AHX, became a Silent Key from congestive heart failure on 25 June 1995. He was born 11 November 1912, in Eugene, Oregon, to George and Emma Heitzman, and attended St. Mary's Catholic School.

On 11 November 1939, he married Rose Marie Galvin in Eugene.

The first certified journeyman plumber for the Eugene Shool District, Heitzman owned and operated George D. Heitzman and Son Plumbing & Sheet Metal Co.

In addition to his long-timeAmateur Radio hobby, he was a master fly fisherman, and enjoyed woodworking.

In addition to his wife, he is survived by two daughters, Christina Collins of Eugene, and Rose Marie McGuire of Reno, NV; one son, George D. Heitzman III of Seattle, WA; nine grandchildren and six great-grandchildren.—*submitted by Rose Marie Heitzman*

Please be seated

Robert H. Mitchell, W2CSL

I just heard a ham on 20 Meters say, "I'll be standing by." Now I won't accuse him of falsehood, this is a traditional saying, but I wonder how many hams are actually "standing by?" A few, maybe, but I'll bet there are more "sitting by," some "walking by," some "lying by," once in a while a "bicycling by," or "flying by." In fact, I just heard a guy say he was running up the Hudson River on a yacht. What would he be? Slogging by? But at my age, I guess I'll just continue to "stand by" as long as I can stand erect. WR

Awards

The Pennsylvania "67" Award

Sponsored by the Mid-Atlantic Amateur Radio Club, Inc.

1. **Basic requirement:** Confirmed Amateur Radio QSOs with all 67 counties in the Commonwealth of Pennsylvania. QSL cards must be in the applicant's possession.

2. **Valid contacts: All** contacts must be 2-way communications made in real time. These contacts may be on any Amateur Radio band/mode.

Contacts made using repeating devices such as FM repeaters, Amateur satellites, moonbounce, and keyboard-to-keyboard contacts through digipeaters/nodes are valid, because these QSOs are made in real or near real time.

Contacts made by storing messages on BBS stations (whether terrestrial or onboard satellites) or by forwarding messages through a network of such BBSs are not valid.

In other words, this award is for QSOs between operators, not for exchange of messages.

3. **Verification of contacts:** Sending cards with the application is not required. An application form is available, but its use is not required. Applicants shall submit a list of QSOs, alphabetized by county, showing the following QSO data: county, call sign of station contacted, band, mode, date, and UTC time. The name and callsign of the applicant should be printed clearly, exactly as they are to appear on the certificate.

QSL cards and the application are to be presented to one of the following for checking and verification: (a) the president of a ham radio club, or (b) an official of the ARRL or DX applicant's national Amateur Radio Society

The following statement, or equivalent language, should appear on the application. The person who checks the cards should sign this statement and also clearly print his or her name and position title.

"I have examined QSL cards for all the listed contacts. The information is accurate as listed."

4. **Award fee and return envelope:** Applicants in the USA should enclose a check for $1.00, payable to Mid-Atlantic ARC. DX applicants (including Canada), please send 1 IRC All applicants please enclose a self-addressed envelope large enough to hold an 8½ x 11 inch (21.5 x 28 cm) certificate.

5. **Submission of application** Mail the completed application to:
Mid-Atlantic Amateur Radio Club
Attn: Pennsylvania 67 Award
P. O. Box 352
Villanova, PA 19085
U.S.A.

SPECIAL EVENTS

Rio Grande Snowbirds

The Brownsville Charro ARC will operate KC5PCN on the beach at the mouth of the Rio Grande 4-5 November, to celebrate the return of snowbirds to the Rio Grande Valley. Operation will be in the General portions of the 40, 20 and 15 Meter phone subbands and in the Novice 10 and 6 Meter phone subbands. Operation will be from as far south as you can go in Texas on grid square EL15XX. Send QSL and SASE to Charro, Box 8610, Brownsville, TX 78526.

Veteran's Day

The Albuquerque ARC will operate WB5MII at the V.A. Hospital from 1600Z, 11 November, to 1600Z 12 November to commemorate Veteran's Day. Operation will be on 40, 20, and 15 Meters in the General phone subbands. For a certificate, send an SASE to AARC, P.O. Box 11853, Albuquerque, NM 87192.

U.S.S. *Silversides*

The Muskegon Area Amateur Radio Council will operate W8ZHO from 1800Z, 4 November aboard the U.S.S. *Silversides*. Operation will be on General phone and CW portions of the 40 and 20 Meter bands. For certificate send QSL and SASE to Robert Carter, WB8OQT, P.O. Box 691, Muskegon, MI 49443.

Alcatraz Island

The Sacramento ARC will operate W6AK from Alcatraz Island on 4 November, from 1800Z to 2300Z. The actual site of the operation will be Alcatraz prison, and will run three transmitters on or about 3.880, 7.290 or 14.280 MHz. If 15 Meters is open, try 21.300. For QSL, send SASE to SARC, Box 161903, Sacramento, CA 95816.

Pioneer Iron Works

The Rainbow Canyons ARC will operate NR7T 10-11 November, from 1500-2400Z, in conjunction with "Iron Mission Days," 144th anniversary of the first Pioneer Iron Works. Operation will be on the General phone portion subband (including 10 Meter Novice band), 80 and 10 Meters. For 8 x 11 certificate, send QSL and 9 x 12 SASE to: Richard Parker, KI7DF, 4410 N. Apple Blossom Lane, Cedar City, UT 84720. WR

STATION APPEARANCE

Michael Bass, KK6WO

*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.*

Our selection of the month for November goes to Michael Reagan, KK6WO, who resides in Pasadena, California.

I was first licensed as KC6NRT in 1990. I am a librarian at California State University, Northridge.

I am an Internet aficionado, a model railroader, and like to dabble in woodbutchery.

I have a newly remodeled room that contains my station. Two other walls contain office machines and computers, but this northwest corner by the window is the radio shack. Antenna leads and ground enter the room at floor level beneath the custom countertop/desktop. Under the window on the north wall are bookshelves ten inches deep, with a counter top style upper surface.

The wall behind is covered with cork, and the station is housed in and under an oak plywood cabinet 24 inches high, 36 inches wide, and 16 inches deep. The cabinet is hinged to the wall at the right, has a plywood back for rigidity, with holes to allow changing cable configurations, and is supported at the bottom by a 2 x 4 lag bolt bolted to two studs in the wall behind. At the upper left there is a block toggle bolted to the wall, with a screw through the side of the cabinet to keep it snug against the wall, except when it is swung out to make changes. Cutouts at the back of the shelves allow cables to pass. The cabinet is constructed with rabbet joints reinforced with dowels.

The equipment is as follows: Top shelf, (from left to right); triple cigarette lighter socket screwed to the top of the cabinet; a home-built loudspeaker cabinet with volume controls, switches, and headphone jacks for both 2 Meter and HF transceivers, with headphones on top; a Kenwood TH-31BT 220 MHz handie talkie clipped to a metal book-end screwed to the shelf; a portable 12-volt rechargeable MVP handy power system; an emergency light that can be plugged into a cigarette lighter socket and an Astron RS-20M power supply.

Second shelf, (left to right): An MFJ HF SWR wattmeter; ICOM IC-27H 2 Meter transceiver, home-built switch box to control microphone or TNC input to 2 Meter and HF rigs as well as TNC or keyer input to HF; Kantronics KAM terminal node controller; and Kent keyer (paddles on book shelf top under the window).

Bottom shelf, (left to right): Murch UT2000A "ultimate transmatch." ICOM IC-735 HF transceiver; automobile adapter for Toshiba; and an ICOM PS-55 power supply.

On counter top, (left to right): Brookstone World Time clock; log book; ICOM SM-8 two line microphone; Toshiba T1600 computer.

The 2 Meter transceiver is connected to a J-pole antenna on the roof of the two story house, the 220 MHz HT is connected to a roof-mounted ground plane, and the crowning glory on the 1909 house is a Buttternut antenna attached to the IC-735.

The entire station, including the computer, can operate both from 120V AC power and from a 12 volt deep cycle battery on the shelf under the counter. There is a feed line in place from the terminals on the back of the Astron to below the counter, so all but the HF rig will shift to emergency power by simply unplugging the wall power and attaching the two clamps to the battery posts. The HF rig is converted to battery power by unplugging the PS55 connector at the back of the rig and substituting a connector leading to the battery.

The upper surface of the cabinet is available for expansion, if necessary, but this station, with built in flexibility, will likely accommodate the moderate growth expected without growing upward. WR

Avoid that last minute gift panic — see the back inside cover for a great list of books for your Amateur Radio friends.

OFF THE AIR

Pratas Island DXing

On page 28 of your September issue, in the DX column, speaks to the Pratas Island DXpedition. This caught my eye, and I wished I had attempted to "work" the group that went there.

During WWII, I was assigned to the submarine U.S.S. Bluegill SS (242), and on 29 May, 1945, I led a landing party onto Pratas. There were no Japanese there, but we did find a bugle, so we called the landing party to attention and hoisted the Stars and Stripes to the top of the flagpole and affixed a plaque to the base of the pole changing the name from Pratas to "Bluegill Island."

At that time that was the farthest advance westward of Allied forces. After the ceremony we blew up some ammunition and oil dumps and returned to the submarine.

Any of those hams who were on the expedition can find the complete account in the May 1993 issue of *Sea Classics*, Volume 26, number 5.

George Folta, W7KEG
Mercer Island, Washington

Ham meeting etiquette

Ham meetings — they often have a speaker at the local club or hamfest get-together. They're usually quite interesting, particularly if the subject is one that interests you.

Then how come there seem to be other QSOs going on at the same time in the same room? Often they successfully out shout the speaker!

If you are a member of a club and your club invites a speaker then, in effect, you are part of the invitation. Do you invite people to your house then ignore them and hold conversations that they're not part of?

From observation it seems like hams have been developing...[an] ability to be rude.... The point is that a speaker at a function has the right to expect a listening audience. If the subject is not your thing, then you and your buddies should go out in the hall or another room where you can't be heard and enjoy each other. Other members no doubt want to hear what is said.

While on the subject of courtesy, perhaps some protocol questions should be added to the ham licensing tests. It's easy to get the feeling that some of the newer hams think that repeaters are maintained by the government or a benevolent organization for their express use. It's true many clubs, often those with a corporate sponsor who welcome and encourage all to freely participate.

Then there are those small groups who operate a repeater for their own use. Someone's call is attached to the machine. That person is responsible for what goes over the repeater. Members, or even an individual has to do installations, do the maintenance and pay the insurance and electric bills. Usually these individuals don't mind occasional use by an outsider, but when 2, 3 or more people move in on to a quiet machine and use it as if it were theirs or like something they found in a parking lot, they may very well be asked to leave.

Is it bad manners or ignorance? If it is ignorance, then it is up to those teaching the courses and writing the manuals etc., to stress these things. New hams should be told to seek out a repeater club or group and join them. Ask before moving in. Simplex operation should be explained so that they understand you can actually talk to stations at some distance without a repeater! As I write this, there are 2 fixed stations having a long QSO about computers tying the repeater up and I can hear both on a hand held on the input, an ideal situation for simplex. Then there's the "Call Please" which turns into a QSO edging out your QSO!

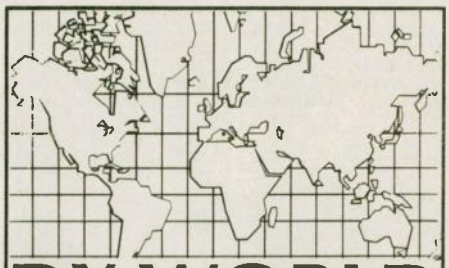
Van R. Field, W2OQI
Center Moriches, New York

HAMCON 1995

Carolyn Valek, KE6SBB

As a new licensee, KE6SBB, I attended my first HAMCON with my husband, N6HVC, and a couple of our ham friends, aboard the *Queen Mary* in Long Beach, California. The weekend held more memories than the different exhibits, the great weather, and the visiting with old friends.

During my subsequent telephone conversation with Glen Newline, K6RUB, I WON WHAT?? Now realizing that the grand prize was an HF rig from Kenwood, a TS-50S. I yelled out "hot diggety dog!" Yes, this means more studying (upgrading) for me and looking forward to next year's HAMCON. WR



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:

500. James A. Limerick, N5OVF 28 Aug 95

Jim Limerick, N5OVF, takes certificate #500 for his efforts in completing the requirements for W-100-N. That's how many certificates have been issued since the first of this series began some 18 years ago.

Vietnam (3W)

Station 3W5FM has been fairly active recently. The activity is reported to be from Nickolay, UAØFM. He is expected to be active until his job is completed in Vietnam, either through September or October. Most of his activity has been on 20 Meters, both CW and SSB. Try 14.008 to 14.021 MHz for CW, near 14.083 MHz for RTTY and 14.192 to 14.199 MHz, all after 1200 UTC.

There also was a report of 3W5FM working the west coast on 40 Meters on 7.005 MHz around 1330 UTC.

DX News Sheet reports Wang, 3W1AS, has been active on 20 Meters CW from Hanoi and should be on 40 Meters. His QSL manager was given as W3RGD.

Rolf, SM5MX, was vacationing in Sweden, but should have returned to Hanoi by now and operating as XV7SW, according to *DX News Sheet.*

Croatia (9A)

The new DXCC country of Croatia continues to be active on the bands. Such calls reported recently include the following calls:

9A1BHI	18.114 MHz	2100 UTC
9A3UF	14.012 MHz	2000 UTC
9A4A	14.260 MHz	2330 UTC
9A4SP	14.215 MHz	2330 UTC
9A5W	14.022 MHz	0100 UTC

Pakistan (AP)

Not much is coming through from this part of the world. There were a couple of reports of an AP2N on 17 Meters working into Europe as he was recorded on 18.136 MHz around 1700 UTC on 4 August and again five days later on 18.117 MHz at 1100 UTC.

On 20 Meters AP2MQ was worked on 14.007 MHz at 0245 UTC the end of July withAP2JZB worked mid-July on 14.247 MHz at 0215 UTC.

Andorra (C8)

Only two calls were reported from Andorra near the end of July. Try C31RM near 14.005 MHz after 2330 UTC. On 75 Meters C31LD was worked from the zero call area on 3.795 MHz at 0345 UTC on 30 July.

Suriname (PZ)

There were at least two calls from Suriname active during the summer. PZ1AP was reported on 14.022 MHz about 1130 UTC with PZ1DV on 14.009 MHz at 0215 UTC. The latter call was also reported on the WARC bands: 10.101 MHz at 0515 UTC, and 18.128 MHz at 2030 UTC.

Slovenia (S6)

Another one of those formerYugoslav republics is Slovenia in which at least seven calls were reported:

S5ØA	7.002 MHz	0215 UTC
S51VQ	14.006 MHz	2215 UTC
S59A	14.021 MHz	1845 UTC
S59AA	7.002 MHz	0400 UTC
S59ABL	14.090 MHz	2015 UTC
S59F	14.083 MHz	2045 UTC
S59KAB	14.019 MHz	2000 UTC

Two of those reported were obviously on RTTY.

Iraq (YI)

The number of calls reported from Iraq are on the increase. The following calls have been gleaned from the DX newsletters, mainlyDXNews*Sheet* published by the RSGB:

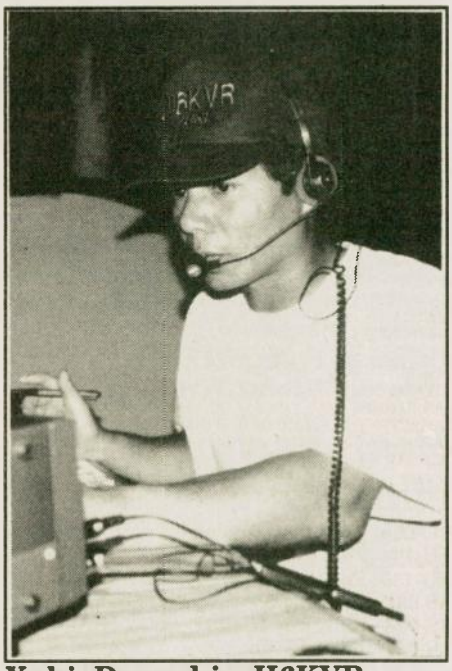
YIØP	14.188 MHz	1100 UTC
YIØVP	14.188 MHz	1930 UTC
YI1DZ	14.197 MHz	1000 UTC
YI1FC	14.196 MHz	1400 UTC
YI1HK	14.256 MHz	1500 UTC
YI1RS	14.213 MHz	0800 UTC
YI1US	14.026 MHz	0600 UTC
YI9CW	14.006 MHz	1945 UTC

The last call has been quite active and can be found between 14.006 and 14.022 MHz from 1830 UTC.

IOTA

The selection of IOTA islands found on the bands during the month of August includes the following:

EU-007	Blasket Island	EJ2HY
EU-030	Bornhom Island	OZ4CHR



Yuki Deguchi, JI6KVR, was very busy during the recent IOTA contest from the Amakusa Islands (AS-012). Here is Yuki working an IOTA hunter.

QSL Routes

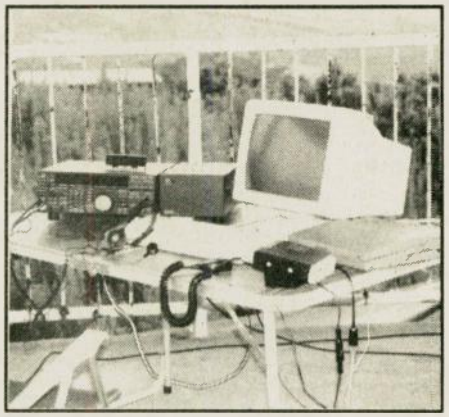
These QSL route come from several sources and cannot be guaranteed. Please report any errors.

1B1AD	—DK7ZZ	C53HG	—W3HCW
3A/I1YRL	—I1YRL	CEØZ	—KØIYF
3C1/TU4EI	—W3HCW	CE6TBN	—CE6TC
3D2EK	—N6EK	CN16DKH	—CN8MC
3E2G	—HP2CTM	CN8DN	—G4LUE
3F4B	—HP2CWB	CN8TM	—JR2ITB
3V8BB	—(See Note 4)	CO1OTA	—CT1ESO
3ZØCDP	—SP6CDP	CQ7U	—CT1EGH
3ZØRY	—SP4TKK	CT3/DL6RAI	—DL6RAI
3Z4JWR	—SP4JWR	CU3P	—CU3AK
3Z6CZ	—SP6CZ	CU3PG	—CU3AK
3Z9BRP	—SP9BRP	CX5BBI	—KA5TUF
4G2X	—DU3DO	D44BS	—CT1EE
4JØFR	—F6AJA	DF5JT/HKØ	—DF3CB
4K1F	—KF2KT	DL/T96N	—SM4IPX
4L50	—TA7A	DLØHRO/P	—DK8KWS
4L7Z	—RB4JF	DL2RXE/TF	—DL2RXE
4S7/JA4FM	—JA1FHK	DSØDX/5	—HL1XP
4U1ITU	—I1YRL	DX1EA	—OH1XX
	(See Note 6)	E31FAO	—JF1IST
5NØBHF	—OE6LAG	EA1FEO/P	—EA5OL
5NØT	—F2YT	EA3AOK	—EA3BT
5N3/SP5XAR	—SP5CWR	EA9UK	—EA7HDO
5R8EU	—JF1MGI	ED1VFA	—EA1CCC
5Z4SS	—JA1SQI	ED2FPA	—EA2CBY
6Y5/K6URI	—K6URI	ED2SDX	—EA5CVN
7K3UZY/JR6	—7K3UZY	ED3SFP/7	—EA3GFP
7S6AG	—SK6AG	ED7TJB	—EA7ESH
7S6AG	—SK6AG	EG4ITU	—EA4BPJ
7X2CR	—ISØLYN	EG5MDE	—EA5BY
7X2VZK	—OM3CGN	EJ2HY	—EI2HY
7Z1IS	—SMØOFG	EJ2IB	—EI2IB
8P9GU	—DL7VOG	EJ7NET	—EI6DR
9A17ST	—9A2AA	ER5WU	—I8YGZ
9A4A	—9A4AA	ESØSM/Ø	—SMØOGX
9A5I	—9A2OB	EU5F	—EW6WF
9A6V	—9A1BST	EU6MM	—IK2QPR
9G1YR	—G4XTA	EW1WZ	—DL1OY
9J2CW	—JF2XTZ	EW3MM	—UO5OIU
9J2HN	—JH8BKL	EW6WW	—IK2QPR
9J2JOCV	—JH8BKL	EXØA	—DF8WS
9K2CA	—ON6BY	EX1M	—DF8WS
9L/TU5EV	—W3HCW	EX2M	—DL4MFM
9L1PG	—NW8F	EX2U	—IK2QPR
9Q5MRC	—G3MRC	EX5T	—F5OJO
9Y4VU	—W3EVM	EX7MA	—IK2QPR
AA5DX/KP4	—N2AU	EX7MR	—KF2KT
AH2CV	—JH7QPB	EX8MF	—IK2QPR
AP2N	—AP2MMN	FG5GZ	—F6CLK
C31RM	—DF2OL	FP5AA	—K2RW
C4MI	—5B4KH	FR5HG/G	—F6FNU
FR5HG/T	—F6FNU	KQ4GC/V2	—KQ4GC
FS5PL/P	—FS5BG	LU5E	—LU5EWO
GBØCI	—GIØDVU	LZ7N	—LZ1NG
GB5FI	—GWØANA	OD/N4ISV	—N4JR
GM4EZW	—GWØFXC	OD5FR	—ZP5ALI
GRØLOS	—G3VIR	OE5LW/DU5	—OE5LW
GS4EZW	—GWØFXC	OLØLJ	—OK1RR
GWØNWR/P	—GW4HDR	OY/ON6QR	—ON6QR
GW5LP/P	—G4BWP	OY/ON7PC	—ON7PC
H34B	—HP2CWB	OY6A	—ON6QR
HD2RG	—HC2RG		(See Note 2)
HG5CW	—HA3KNU	OZ1DRP/P	—DL9BCP
HKØ/DF5JT	—DF3CB	OZ4CHR	—OZ1LUR
HK3JHH/2	—HK3JHH	P4ØAN	—CX3AN
HLØT/2	—HLØT	P4ØF	—KRØY
HL9DC	—N7RO	P4ØT	—N2VW
HO4B	—HP2CWB		(See Note 5)
HSØZBI	—NW3Y	P4ØZ	—K6URI
IA5/OE5XBL	—OE5XBL		(See Note 1)
IA5S	—IK1JJB	PA6QRP	—PA3FYV
II2R	—IK2QPR	PI5ØVLB	—PI4VLB
LJ9/IT9HAJ	—IK2EUY	PJ7/AI5P	—AI5P
IL3/DL3MFW/P	—DL3MFW	PJ7/K6URI	—K6URI
IT9GSF/IG9	—IT9GSF	R1/N9FNQ/FJL	—UA3DSP
IT9STG/P	—IT9ABY	R1FJV	—RW3GW
IT9YRE/LJ9	—IT9YRE	RA9LI/9	—DL6ZFC
IY1MR	—IK1HJT	RKØQXY	—UAØKCL
J28MD	—DL2RDP	RLØO	—IK2QPR
J37K	—W8KKF	RMØMR	—KF2KT
J37L	—WA8LOW	RUØB/P	—UA9OBA
J3A	—WA8LOW	S21YE	—G4VLV
J3J	—K9AJ	SJ9WL	—SMØDJZ
J3K	—WB8GEX	SKØHS	—SMØMPV
J3X	—W9DXX	SLØCB	—SMØTXT
J3Y	—KA9RHK	SPØIC	—SP6TPM
J3Z	—WD8ATP	SU1/ZP5ALI	—ZP5ALI
JT1FAS	—JE2VDG	SV/I2YYO	—I2YYO
JY1	—WA3HUP	SV1CID/3	—SV1CID
JY74X	—JY6ZZ	SV1DKD/P	—SV1DKD
JY74Z	—JY6ZZ	SV3/DL1BKK/P	—DL1BKK
JY8CR	—DL4VCR	SV5/G4JVG	—G3OZF
JY8TT	—4X6TT	SV8/I3BQC	—I3BQC
JY8VC	—DL4VCR	SV8/SV1CID	—SV1CID
K4ZLE	—TU4FB	T2ØXC	—JE1DXC
KA3HMS/KH3	—KA3HMS	T28RW	—ZL1AMO
KC6SM	—JA6EGL	T32BI	—KH6DFW
KC6TO	—JA7GAX	TAØ/DJ8QP/P	—DJ8QP
KG4MN	—WB2YQH	TA2IJ	—KB4GID
KP2/VS6CT	—AA6AB	TA4/UA3AB	—UA3AB
TA6AR	—DL1AQ	VE8TA	—VE2BQB
TF7/GØHSD/P	—GØHSD	VI5ØPEACE	—VK4CHB
TF7/G3WGV/P	—G3WGV	VK9CJ	—DJ9HX
TF7/G3ZAY/P	—G3ZAY	VK9XH	—JA1CMD
TI5NW	—WB3LUI	VO2/NU2L	—G3ZAY
TJ1GD	—SP9CLQ	VP2MR	—N5DXD
TJ1JB	—KE9A	VP5/JA7XBG	—JA7XBG
TK/DF4RD	—DF4RD	VP5C	—PA3ERC
TM7I	—F6JYD	VQ9LW	—WA2ALY
TT8NU	—F6FNU	VR2RJ	—JH1BED
TU2EY	—KE4I	XJ7/TM7I	—F6JYD
TU4EI	—W3HCW	XM1M	—VE1DCG
TU4EY	—KE4I	XRØY	—WA3HUP
TU5EV	—W3HCW	XRØZ	—WA3HUP
TY1IJ	—DK8ZD	XT2JB	—W3HCW
TY8G	—LA8G	YB50RI	—YBØHZL
UAØFZ	—W3HNK	YB7JUL	—KD7YO
UAØWG	—V73AX	YE5ØRI	—N6QLQ
UC1WWO	—IK2QPR	YIØSW	—JY4NA
UC2WO	—IK2QPR	YI1AA	—JY4NA
UK8FF	—W3HNK	YI1AL	—JY4NA
ULØOB	—IK2QPR	YI1BGD	—DF3NZ
UL7OB	—IK2QPR	YI1HK	—SM3DBU
UM7MA	—IK2QPR	YI1MH	—DF3NZ
UM8MCT	—IK2QPR	YI9CW	—DF3NZ
UM8MCY	—IK2QPR	YJØALS	—JS6BLS
UM8MFO	—IK2QPR	YK1/ZP5ALI	—ZP5ALI
UM8MU	—IK2QPR	YL1XZ	—IK2QPR
UNØAA	—UL7ACI	YT5ØBB	—YU1NUF
UN2O	—IK2QPR	Z32JS	—W3HNK
UPØO	—IK2QPR	Z37GBC	—YU5GBC
UQ1GXZ	—IK2QPR	Z38/DL2SCQ	—DL6DK
US1L	—UR4LRQ	ZA1AJ	—OK2ZV
UU5JYL	—LY1DS	ZA9A	—OKDXF
V26A	—WB3DNA	ZC4DX	—GØMRF
V26B	—WT3Q		(See Note 7)
V26DX	—N3ADL	ZD7BJ	—W4FRU
V26E	—AB2E	ZD7JP	—N5FTR
V26R	—KA2AEV	ZF2VA	—K6URI
V26T	—K3MQH	ZK3RW	—ZL1AMO
V26U	—WA2UDT	ZP5XQV/VP5	—JA7ZF
V31RD	—G4SMC	ZP5XYE/VP5	—JA7ZF
V47JA/M	—AE6I	ZSØA	—WA3HUP
V5/ZS6YG	—KYØA	ZS94F	—ZS6YA
V63AH	—JL7CHC	ZS9F	—KK3S
V63XB	—JL1HCL	ZS9RWR	—KK3S
V73CO	—V73AX	ZV5SG	—PP5SG
	(See Note 9)	ZWØJR	—PP5JR
VE7GAS/VP9	—VE7GAS	ZW2EPA	—PP5LL

EU-064	Noirmoutier Island	F9IE/P
EU-124	Flatholm Island	GB5FI
EU-136	Pag Island	9A4A
AS-022	Bear Island	RKØQXY
AS-028	Kotel'nny Island	UAØQBA
AS-087	Arktichesko Instituta Isl.	RUØB/P
AS-089	Sharopovy Koshiki Isl.	RA9LI/9
AS-099	Anatolia West group	TAØ/DJ8QP/P
AS-120	Cyprus's Coastal Isl.	5B/G3OZF
NA-036	Vancouver Island	VE7IU
NA-051	Queen Charlotte Isl.	VE7/F5JYD
NA-065	Whidbey Island	AA7KE
NA-075	Gabriola Island	XJ7/TM7I
NA-091	Cormorant Island	XJ7/F5SSM
NA-173	Long Island	KD2JR/XK8
NA-l99	Tintamarre Island	FS5PL/P
SA-082	AjugaIsland	HK3JHH/2

While collecting islands it would be a good idea to keep track of these islands in a way that you may easily reference them.As island mania increases so does the interest in island specialties.

There are other island collections that have come about such as Brazilian Islands (discussed in an earlier column), Italian Islands, French Islands, Portuguese Islands, Canadian Islands, and even United States Islands. Although you may have no interest in



The weather was FB on the Amakusa Islands as you can see from this elevated outdoor location. His vertical antenna also doubles as a flagpole which includes the IOTA flag and his national flag.—*photos courtesy of JI6KVR*

collecting such at the present, you may later.

DXCC Business

Many are aware that there is a conflict on the status of Scarborough Shoal. The DXAC voted to not include it in the DXCC Countries List. It was the unanimous opinion of the Awards Committee that it should be added to the DXCC Countries List. As called for in the Awards Committee Standard Operating Procedure, the Chairman of the DXAC and theAwards Committee conferred in an attempt to effect a compromise but were unable to do so. Therefore, it will have to be resolved via the Membership Services Committee (MSC).

This committee is the standing committee of the Board of Directors and is responsible for performing studies and making recommendations to the Board regarding membership awards, including the DXCC program. The members of the MSC are Directors Fried Heyn, WA6WZO, (Chairman), Lew Gordon, K4VX, Steve Mendelsohn, WA2DHF, Joel Harrison, WB5IGF, and Mary Lou Brown, NM7N; Vice President Jay Holladay, W6EJJ; and Vice Director Warren Rothberg, WB1HBB.

The DXAC has been asked to reconsider its earlier negative decision on the Pratas Island issue. Once it has done so, the Awards Committee will also take up the matter. If the committees agree, that decides the issue; if not, that too will go to the Board via the MSC.

Some Board members had been considering introducing a motion calling for a comprehensive study of the DXCC program, including the possibility of phasing out the existing program and creating a new one effective with the turn of the century. Such a motion, however, was not introduced. This same issue was brought forth by members of the Northern California DX Club at Visalia last April.

Bear in mind that the existing program would not be cancelled upon the beginning of a new program. It isn't a bad idea at all and deserves further study.

DXCC Processing status

The number of unprocessed applications at the DXCC Desk the end of July was 182 (19,187 QSL cards). During the month of July, 327 applications (31,779 QSLs) were received for endorsements and new awards.

Miscellaneous

Miriam West Smith, KB4C, coowner of the recently acquired *QRZ DX*, has become a Silent Key. The wife of Carl Smith, N4AA, Miriam passed away on 26 July 1995, at the age of 48. The staff at ***Worldradio*** extend our deepest sympathy to Carl for the loss of his beloved wife.

Postal rates have increased in Canada. The rate to the United States from Canada is now 52 cents. Please remember this when providing Canadian postage for return cards from Canada.

Bob, WB2YQH, states that the certificates for working VP9RND in May are available. The station was active to commemorate the 20th Anniversary of the Naval Dockyard in Bermuda. To apply, please provide an address label and $2 to Bob at P.O. Box 73, Spring Brook, NY 14140. Bob is also the editor of 59(9)*DXReport*. However, I have no information on this publication and am not on his mailing list.

If you haven't already done so, please read "Publisher's Microphone" on page 4 of the September issue of ***Worldradio***. Armond is right regarding the exclusion of U.S. stations from the so-called foreign phone bands. We do have more amateurs on the bands compared with the rest of the world. However, there are quite a few on from Japan.

It's about time to stop the discrimination against Americans regarding phone privileges. Of course our Canadian neighbors will cry foul. They have a good thing going there without U.S. competition in the foreign phone bands!

QSL Information

Al LaPlaca, W2WW, wishes to inform ***Worldradio*** readers that he is not the QSL Manager for 8R1J, nor does he know who is. A check was made of QSL routes for the past year in this column

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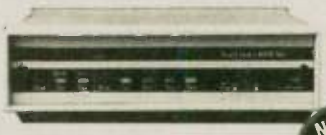

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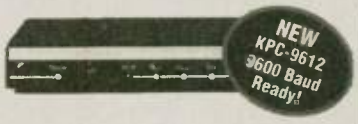

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DX Prediction — November 1995

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

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

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(9)*	10	13	*(8)*	*(12)*
12	*(9)*	10	12	*(8)*	*(12)*
14	*(16)*	10	12	*(13)*	23
16	*(20)*	10	*17	*(13)*	27
18	21	*(10)*	*(15)*	*(9)*	29
20	21	*(13)*	*(20)*	*(9)*	29
22	*(18)*	20	24	*(8)*	28
24	16	22	27	8	*24
2	12	18	24	8	*16
4	11	13	17	8	*15
6	*(10)*	*(12)*	*(15)*	8	*13
8	*(10)*	*11	*14	*(8)*	*13

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(12)*	8	*12	*(8)*	*12
10	*(12)*	8	12	*(8)*	*(12)*
12	*(21)*	8	12	*(14)*	23
14	26	10	*20	15	*26
16	27	*(10)*	*(17)*	*(14)*	*28
18	27	*(10)*	*(15)*	*(10)*	*29
20	22	*(12)*	*(21)*	*(9)*	*28
22	*19	*(17)*	24	8	*24
24	*15	*(14)*	24	8	*17
2	*14	*(10)*	16	8	*15
4	*13	*(9)*	*(14)*	8	*14
6	*(12)*	*(9)*	*(13)*	8	*13

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	*(12)*	8	*(12)*	*8	*12
9	*(12)*	8	12	*(8)*	*12
11	22	8	12	14	21
13	26	9	*22	16	*24
15	28	*(8)*	*(18)*	15	*27
17	*28	*(8)*	*(14)*	13	*28
19	*25	*(8)*	*(18)*	*(10)*	*29
21	*21	*(14)*	*(23)*	9	*25
23	*15	*(14)*	*(23)*	8	*18
1	*14	*(10)*	*(16)*	8	*16
3	*13	*(9)*	*(14)*	8	*14
5	*12	*(8)*	*(13)*	8	*13

and no listing was found for such a call. Al didn't say how many QSL requests he received for 8R1J.

In the September issue the QSL route for UAØQBA was given as P.O. Box 15,210026 Vitebsk, RUSSIA This is the address for EW6A, a call not assigned to Russia. A check with our *National Geographic Atlas* shows Vitebsk to be in Belarus. Therefore the address should read BELARUS, not RUSSIA.

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

4N4L —Marin, P.O. Box 22, Sirar Brueg 88220, HERZEGOVINA

5A1A —P.O. Box 78665, Tripoli, LIBYA (See Note 8)

5NØJHE —P.O. Box 70867, Lagos, NIGERIA

9G1RY —Ricky, P.O. Box 932, Accra, GHANA

9K2HN —Hamad J. Al-Nusif, P.O. Box 29174, 13162 Safat, KUWAIT

AR5N —Pakistan ARC, G.P.O. Box 1450, Islamabad, PAKISTAN

DL8OBC —P.O. Box 1253, D-30984, Gehrden, GERMANY

E21CJN —Tham, P.O. Box 26, Klongtoey, Bangkok 10110, THAILAND

FY5GF —Ignace, P.O. Box 6005, 97306 Cayenne FRENCH GUIANA

HKØEFU —Moses, P.O. Box 464, San Andres Island, COLOMBIA

HLØBCD —CARA, P.O. Box 110, Kwangu 501600, SOUTH KOREA

IH9/ITØXBX—Francisco Fucelli, Str. S.Lucia 38, I-06125 Perugia, ITALY (See Note 3)

IT9/IT9ABY/P—P.O. Box 11, I-90129 Palermo, Sicily Island, ITALY

LZ2UA —Vlad Vlaov, P.O. Box 100, 5600 Troyan, BULGARIA

OM3JW —Horecky Stefan, Mlynska 2, Stupava, IBV 900 31, SLOVAK REPUBLIC

P29EB —P.O. Box 1828, Boroko, NCD, PAPUA NEW, GUINEA

S92LB —P.O. Box 147, SÃO TOMÉ

SV5TH —P.O. Box 282, Rhodes, GREECE

—P.O. Box 15, 210026 Vitebsk, RUSSIA

VK9LX, —Eddie Schneider, GØAZT

VK9LZ, P.O. Box 5194

VK9NM Richmond, CA 94805-5194

YI1EYT —P.O. Box 27110, Bagdad, IRAQ

YMØAA —P.O. Box 93, 81031 Istanbul TURKEY

ZP5ALI —Fagues Rahal, Avda Pacheco 5257, Asuncion, PARAGUAY

Notes:

1. This route applies only for 1995 WPX SSB Contest in March.

2. This route applicable for 24 July to 7 August 1995 only.

3. This route is valid until 1 November 1995. After that date send QSL requests via IØZUT, P.O. Box 82, I-06100 Perugia, ITALY.

4. For the QSL routes of 3V8BB please be aware of the operator. When YT1AD is operating the route is via YT1AD; during operations by Japanese operators please QSL via JF2EZA; operations by GØUCT during the period 8-13 August go to GØUCT.

5. This route applies for September 5 to 12 only. This route is not valid for any other P4ØT operations.

6. This route for 4U1ITU is valid for operations in October 1995 by I1YRL only.

7. This route applies for the operation by Whitton Amateur Radio Group, 24 October through 6 November 1995.

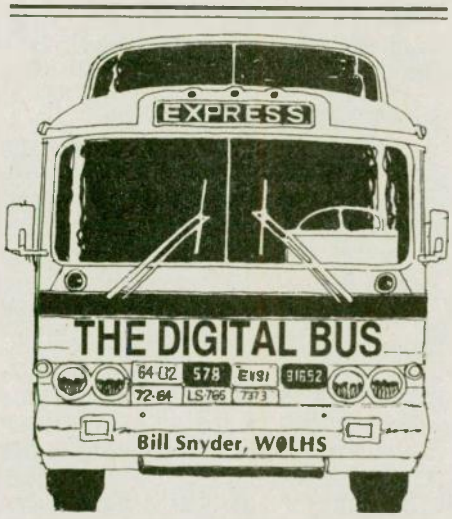
8. This route applies for contacts made since 26 July 1995.

9. The preferred route for V73CO is via P.O. Box 60, APO AP 96555. U.S. stations need only supply an SASE with 32 cents postage.

Many thanks to the following contributors: V73CO, W2WW, KC5ALW, K6CJ, K6URI, N7NZ, W8KKF, Northern Arizona DX Association (W7YS), Western New York DX Association (KB2NMV), The American Radio Relay League (K5FUV), The OPDX Bulletin (KB8NW), CQ *Ham Radio, Amateur Radio Action (VK9NS), Long Skip* (VA3JS), *The Low Band Monitor* (KØCS), *DX News Sheet* (G4BUE), *QRZ DX* (N4AA), *Inside DX* (N2AU), and *The DX Bulletin* (VP2ML).

Summer is over and the season of low band activity is approaching. It was there during the summer months if you wished to compete with the static crashes. Get those antennas in shape as maybe you will gets lots of new ones. The goal at N6JM is to hit the necessary requirements for 80 Meter DXCC. This, of course, will be with 100 watts to wire antennas. Maybe, a vertical antenna is in order. 73 es gl DX de John N6JM. WR

From the staff at ***Worldradio,*** Happy Thanksgiving!



One of the side effects of writing my column in ***Worldradio*** is the packet mail I get from hams all over the world. Most of the time the mail contains only comments, but every now and then there are letters that contain a laugh, and at other times there are letters that bring requests for help.

Recently I received a letter from a young man named Michael Spenn, Box 33216, San Antonio, Texas. Here is the text:

I am an eleven year old who recently started collecting Amateur Radio automobile license plates. Since you live in North Dakota, could you please help me get a North Dakota ham radio license for my collection? Thank you very much."

The only ham license plate I own at the moment is on my automobile, so I can't send one to Michael in San Antonio. I did, however, put a note in our local club newsletter asking local hams if they could send a plate to him. As I sat down to write this month's column, the thought occurred to me that perhaps there are others in the country that might have an old call sign plate to mail to the lad. Why not?

War story time

Here's a letter that had a good laugh in it. In my September ***Worldradio*** column, I explained how, during World War II, all the members of my army amphibious outfit were required to learn semaphore code rather than Morse code. I happened to be the communications officer of the Boat Battalion (we ran the small landing craft that ferried the infantry ashore for battle) and I told the commanding officer that semaphore signaling was only good in daylight.

But, because the brigade commanding general had ordered everyone to be conversant with the semaphore code, that's what we had to learn. Then one night in New Guinea, our friendly forces spotted our boats going along the sea coast in a move from Port Morsby to Milne Bay on the east end of the island. They blinked a challenge message to the boats, but no one could read the Morse code, so they didn't answer. Again and again the shore people challenged the boats in the night. When they didn't answer after the third time, the shore people's artillery fired a couple rounds off the bow of the lead boat. Quickly our boats headed out to sea and continued on their trip. The next day the commanding general sent an urgent message to all units ordering everyone to forget semaphore and learn blinker immediately.

Rocket ammunition was rather scarce at that point in the war, so we couldn't shoot too many practice rounds . . .

That column brought the following letter from an old-time ham, Charles Baker, W2KTF, who was known to the members of the WWII 8th Signal Company as "Able Baker Charlie." (Those are the first three letters of the phonetic alphabet in use during the war.)

*Enjoyed your column in September, 1995, **Worldradio**.*

Reminded me of an experience back in '43, when I was on a troop ship headed for Europe. At the time, I had been a licensed ham since '37, and had operated 40 Meter CW before going in the Signal Corps. I also operated ham CW in the Army until the war broke out and closed the hobby down. In addition, I had for several years taught Army radio schools——code schools, that is.

On the troopship, I was asked if I'd like to operate the ship's radio. That surely sounded interesting, even though I believed that the ship would be mostly observing radio silence. Well, I volunteered, and then found that the radio they referred to was a Navy voice "TBS" (talk between ships) which was just like a ham five-meter walkie talkie. It was located on what the Navy called the signal bridge. It was used for communication with the battleship that led our big convoy. It wasn't bad duty because it was out in the fresh air, and when I was not on watch, I ate in the crew's mess. The Navy chow was excellent.

The interesting point of this was, on my first watch, the battleship sent a message—very slowly—on their blinker light. The Navy signalmen on watch didn't decode the message very well, so I told them what I copied as the message: "AT 1130 THE CONVOY WILL CHANGE COURSE TO 42 DEGREES AND AT THAT TIME THE BATTLESHIP WILL DROP ITS SIGNAL FLAGS AND GIVE WHISTLE SIGNAL."

I read that message to the signalmen. Then, a Navy lieutenant who happened to be on watch and heard me read my copy said, "Gosh, that soldier has only been up here for two hours, and already he learned the blinker code."

More war stories

That column also brought a late evening phone call from another old World War II veteran, Bob Burr, N8WBG, of Erie, Michigan. Bob had been with the 534th Engineer Boat and Shore Regiment and had spent his part of the war in the Southwest Pacific Theater of operations. I had spent a year and a half with the 592d Engineer Boat and Shore Regiment in the same theater, so we had a good chat which lasted about an hour. We compared our experiences in the war from Cape Cod to Florida to Australia to New Guinea to the Philippines and finally the main island of Japan. It was a lot of fun to reminisce as we did.

After I hung up I got to thinking about more wartime adventures, and the following one popped into my head:

Our unit put on a demonstration of how the Amphibian Engineers ran the small landing craft that transported the infantry soldiers from the friendly shore to enemy-held beaches. We were being visited at our first training base in Australia by the high brass from GHQ and Sixth Army Headquarters, and our commanding general wanted to demonstrate the new amphibious DUKW (pronounced "Duck") truck that had been fitted with a rocket launcher.

I was the communications officers for the Boat Battalion, so I had to furnish communications for the show. The big demonstration in our show was to have the sea-going truck drive into the water and then bombard, by rockets, a small island off the shore near Yeppoon, Queensland.

Rocket ammunition was rather scarce at that point in the war, so we couldn't shoot too many practice rounds to get the range during our dress rehearsal, so we shot just enough to hit the tiny island, and then at that point, dropped a few small home-made buoys into the sea to mark the launch point. The buoys were small enough not to be too visible from the reviewing stand the Shore Battalion fixed up for the brass.

The afternoon of the show arrived and we demonstrated frog men swimming ashore and clearing the beach of obstacles, then a wave of landing craft bringing in assault infantry men. Then we went through all the various demos showing what the Amphibs did to invade a hostile shore.

The headline act was the rocket demonstration. The amphibious DUKW rumbled past the reviewing stand drove into the sea and the driver engaged the propeller and started out for the buoys. The announcer on the viewing stand was telling the brass what the truck was going to do — not really knowing if the facts were correct or not. It seemed like it was taking forever for the DUKW vehicle to reach the buoy markers and begin shooting the rockets.

I started to worry when the DUKW back-tracked a bit; I had the feeling that the tide had taken the buoys out to sea, or some other problem of that nature. Then the first rocket went flying out of the DUKW and it was followed by a sequence of rockets that went looping into the sky. As the rockets left the truck, the driver slowly swung the rudder and the pattern of rockets was spread out across the sky. When the first rocket exploded on the shore, it was right on target, and the stream of missiles went banging along in a perfect line across the beach area of the little island.

The smoke from the continuing explosions covered the little hump of land that projected up out of the sea. The demonstration was a huge success, and everyone in the show breathed a sigh of relief. One man, standing next to me, said when he saw the last rocket land, "I'm sure glad I am not out there where those bombs are landing!" I agreed with him. The show was impressive!

When the DUKW returned to our shore and the brass had entered their staff cars and departed from the area, the driver was asked what the delay was in firing the rockets. "Next time you try this," he said wryly, "make the damn buoys bigger. They were a little hard to find in that great big Pacific Ocean."

EAVESDROPPINGS

IT'S HARD TO BELIEVE THAT A HALF CENTURY HAS GONE BY SINCE WE FINISHED THE WAR IN THE PACIFIC . . . MY-TILT OVER ANTENNA GOT REALLY TILTED OVER WHEN A GUY WIRE FASTENER BUSTED IN A EIGHTY KNOT WIND . . . I LOST MY NEW RIG WHEN MY WIFE HAULED ME TO THE INDIAN GAMBLING JOINT WHEN WE SHOULD HAVE STAYED HOME . . . IT'S AWFUL THAT DUMB KIDS ARE STARTING TO SMOKE AT A TENDER AGE JUST LIKE WE SMART PEOPLE DID SO MANY YEARS AGO . . . EVERY TIME THE DOLLAR-YEN EXCHANGE RATE GETS WORSE FOR US, MY YEN FOR A NEW RIG GETS POORER TOO . . . 74 OLD MAN — THAT'S ONE "BEST WISH" MORE THAN THAT OLD FASHIONED 73.

If you wish to send me a packet message, try WØLHS@WØLHS.#SEND.ND.USA.NOAM. It may work. So far I have not succumbed to the various "on-line" outfits that tempt me with free disks, but I still have postal mail at 1514 12th St. S, Fargo, ND 58103-4134. 73 de Bill Snyder, WØLHS. DIT DIT. WR

Visit Your Local RADIO CLUB

ALASKA

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

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.

Central Arizona DX Assoc., (CADXA). Meets 1st Thurs./monthly, 7 p.m., Salt River Project Pera Club, 1/2 mi. West of 68th & Continental Dr., Scottsdale, AZ. Rptr. K5VT 147.32(+). Packet Cluster nodes (S): 145.09, 144.93, 145.03. Info: (800) 283-4319 or (602) 876-2718.

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.

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.

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(-).

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.

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.

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.

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.

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

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.

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.

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

Lake County Amateur Radio Society, (LCARS). Meets last Thurs./monthly at either Red Cross HQ, Clearlake, or the Nice Community Clubhouse, Nice, CA, 7 p.m. Net Mon., 7 p.m. 146.775(-) for info.

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) 447-3815.

Manteca Amateur Radio Club (MARC). P.O. Box 545, Manteca, CA 95336. Meets 1st Thurs./monthly, #1 Firehouse, 7 p.m. Talk-in on club rptr. 146.985(-) PL 100Hz. Info: (209) 823-3611.

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.

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Denny's Restaurant, 22611 Oakcrest Cr., Yorba Linda, CA at Weir Canyon, off the 91 Fwy. Info: Ray Davis, KD6FHN, (714) 551-2010 or (714) 551-1036.

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.

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

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

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

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.

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.

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

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.

Sierra Foothills ARC. P.O. 3262, Auburn, CA 95604. Meets 2nd Fri./monthly, 7:30 p.m., Firehouse, 226 Sacramento St. Auburn. 10m, Wed. 7:30 p.m., 28.415, 2/220m, Thurs. 7:30 p.m., 145.430(-) (PL 94.8) & 223.86(-).

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.

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

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.

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.

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).

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.

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.

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7 p.m., Vaca Fire Dist. Stn., Vine St. in Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Dan Bissell (707) 446-7411.

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. 145.440(-) PL 136.5. For info: Joe, KA6LPZ, (714) 963-4426.

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.

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(-).

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.

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.

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.

CONNECTICUT

Tri-City Amateur Radio Club. P.O. Box 686, Groton, CT 06340-0686. Meets 2nd Tue./monthly, 7 p.m., St. Lukes Lutheran Church of Gales Ferry on Rt. 12. Info: Bob, KA1BB, (203) 739-8016.

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.

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.

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(-).

Saint Petersburg Amateur Radio Club. Meets 1st Fri./monthly, 7:30 p.m., Red Cross Bldg., 818 Fourth St. North, St. Petersburg, FL. Nightly nets 6:30 p.m., 147.06(+), 224.66(-). Rptrs. 147.06(+), 224.66(-), 444.475(+). Info: R. Russell, N4ZMQ, (813) 896-2518.

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.

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.

GEORGIA

Dalton Amateur Radio Club, Inc., (DARC). 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.

HAWAII

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

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.

IDAHO

Idaho Society Radio Amateurs. Boise Chapter 146.94. Meets 3rd Tues./monthly, Borah H.S., 7 p.m. Rptr. at 8000'. Membership welcome. 146.94(-).

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.

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.

Hamfesters Radio Club, W9AA. P.O. Box 42792, Chicago, 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 145.07. Info: (312) 974-3291.

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(+).

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(+).

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(-).

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

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(-)

MAINE

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

MASSACHUSETTS

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

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

MICHIGAN

Adrian Amateur Radio Club, W8TQE. Box 26, Adrian, MI 49221. Meets 1st Fri./monthly, 8 p.m., Blue Flame Rm., Citizens Gas., N. Winter St. ARES net Sun., 9 p.m. 145.37(-). Info: Tom Parsons, N8QEW, (517) 263-5568.

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

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.

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(+).

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

Hazel Park Amateur Radio Club. Hoover Elementary School-Hazel Park, P.O. Box 368, Hazel Park, MI 48030. Meets 2nd Wed./monthly, 7:30 p.m. Sept. thru May. 146.64(-) Call-in. W8JXU Club Call. Net Sun., 9 p.m., 146.64(-).

Hiawatha Amateur Radio Club (HARA) Meets 1st Thurs./monthly, 7:30 p.m., at Trinity Lutheran Church in Ishpeming, MI (even no. mos.) and at Jacobetti Veterans Facility in Marquette, MI (odd no. mos.). Sun. net 7:30 p.m. on 146.76. Info: Richard, N8GBA, (906) 249-3837.

MISSISSIPPI

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

MISSOURI

Central Missouri Radio Assoc. P.O. Box 28954, Kansas City, MO 65202. Meets 2nd Tues./monthly, 7 p.m., Boone Electric Coop, 1413 Rangeline Rd., Columbia, MO. Talk-in 146.76(-).

Lebanon Amateur Radio Klub, Inc. P.O. Box 2034, Lebanon, MO 65536-2034. Meets 1st Mon./monthy, 7 p.m., Bell Restaurant, City Rt. 66 East Lebanon. Call in 146.700(-).

PHD Amateur Radio Assn., Inc. P.O. Box 28954, Kansas City, MO 64188. Meets last Tue./monthly, 7 p.m., Gladstone Comm. Bldg. (816) 781-7313, Volunteer Examiner Coordinator.

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 3rd Sat./monthly, bkfst. 8 a.m. & mtg. 8:30 a.m., Rae's restaurant, 2531 Wigwam at Pecos. Club info: Jim Frye, NW7O, (702) 256-5396 or Leona Wallace, WA6OHB, (702) 247-6450.

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 9 a.m., Penny's Kountry Kitchen, 337 E. Plumb Ln., Reno. Info: (702) 356-8200. Call in on 147.30(+) MHz.

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.

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.

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(+).

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.

Cape May County Amateur Radio Club. Meets 3rd Thurs./monthly, 7:30 p.m., Human Resource Bldg., Rts. #9 & #47 in Rio Grande, NJ. Talk-in on 146.61(-). Weekly net, 8 p.m. every Thurs. except 3rd.

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.

NEW MEXICO

Albuquerque Amateur Radio Club. P.O. Box 11853, Albuquerque, NM 87192. Meets 1st Sat./monthly, 7:30 a.m., Golden Corral Restaurant, 8505 Montgomery NE.

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.

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.

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: Charlie, WA2JUJ, (516) 420-0046.

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.

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.

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

Suffolk County Radio Club, (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.

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

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) 962-9666 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A.

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(+).

NORTH CAROLINA

Cabarrus Amateur Radio Society, (CARS). Meets 3rd Mon./monthly, 7 p.m., Forest Hills United Methodist Church in Concord, NC. Net on Mon., 9 p.m., 146.65(-).

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

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(-).

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 146.85(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS.

Firelands Area Rptr. Assn., (FARA). Meets 4th Tue./monthly, 7 p.m., Ohio Veterans Home, Sandusky, OH. WB8LLY rptr. 146.805(-). Net Sundays, 8 p.m. Info: FARA, P.O. Box 442, Huron, OH 44839.

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.

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.

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: Brian, WD8MXR, 385-5624.

Triple States Radio Amateur Club. Meets Wed./weekly on 28.48 at 8:30 p.m., 7260 at 9 p.m. and Sun. 4 p.m. on 7240. Rptrs. 146.91(-), 146.715(-). P.O. Box 240, Rd. #1, Adena, OH 43901. (614) 546-3930.

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

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.

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.

Oregon Coast Emergency Rptr., Inc. 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 997-3081.

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.

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.

Fort Venango Mike & Key Club. Meets 2nd Tues./monthly, 7:30 p.m., Vo-Tech, Oil City, PA. 145.230, 145.190, 147.120, 444.125.

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.

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 pt.bbs.

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

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.

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.

VIRGINIA

Southern Peninsula Amateur Radio Klub, (SPARK). Meets 1st & 3rd Tue., Salvation Army Community Bldg., Hampton, VA. Repeaters 146.73(-), 449.55(-). VE Exam Info: (804) 898-8031, W4RTZ.

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.

WASHINGTON

The Inland Northwest Hamfest Assoc. (Club). Meets 2nd Tues./monthly, 7 p.m., St. Ann Parish Hall, E. 2120 First Ave., Spokane, WA. Info: KJ7BB, (509) 534-8443.

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.

WEST VIRGINIA

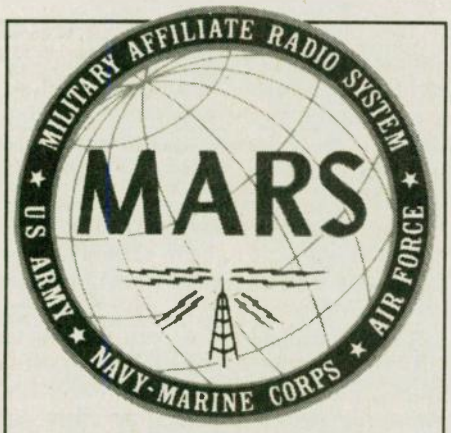
Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., United Nat'l Bank of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. For info: D. Tenant, N8ZYB, Rt. 1, Box 317, Cottageville, WV 25239.

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

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.

For information on how to get your club listed in "Visit Your Local Radio Club," plus receive many other benefits, write to:
Club Liaison, Worldradio
2120 28th St.
Sacramento, CA 95818.



Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

Writing a column scheduled to be printed in November while still in the heat of summer and watching more tropical systems headed my way creates a strange mix of practical considerations and holiday sentiments.

November, of course, includes two special days — Veteran's Day and Thanksgiving. Both are important to Army MARS members.

Veterans of all services were honored earlier this month (August) in the Army MARS publication, *The MARS Corner*. This column included information sent to me by Mr. Richard Zucker, AAR3EO, from Maryland Army MARS. On 14 August 1945, Mr. Zucker was an Army Sergeant serving with the 3116th Signal Service Battalion at WTJ Radio Control in Oahu, Hawaii. At 2314Z, Sgt. Zucker received a very special message on radiotelephone and relayed that message to General MacArthur in the Philippines. That message 50 years ago originated from station WAR (Pentagon based Army Communications Center) and signified the official end of World War II.

Closer to home, Jim Keele, AAR4WO, of Florida Army MARS, reported that message saved him from being among the first troops to be sent in to invade Japan. That would have been a very costly operation in terms of lives on both sides. I am certain that this relief was felt by many current ***Worldradio*** readers.

Veteran's Day is a time for another special salute to these veterans and the thousands of others from all services who were there when their country needed them, who preserved the freedoms that we all enjoy. Army MARS members salute you all.

Thanksgiving Day at the end of November ushers in the entire Holiday Season which is celebrated in many different ways by those of many different faiths. MARS members contribute greatly to the holiday season by being there whenever they are needed. They boost the morale of the season both at home and abroad by participating in Operation: Holidays each year and by encouraging seasonal traffic to be shared by a widely expanded base of military personnel (Chief Army MARS Message 22 March 1995) and their loved ones.

Looking back through the year, Army MARS members and those we serve have much to be thankful for this Thanksgiving season of 1995. We can be thankful that we live in the United States, that we live in a country where we are allowed to serve others in our work with Army MARS. We can be thankful for the camaraderie within the Army MARS family throughout the entire world . . . close relationships developing while, at the same time, maintaining the efficiency and the protocols of a military communications system.

Thousands of Americans can be thankful for Army MARS services . . .

This Army MARS family relationship was underscored through a message sent to my station in Northwest Florida immediately after the passage of Hurricane Erin by Chief Army MARS, Robert L. Sutton. That message did not ask about operations or traffic or anything else that might be part of an After-Action Report. In that message, Chief Sutton wanted to know if "any of the Florida members had been injured during the hurricane and did anyone suffer major damage." It took several days to reach members in Pensacola but everyone checked out OK.

Thousands of Americans can be thankful for Army MARS services . . . communications support in both the morale and welfare traffic area and in the primary mission of Army MARS emergency communications support. In terms of emergency communications, Army Mars' new EEI mission has proved invaluable to DOMS (Director of Military Support). In this capacity, Army MARS members send early information to DOMS at the Pentagon where it is shared by planners of emergency relief. During some emergencies, Army MARS members may handle little or no traffic. Like the fireman who is always there and hopes that there will be no fire or need for his services, Army MARS members are always there . . . ready and able to carry out any communications function that might be needed.

Army MARS members, as all Amateur Radio operators, can also be thankful for the equipment we use every day. Mr. Zucker had included a description of the equipment in use at the time of his 1945 message. My respect and thanks go to him and to thousands like him who accomplished so much with that equipment and who were in the forefront of the development of the equipment that we enjoy using today.

Army MARS has been challenged this year of 1995 with many changes and transitions into operating with those changes. This was the year in which the Area Directors' offices were closed at Fort Detrick, MD, Fort Sam Houston, TX, and at Fort Lewis, WA. The Area Director functions have been absorbed by the Army MARS office at Fort Huachuca, AZ using existing personnel which meets the major challenge of "doing more with less."

Army MARS said "farewell" to Frank Kerton who had been Western Area Director and to Leon Ritter who had been Central Area Director. Both have been transferred to other federal jobs at their respective forts. Fred Neff has said his farewells as Eastern Area Director and has retired from civil service. We are most gratified that Mr. Neff has recovered from the illness he suffered during May. All three former directors remain as highly valued members of Army MARS.

As an Army MARS member, I am personally thankful for the opportunities to share ideas with all of you who read these columns each month. I am further thankful for the opportunities to work with so many Army MARS members from all over the country. My final thanks is for the opportunity to work with inspired leadership which includes my State MARS Director, Albert Fow, Eastern Area Director, Kathy Harrison, and Chief Army MARS, Robert Sutton.

May all of us recognize the blessings that we enjoy all year long.

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

John G. Troster, W6ISQ

Many thanks ladies

Bouquets are in order. Blanche Randles, W4GXZ, and Ethel Smith, K4LMB, wrote this column for the past two months and we're most appreciative. I'm sure you readers enjoyed their articles too. Great work, gals, interesting and timely. They're both long-time members of QCWA and widely-known among members from coast to coast. They did such a good job we'll make sure they write for us again. Thank you ladies!

We were on vacation

While Blanche and Ethel were turning out this column, Marguerite, KC6NFE, and I went on a water tour of Russia which took us from Moscow down rivers, locks, and lakes, to St. Petersburg. Great trip and I'd recommend it to all. Anyway, I thought it would be my opportunity to meet amateurs on that side of the world, so I took along the baseball-type cap with my W6ISQ printed in big letters across the front, which cap, incidentally, I earned from the Northern California Contest Club for working all Sections in the ARRL Sweepstakes.

Our tour started off in Copenhagen. I paraded up and down the streets and on tours with my cap prominently displayed on my head. Big deal. Nary a peep from anyone. Oh well, wait 'till we get to Russia. Arrived in Russia and the first day we visited Red Square. I was prepared to be mobbed by Russian amateurs anxious to make eyeball contact with a valuable W6. Nyet!

In the Moscow subway, still nyet. All over Moscow, nyet. Where are all you fellas from Box 88? Here I am— a genuine W6 in your midst?

We take off on the ship down the rivers. Not much to hope for a contact on the water, but, St. Petersburg's sure to have plenty of 'em. Arrive in St. Petersburg, cap firmly in place. Much walking though streets, tours, the Hermitage, hundreds of people everywhere—I can't believe it, but it's still nyet. I am beginning to worry about what could have happened to all those UA fellas I worked over the years.

On the last day, we visited Catherine the Great's Summer Palace. We were just boarding the bus to return to our ship when a teenager runs up to me and points to my cap. "You a ham?" I eagerly ask, quickly whistling "hi" and "CQ" in flawless code. He gives me a quizzical look and gestures that he wants to swap caps with me. I'm shattered. My last hope for an eyeball QSO just melted. The kid persists. He really wants to swap his hat for mine so finally I come to and read his cap—"Clinton/Gore '92." Folks, this is a non-political column — so I can't tell you what I did.

Where are all you fellas from Box 88?

Johnny Johnston, W3BE

Some years ago, well-known FCC executive Johnny Johnston, W3BE, and family set off on a vacation trip. In a restaurant along the way, they began playing the game of "if you came back as an animal—which animal would you like to be?" When it came John's turn, his two pre-teenage boys took over. They would pick the animal for him. There was much giggling and snickering before they finally pronounced an animal type for their father's reincarnation—"Bald Eagle."

Ten years or so later, when the FCC made available two-letter calls, John chose not to select his initials, JJ, or even DX or CW the way most of us did. Instead, he chose the letters of his family nickname—BE, Bald Eagle, and even today is W3BE.

Johnny arrived at the FCC in 1972 to be Assistant to the Chief of the Amateur and Citizens Band Service, Prose Walker, W4BW, and over the years he has become well-known in amateur service at the FCC. He's a frequent banquet speaker on behalf of amateur interests and has often received awards for notable service to the amateur community. This year the QCWA will present the Presidential Award to him. It will be bestowed by his good friend, our esteemed Prez Lew McCoy, W1ICP, at our annual convention this fall in Manchester, NH.

Johnny is a native of Zanesville, Ohio. When he was in high school he worked in a store which would be every boy's dream—photography, model airplanes, TV, radio. And that's where Johnny learned about Amateur Radio. The owner, Chester Thompson was W8RE. Mr. Thompson also had a lovely daughter. But we are getting ahead of the story.

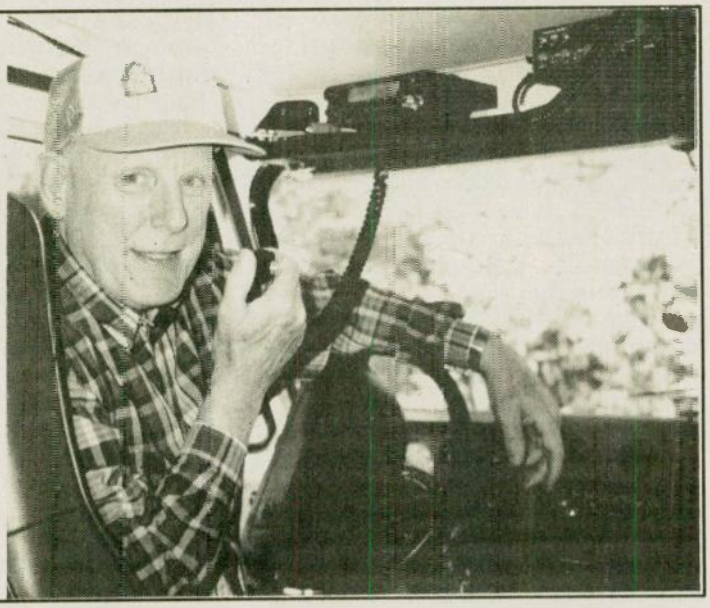
At 17, Johnny dropped out of high school and joined the Navy. He was sent to Guam to perform what he describes as "slave labor." But it wasn't at all lost time because he studied and earned his High School Equivalency certificate, so that when he mustered out of the Navy in August 1946, he went directly into Ohio University, joining the class of 1951, to study Electrical Engineering.

Johnny continued to work in the radio store and with the Elmering of W8RE, he began to get seriously interested in Amateur Radio. And also in Mr. Thompson's daughter, Mary Jean, whom he married in 1949.

After college, he went to work for Sperry Gyroscope Corporation in Lake Success, NY, designing microwave systems. In 1954 he received his Novice ticket, KN2HHR, and joined the company Radio Club. There he met Harry Dannals, W2HD (our erstwhile QCWA president). He also met Charles Ferris at Sperry who went on to become Chairman of the FCC.

Subsequently, he put together a small station at his home in Westbury, Long Island, consisting of a 6AG6 — 6L6, with an S-40 receiver and a 40 Meter dipole. Johnny says that rig didn't run much power, and he was surprised when some of the RF he generated actually went out over the air.

In time, Johnny decided to upgrade



Johnny Johnston, W3BE, of the FCC...One of Us.

to a General Class, so he took the FCC exam. In fact, he took it three times before passing it. That should restore courage to ham hopefuls.

He went through a lot of rigs in quick succession: an Eldico 6AG7-1625 rig which he bought for $49, built an AM modulator for it and went on 40 phone. Then he built a Viking Ranger, bought a B & W 45100, and installed a 10 Meter phone rig in his car.

After five years at Sperry, Johnny moved on to RCA near Philadelphia, and kept on swapping rigs until he wound up with a Central Electronics 20A and went on SSB. At RCA he worked on military avionics, radars, infrared, military TV—everything. After four years, he moved on to General Electric and switched into space work, designing nose cone electronics for satellites.

While in the Philadelphia area, he joined the Frankfort Radio Club and was president of that illustrious organization for two terms. He also was a member of the Pennsylvania Wireless Association. Then in 1972, he switched out of industry and joined the FCC.

In those days, there was only the Amateur and Citizen's Band group to worry about. What a difference today! Now Johnny is officially within the Wireless and Telecommunications Bureau, Private Wireless Division and Assistant for Personal Radio to Chief Bob McNamara. This Division watches such matters as Commercial Radio operators rules, CB radio, control of interactive video, General Radio Services, Land Mobile Service and, oh yes, Amateur Radio. Added to that he is the overseer of the VEC program. Actually, Johnny wears so many hats in so many different branches that the only way you will ever know what he does is to ask him the next time he gives a speech at your convention! But even with these many and varied responsibilities he puts in about 25% of his time on Amateur Radio matters.

In that area, Johnny handles the 25 to 50 Notices for Proposed Rule Making that are sent in to the FCC every year. These petitions are sent in by amateurs or organizations seeking to amend or adopt a rule change in Amateur Radio regulations. Some are frivolous. Some urgently request an ordinance which, in fact, is already part of the FCC regulations. But also, some are well thought-out and worthwhile.

Johnny points out an interesting fact: there is no FCC master plan for Amateur Radio. Currently, the FCC is guided in making rules for Amateur Radio by these submitted petitions from amateurs. In short, through petitions, amateurs indicate to the FCC the direction that Amateur Radio should go. Those petitions you read about are vital to the rules governing our Amateur operations. Hence we all need to pay attention, read them carefully, exercise our right to comment on them, yea or nay.

Although working for the FCC in DC, Johnny doesn't have to fight the beltway traffic. He lives in Derwood, Maryland a bucolic community at the end of the Washington subway system. Although he became interested as far back as 1965, it's now that he's become a dedicated 20 Meter RTTY operator. He uses the Drake TR-7 line and when necessary has a L4B linear to throw on. He feeds a TH5 antenna at 80 feet. Also in the shack is a 2 Meter rig and a KWM-2, plus a 10 Meter mobile rig awaiting the return of the sunspots. He's also a member of the world-famous Potomac Valley Radio Club.

For 30 years, until he passed away, Johnny carried on a weekly sked with his father-in-law, W8RE, in Zanesville. Tragically, last year his wife also passed on. Even though Johnny is eligible to retire from the FCC, he loves his work and he plans to stay on and enjoy it.

About those two boys who gave their OM the nickname Bald Eagle. Kenneth is in New Jersey working for the German company which built the Hindenburg air ship. Nowadays, he designs and builds transmissions. Douglas is at the Smithsonian Institution where he designs and builds exhibits. Some of you may have seen a big one he did a few years ago on Christopher Columbus. Thank you, Johnny, for taking such good care of us hams. We are proud you are One of Us, the Proud, the Many, the Elite, the QCWA.

73 + 25, Jack, W6ISQ **WR**

Search And Rescue Communications

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

Sometimes you just have to get outside and do something! High on my list of good outside things for a communications group to do are a picnic and bunny hunt. You can often combine these two activities into a fun evening for the group and their families.

When someone joins a public service group, he or she has some mental picture of what they'll be doing. During the recruiting effort, group leaders make promises including training events and actual missions. The challenge for group leaders is getting members involved with hands-on activity — if your people are not doing anything, they're going to get bored and go away.

With working agreements in place and the group's completed (and maintained) basic training levels, it becomes a challenge to keep your members ready to respond and active. A group can do only so many table-top exercises or system tests before these too get tedious. One activity that seems to promote high activity and interest is the bunny hunt.

I don't know if it is the competition challenge or the technology challenge, but hidden transmitter hunts are not only fun but tend to be great opportunities for team training. In a nutshell, someone in the group either hides and transmits or hides a low-power transmitter and the rest of the group uses direction finding skills and race to see who can find the "bunny" first.

Some sneaky "bunnies" use intermittent transmitters, directional antennas, varied power output, or other deceptive measures to thwart the hunters. The hunters employ various antennas and direction finders to locate the bunny. With some leadership imagination, you can use the bunny hunt to accomplish a variety of training scenarios.

Leadership skills

If you have a missing person and they are sending out a weak signal, the challenge is a race against the clock to save the victim before sunset. You can divide your group into teams and use the exercise to develop interactive leadership skills. With some off-road preparation your bunny hunt can hone map and compass skills or allow some practice in setting up a field communications station.

One benefit of a regular bunny hunt is that of personal interaction and technological readiness. It is good to work with others in the group and practice using equipment, both yours and others! As you work in teams, you get practice setting up and using antennas and you get to coordinate your readings with other team members. When you work as a team toward a common objective it is amazing how much satisfaction you get from the activity.

It is a challenge to keep your team working together and ready to respond. If you use your imagination and something like a bunny hunt, you can make training fun and valuable. You may also be able to attract others to your group such as those who enjoy building and hiding the "bunny" and those who specialize in direction finding.

Activity levels

One difference between groups that thrive and groups that never seem to get past "go" is a high activity level and that members are involved in making the activities happen. A good leader isn't someone spending 23 hours a day making things happen. We're all volunteers and have a good tolerance for time constraints but we all have ideas and we like it when we get a chance to get involved.

It is important to let members of your group assist in guiding the group through suggestions, involvement, and in leadership roles. When you, as the leader, cultivate ideas and guide others through the process of making the ideas happen, you are developing leaders. The best part of the process is you (the leader) now have others that can help make things happen. The last thing your group needs is a leader who burns out trying (single handedly) to make things happen.

When they call

There are times when a search coordinator must also be the communications officer but I am hard pressed to say it should continue beyond, perhaps, an initial alert. Once you have an event in progress it is important that coordination and communications not negatively affect each other.

Consider an actual mission where the mission coordinator is trying to answer several phone calls and respond to radio calls. It is just not possible or effective — especially to your field teams. One of my most emphatic teaching points is that you (as a communicator) do not keep field teams "on hold." When a chopper, air crew, or

ground team calls in, they have priority.

Field teams are your "eyes and ears." When they call they have information they feel is of importance to the mission at hand. The last thing they want is to be asked to "stand by." My worst possible scenario is to have an air crew experience problems and want to give their location to a search base, only to be put on hold.

During a recent mission, the coordinator made the announcement that all radio traffic must be handled by the coordinator who was acting as net control. It wasn't two minutes later that calls to the coordinator went unanswered for a considerable amount of time. The coordinator then stated "I was on the phone, would the stations calling please call again." No calls came, I guess they either crashed (not really) or gave up.

If you're too busy to handle radio calls, you need additional help!

Safety and survival

When we consider training and certification, the key is demonstrating performance. Take, for example, the skill of tying a bowline knot. This knot is known by Scouts as the "rescue" knot and makes a great way to hook someone into a rope for safety and rescue. When I show Scouts how the knot is tied, they have not acquired the skill.

It is not until each person has repeatedly tied the bowline knot that they begin to acquire the skill — and it is performance that indicates acquisition and proficiency. On a summer campout, I was impressed with the Scoutmaster when he spent a few minutes after lunch challenging the boys to demonstrate some knots. Each received a reward for a correctly tied knot and incorrect knots were practiced until they were repeatedly correct.

The process was fun to watch and applicable to most of our public service groups. The leader issued the challenge and offered the reward. Boys first responded "I think I can tie a taughtline hitch." Some were able and others couldn't quite do it. Those that could began to help the others. Several things happened. All of the boys received a reward. All of the boys moved from an "I think" attitude to an "I can" attitude. They began to cheer and help each other and in 20 minutes you could see some important changes in teamwork and self-esteem.

The leader simply allowed it to happen. He knew several of the boys would know how to tie the knots. He knew boys would respond to a challenge and to the offer of a reward. Once the event started, he encouraged the boys to teach each other. Not once did the leader make any negative comments. I'm sure next time this scenario plays, the boys will be better prepared and express more confidence in their ability to tie knots.

SAR skills

Among the National Association for Search and Rescue's standards for a SAR technician is a category called "improvising." It's important for field people to look at a situation and simply improvise a solution. Part of the NASAR certification exam is to list ways to improvise shelters, signals, water purification, and building fires.

These become important as you involve your group in field activities and want some sense of security that your people can take care of themselves in unique situations. A lot of what we do in preparing for search missions includes basic skills relating to individual well-being. We must be able to function within the "mission environment" whether it is an emergency operations center or a field command post.

A pilot recently complained at the need to attend an advanced first aid course. He said he was a searcher, not a rescuer. As a search coordinator, it is important to me that field teams (on the ground and in the air) are able to handle situations that arise during activities of high risk. If the search plane crashes or the ground direction finding team gets snowed in, I want to know they can take care of themselves and have certain basic skills.

This reminds me of the rescue of a pilot who had crashed on one of Utah's mountain peaks. The Air Force dropped two para-rescuers at the site who stabilized the victim and loaded him into a basket. Just after sunset the chopper hoisted the victim into the bird and then headed for the hospital, leaving the two rescuers behind.

When I asked about the two rescuers, their commander said "They'll be fine, they're Air Force medics. We'll get them out tomorrow." The commander knew, and had high confidence, that his people were prepared to effect the rescue and be prepared to "improvise" until they were pulled out. As we train and prepare to respond, don't forget basic skills seemingly unrelated to public service.

Until next month, keep warm, keep dry and be safe! **WR**

Why I need to keep . . . .

Marvin Johnston, KE6HTS

In attempting to clean out my garage, I came up with a list of reasons NOT to invoke the dreaded "D" word ("dump").

1. That I-I-H* has perfectly good parts for another project.
2. I can't toss something out that costs more than I make in a year.
3. Someday I will get the time to fix that I-I-H.
4. That I-I-H looks too cute to throw away.

*I-I-H = Insert Item Here—*Key Klix,* Santa Barbara ARC

The Youth Forum

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

1995 Young Ham of the Year Named

Fifteen year-old Adam Weyhaupt, N9MEZ, of Alton, Illinois has been named as the 1995 "Young Ham of the Year Award" recipient, according to Award Administrator, Bill Pasternak, WA6ITF, of the Amateur Radio *Newsline*. Runners-up Bryce Duncan, N0YDI, 18 of Red Wing, Minnesota and 14 year-old Toby Metz, KB7UIM, of Meridian, Idaho were also recognized for their achievements. The *Newsline* Young Ham of the Year Award (formerly the *Westlink Report* Young Ham of the Year Award) has recognized outstanding contributions by a young amateur to the Amateur Radio service, community or nation since 1986. This year, the award is sponsored by the Amateur Radio *Newsline* with Yaesu U.S.A. and *CQ* Magazine providing corporate funding.

Adam Weyhaupt is extremely active in his community through his Amateur Radio activities. N9MEZ was selected as the Young Ham of the Year largely because of his leadership in his local Skywarn organization and his dedication to public service through the Amateur Radio service. At age 13, Weyhaupt was heavily involved in providing communications assistance during the massive Midwestern flooding in 1993. One of Adam's major duties during the flooding was to coordinate round-the-clock scheduling of amateur operators providing emergency communications. He also served as a "net control" station for disaster communications in his area.

A year later, N9MEZ played an important role in organizing the Amateur Radio communications for the 1994 U.S. Olympic festival, held in St. Louis. Adam assisted his fellow amateurs in providing communications for 35 sports events at 25 separate locations, some of which were nearly 100 miles apart.

This outstanding young amateur didn't stop there, however. He continues to be heavily involved in public service communications in his area. Besides serving as an Amateur Radio Emergency Service (A.R.E.S.) Network Manager and a Skywarn "weather spotter," Adam edits his Skywarn chapter's newsletter.

Weyhaupt is a junior at Marquette Catholic High School in Alton, Illinois and lives with his parents and two sisters. Adam's father, Gil is also an Amateur Radio operator. Adam's involvement in Amateur Radio has not only benefited others, but he says it has also helped shape his career goal. After becoming involved in the National Weather Service's Skywarn program, Adam decided to sets his sights on becoming a meteorologist.

The 1995 *Newsline* Young Ham of the Year Award was presented to N9MEZ at the Huntsville Hamfest on August 19. This Alabama gathering is one of the fastest growing conventions in the country. The Young Ham of the Year award is also becoming a regular feature at this event due to the generosity of the convention's Planning Committee. The award ceremony was hosted by Bill Pasternak, WA6ITF, of the Amateur Radio *Newsline*, Kevin Karamanos, WD6DIH, of Yaesu U.S.A. and Rich Moseson, NW2L, of *CQ Magazine*. The 1994 recipient, Allison Zettwoch, KD4CKP, 16, also participated in the presentation.

Adam's awards package included several generous gifts from each of the award sponsors. In addition to being a guest of the Huntsville Hamfest, Adam received an all expenses paid trip to the convention and operating equipment from Yaesu U.S.A. *CQ* presented N9MEZ with a variety of *CQ* products and a "V.I.P." tour of the Marshall Spaceflight Center and the U.S. Spacecamp in Huntsville. *Newsline* presented Adam with a handsome engraved plaque.

The *Newsline* Young Ham of the Year Award is now entering its tenth year. Previous recipients include: Shawn Wakefield, WK5P; David Rosenman, KA9PMK; Jonathan Binstock, NK3D, Erin McGinnis, KAØWTE; Mary Alestra, KB2IGG; Sammy Garrett, AAØCR; Angie Fischer, KBØHXY, Kevin Boudreaux,

N5XMH; and Allison Zettwoch, KD4CKP.

The Young Ham of the Year award is presented annually to an amateur age 18 or under. For further details send an SASE to the following address: The Amateur Radio *Newsline*, Young Ham of the Year, 28197 Robin Avenue, Saugus, California, 91350.

Special thanks to Bill Pasternak, WA6ITF, of the Amateur Radio *Newsline* (and ***Worldradio*** columnist) for providing much of the information included in this article.

A.R.R.L. recognizes youth, educational accomplishments

The American Radio Relay League (A.R.R.L.) offers several programs and awards which recognize the contributions of young people and educators to the amateur service. The following information might be of special interest to you, your teachers, or members of your local radio club.

The *Hiram Percy Maxim Memorial Award* is given in recognition for outstanding contributions to the amateur service by young people (under age 21). According to the A.R.R.L., some qualifications for nominees may include: key leadership roles within the local or national amateur service, technical endeavors, recruitment of new amateurs, public service, work in publicizing Amateur Radio, and operating record. It's important to note that these are only a few examples of possible contributions and are not intended to limit the nomination criteria.

This honor is presented annually by the A.R.R.L. to a licensed amateur under age 21. The recipient will receive $1,000 cash, a commemorative plaque and an all expenses paid trip to an A.R.R.L. convention for the award presentation.

Nominations for the *Hiram Percy Maxim Memorial Award* should be sent to the appropriate Section Manager, who will endorse them and forward the materials to A.R.R.L. Headquarters. The nomination deadline for this award is March 31, 1996. The *Professional Educator of the Year Award* is presented to licensed teachers utilizing Amateur Radio in the classroom. The A.R.R.L. hopes to encourage increased interest in the amateur service while recognizing the accomplishments of educators through this program. Nominations should be submitted to Section Managers, who will review and forward the materials to A.R.R.L. Headquarters. The nomination deadline for this award is February 15, 1995.

Further information about these and many other A.R.R.L. programs for young people and educators may be obtained from the league. Its address is: American Radio Relay League, 225 Main Street, Newington, Connecticut, 06111.

Special thanks to the A.R.R.L. and its Section Leader newsletter for providing much of the information included in this article.

Column information needed

With the start of school, contest season, conventions, hamfests, etc. comes the involvement of young people in Amateur Radio. I'm hopeful that I'll be able to highlight more deserving young amateurs and their activities in the coming months. But, I can't do it alone! Column ideas, comments, suggestions, letters, good photos (color or black and white) are always welcome and encouraged! This information does not necessarily need to be extraordinary, just timely (I must receive all dated information at *least three months* prior to the desired publication date) and of interest to young people.

I'm currently in the process of planning a column highlighting *Amateur Radio Scholarships*. If you know of a radio club, hamfest, organization, etc. which offers such programs, please contact me with as much detailed information as possible at the address above. Information may also be faxed to 314/831-8536. Please be sure to include a cover sheet which includes my name and a phone or fax number where you may be reached. As always, thanks and keeps those ideas coming! **WR**

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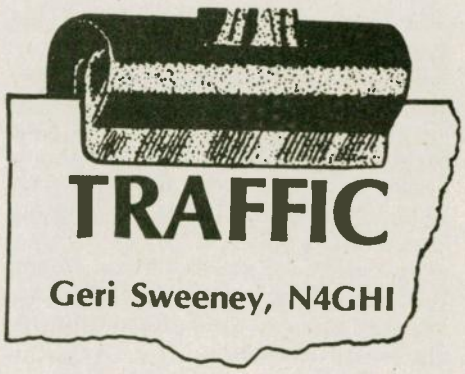
Open the window to your story . . . submit photos whenever possible!



TRAFFIC

Geri Sweeney, N4GHI

Upcoming traffic:

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

December Holiday (VA Beach mall, VA) - over 1500 messages in 1994
First Night, (Annapolis, MD)
First Night, (Boston, MA)
January South Florida Fair

History

K4BGZ says that the VA Beach ARC set up the first Pembroke Mall Christmas Message Center as training for the VA Beach ARES in 1979. The enthusiasm generated by the message center spread through the club members and their families. Many non-amateur family members assisted with running the booth (writing and editing messages). Before each event, training classes are taught on message formatting and traffic delivery via their local 2 Meter net. Many family members then became interested enough to get their own radio license. Information is taken from anyone sending a message so that replies and/or service messages (ARL sixty sevens) can be returned.

First night

Do you know of any other First Night (New Year's Eve) radio events?

Silent Key

VE3GSQ, Gail Murray, Shelburne, Ontario. It's devastating to lose such a wonderful person. NCS on traffic nets generally ask for a moment of silence when such announcements are given. This seems very appropriate. It was certainly done on our Virginia Nets recently when N4FZA, Jim Halverson became a silent key. And, yet, I heard nothing about Gail passing away on the EAN (Eastern Area Net). I wonder why? Since newsletters are so few and far between on the Region and Area (at least, here on 4RN and EAN) level, perhaps we should give their managers a few lines in *QST* and/or a Field Newsletter for a short report on items of importance. What do you think?

CNE

The Canadian National Exhibition presented us with lots of traffic this year. Thanks to the exceptional operators there who made this such a fine traffic event.

Slow speed training CW nets

Gary Adams, KE4DNO, hopes to hear many new fists on the 'All Florida Slow CW Training Net.' It has a curriculum of training messages. Listen on 3715 kHz at 8:00 p.m. EST and do check in. That's the good news.

The bad news is that the EM/RI slow CW net has been discontinued due to insufficient interest. Somehow we need to get some PR out to new licensees on where they can find a slow speed CW net, and why it would benefit them to participate. If nothing else, it's a great way to practice CW. Gary is trying an original PR program. He queries Gettysburg (on Internet) as to who is getting a license in Florida. He then sends them a message inviting them to join the net. He says the most unique message that he has received back said: 'Not interested, as I only got a license to engage in model airplanes.'

It would be very helpful if every new licensee was sent a note from someone inviting them to join a Local and/or Section net — but who would be responsible for issuing the necessary information? Has anyone pursued such a course? Please let me know if you know of a slow speed traffic net in your area so we can advertise it here.

Traffic via packet

Digital modes have the means to be of great value. Its benefits are obvious: Fast, overloads in emergencies, time flexible for its users — to name a few. And yet, many traffic handlers have had experiences with packet which have not proven very successful. My latest packet endeavor, as with much that I enjoy doing in life, within and without the realm of Amateur Radio, was gathering data (pun intended) on how traffic is performing on packet.

As it happened, several weeks ago, I encountered a broken schedule. This occasionally happens. But, a person (me) still held the traffic and was committed to keep it moving, even if a bit tardy (give it to the next guy on his/her schedule).

This is how it works. The National Traffic System consists of three hubs called Area Nets - Pacific, Central, and Eastern. Their divisions are shown on a map of Canada and the U.S. on the back of the 'Net Directory,' published by the ARRL. These Area Nets meet twice a day (afternoon and evening). Region nets meet on either side to supply the traffic to the Area Nets. Section Level Nets meet on either side of each Region Net. Thus, traffic starts on a Local (2 Meter), and/or a Section Level (State) Net and progresses through the system of nets to the net closest to its destination where a station on a Local and/or Section Level Net takes it for delivery.

Area nets are the satellite hubs. Traffic moves up and down between the local level and the Area nets via the Region Nets. Traffic between hubs (Area nets) is handled by individual stations who check into the Area net and pick up all traffic heading for another area. Traffic, here, moves sideways. These stations then, either meet another Area net and/or another individual station from that area to hand off the traffic. Traffic between the Eastern Area and Pacific is a one-on-one sked due to propagation and time differences.

Thus, we find me on the EAN, picking up traffic for the Pacific Area one night at 8:30 p.m. and discovering at 9:30 pm, that my contact in Pacific Area was missing. Since the messages were very general in nature and had no time value, I elected to try sending them on packet. But, I did something I had not tried before. Instead of just entrusting these messages into the system, with faith that they would emerge on the other end, I added an 'op note' at the bottom requesting that any station who re-

moved it from a PBBS send me a message saying they had the traffic. As I write this, two weeks have passed and I have yet to receive a message from anyone.

What could have gone wrong? The board I use could have crashed and the traffic may have never left. It's been having problems lately. Any board/s to which the traffic was sent could have experienced problems. The messages may have made it to their destination (California) and sat on a board for lack of anyone taking them off. Someone may have delivered the messages and just not bothered to let me know. Someone may have sent me a message and it could have disappeared on the way back. After a week, I dispatched the messages on a net.

We need a plan on how to incorporate packet into the world of traffic. As it has developed informally, many traffic handlers don't trust it with their messages. When it's handed from person to person, there is a system to track one's message by using handling instructions (HXC and HXD). When handled by machines, there does not seem to be any system. It's not that we don't trust machines. It's that we know that machines can't care.

The folks at ARRL Headquarters seem anxious to impose a digital policy on traffic handlers. These are the folks who don't appear to check into traffic nets and/or send traffic. Thus, they seem to prefer to depend on a few wise men to direct them. That limits input. Wouldn't it be better to listen to the grass roots? How would you do this? Every month hundreds of stations report their traffic activity. These folks then become appointees (ORS - Official Relay Stations) in their Section. Why not just survey these folks? This could be accomplished by way of the newsletter ARRL sends to them (fill it out, send it back).

Some survey questions could be: 1) Do you run a PBBS? 2) Do you handle traffic on: (multiple choice of digital modes)? 3) How can we make packet more reliable for traffic handlers?

This data could then be examined for an in-depth study of what is happening. Technical questions could be examined by our three Area digital appointees as to whether various suggestions would work, how to make them work (short programs may need to be written), and published in the next newsletter for additional comment.

Instead, our three digital wise men (appointed by our staff at Headquarters) seem more intent on creating an entirely new system utilizing new technology (more expense) while declaring that packet as we know it won't work for traffic handing. This is a hobby. To allow the most amateurs to participate in traffic handling, we need to keep it simple. We need to utilize the players which we already have, as well as encouraging those who want to work with the latest technology.

My own survey:

Do you think it would be useful to put an op note on traffic going via packet, asking for a reply when the message is taken off? This doesn't always mean the message has arrived at its destination. Many traffic handlers take messages off boards for various reasons, such as, it's been sitting on the board they monitor for several days. But, it would establish a link of person to person. Are there any PBBS out there which automatically services a message back to the station which put it on packet? Any ideas on how we can make packet more dependable? (SP N4GHI @ WA3TAI .MD) If you don't receive a reply, assume I didn't get it. WR

Richard Fisher, KI6SN

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

QRP from the 'Wilderness'

It has been almost two years since the QRP world was buzzing about the debut of a transceiver kit called the NorCal 40.

A review in ***Worldradio's*** QRP column ("The extraordinary 'NorCal 40,'" Feb, 1994) spoke of "whispers of 'classic' being attached to a small, 40 Meter transceiver" introduced in late 1993 as a project by the Northern California QRP Club. The whispers quickly turned to shouts as literally hundreds of NorCal 40s made their way into QRP shacks around the nation and world.

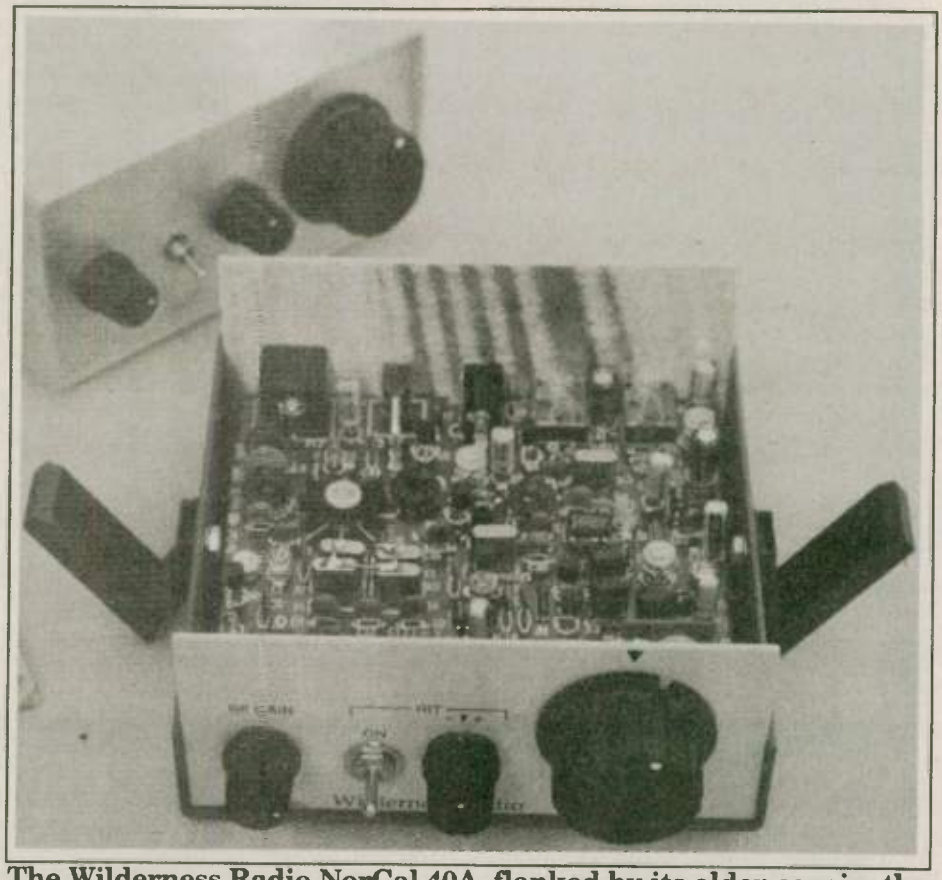
Designed by Wayne Burdick, N6KR, the NorCal 40 has unquestionably earned QRP "classic" status, comfortably in the company of such extraordinary designs as Roy Lewallen's W7EL transceiver, and The Twofer transmitter, by John Collins, KN1H.

An initial kit run of NorCal 40s sold out almost as soon as it was announced in 1994. The club followed with a second production — dubbed the NorCal 40A — featuring an array of upgrades. Those kits, too, were scooped up in virtually no time. To the disappointment of many QRPers, the Northern California QRP Club's second run of '40As, however, was its last. Now happily, the kit is being produced commercially by Los Altos, California based Wilderness Radio, owned by QRPer Bob Dyer, KD6VIO. That's great news to QRPers who have come to appreciate the NorCal 40A's gifts of design and packaging. Dyer, though, didn't stop with the status quo. After nearly two years of rigorous field testing and painstaking modifications from both the rig's designer and legions of the kit's builders, the Wilderness NorCal 40A takes an already great transceiver to even greater heights. For its $129 price tag, it's easily one of the top QRP kits today.

Basically, the Wilderness NorCal 40A is a two-watt 40 Meter superhet transceiver with receiver incremental tuning (RIT), automatic gain control (AGC), 400 Hz filter, VFO coverage of about 50 kHz of the band, RF gain control and full QSK. And its physical design is as attractive and innovative as its electronic circuitry. As a longtime user of the club's original NorCal 40 here at KI6SN, I can attest that the Wilderness '40A (currently at "revision B") is a markedly improved transceiver when set beside the original. Indeed, little things mean a lot. Among the upgrades noted by Wilderness:

- Junction field effect transistors (JFETs) have been replaced by J309s, "improving AGC performance, transmit power output, and alignment repeatability."
- The addition of low-pass filtering following the VFO "to improve receiver image rejection by about 10dB."
- AGC and QSK component value changes to improve attack/decay times and to reduce audio thumps.
- L-C circuit value alterations "to make alignment easier."

The sidetone pitch is now operator-adjustable using a PC-board mounted



The Wilderness Radio NorCal 40A, flanked by its older cousin, the original NorCal 40. ***—photo by KI6SN***

trimmer capacitor. The AGC is also variable with a board-mounted potentiometer. And there is a lot more receive audio. By and large, the newest '40A is just a better sounding radio than its predecessors. That's saying a lot, given the great performance of the original NorCal 40.

I built the Wilderness '40A in two weekend sessions — sandwiched between kids' soccer games and trips to the movie theater. The rig's single circuit board is plated through — beautifully silk-screened showing component locations. It's a pleasure to work with. You'll not find higher quality. Every part — right down to the tiny clear plastic spacers used to insulate board-mounted crystals — were accounted for. And there's no doubt that Wilderness uses the same standard for quality in its component procurement as it does for its circuit boards.

As with previous incarnations of the '40, all parts — including switches, plugs, connectors and potentiometers — are mounted on the rig's circuit board. There is no chassis wiring. There are several toroids to wind and resistors, capacitors, chips, transistors, diodes and chokes to sort and identify. But the Wilderness transceiver is well within the building capability of QRPers with only limited bench experience. One reason is the kit's manual.

From start to finish, the documentation carefully walks the builder through construction, alignment, troubleshooting and theory of operation in clear, concise language. Pictorials help with component identification and PC board placement.

Taking your time, following directions and doing neat and thorough soldering will likely result in an operating transceiver in just a few hours. And if you've goofed somewhere along the line — and are stumped in finding a solution — for a $50 diagnosis and repair fee, Wilderness will get the rig up and running. The pre-drilled front and rear panels are light blue with black lettering. On the front are controls for RF Gain, RIT On/Off and tuning, and VFO tuning.

On the rear are jacks for headphones, key, 12-volt B+, and RF output. The rig's cover is dark blue, and the top can be quickly and easily removed with snap-on plastic latches. There's plenty of room inside, too, for further modification or for adding accessories, such as a keyer.

Physically, the Wilderness NorCal 40A is 2.2-inches high, 4.6-inches wide and 4.4-inches deep — ideal for backpacking. And current drain is just 15 milliamperes on receive; 200 to 300 milliamperes on transmit, making it well suited for battery operation. A hefty 2SC799 transistor is called to service in the final. Step-by-step alignment procedures take about five minutes to complete. Fancy test equipment is not required. On the air, the Wilderness NorCal 40A is truly a pleasure to operate.

At KI6SN, it came to life the first time voltage was applied, and within moments was engaged in CW reparte with Terry Markham, WO8N, Redmond, WA. Signal reports have been great.

The VFO is rock solid from a cold start. The CW tone is pure, and the keying is excellent.

There is a slight audio thump in the sidetone during keying, but it is not objectionable.

I'd never have dreamed such a fundamentally good rig could be so improved. But Burdick, hundreds of field testers, and Dyer have proven otherwise with the Wilderness '40A. For more information about ordering the NorCal 40A, or the company's growing line of QRP products, write: Wilderness Radio, P.O. Box 734, Los Altos, CA 94023-0734. Telephone: 415/494-3806.

The passing of a newsletter

Joseph Falcone, AA8HV, writes from Livonia, MI, that he "will no long be publishing the MFJ 90's Newsletter." Since the Fall of 1993, Falcone, who heads the MFJ 90's Radio Club, has been publishing the periodical, featuring reports from members about operating and modifying the popular line of MFJ Enterprise's QRP transceivers. He has been polling the membership seeking a volunteer to continue producing the publication. Falcone writes that the popularity of the rigs "is a credit to MFJ and its American-based manufacturing of radios. I am sure the radios will remain popular for a very long time."

Catalog of the month

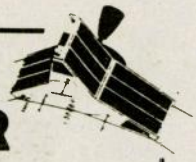
"Talk about coincidence," writes Mike Wood, N6MVE, of Vacaville, CA. "I had been working on a couple of (audio) amplifier kits for various rigs here and was hesitant to tackle installing them, as I didn't want to alter the rigs' cases. Your idea of making a separate box that could be transferred from rig to rig was just great!"

Wood is referring to the Audio Ratchet, using Radio Shack's Power Amplifier Module Kit as an outboard general purpose audio amplifier. It was featured in the June 1995 ***Worldradio*** QRP column. "Several years ago I found several cheaper alternatives (to the Radio Shack amplifier) that I thought you might want to pass on," Wood said.

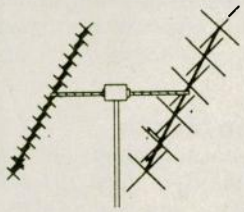
Produced by JDR Micro-devices of San Jose, CA, the amplifiers are featured in the company's free electronic components catalog, available by calling (800) 538-5002. One JDR audio amplifier kit is for general purpose applications, costs just $4.95, and is based on the popular LM386 chip.

The other is rated at one watt, based on a TDA7052 Philips chip, and costs $5.95. "Both are a snap to build and work with 3 to 15 volts," Wood said. The catalog features lots of parts and accessories for the QRPer.

The company's mailing address is: JDR Microdevices, 1850 South 10th St., San Jose, CA 95112-4108. WR



AMATEUR SATELLITES



TERRY DOUDS WB8CKI

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

This month I want to break away from operating on the birds to answer some of the questions I have been receiving from those of you who have written. I would guess that if you are coming up with questions, there are others out there who could benefit from the information as well.

I have found that many are interested in satellite communications, but with the large influx of new amateurs whom we are welcoming into our ranks, they have not seen past articles on getting started. For those in that predicament, here is a very quick overview...

First, check around in your local area for any satellite operators who may reside there. Ask them for assistance in getting started — most of us had an Elmer nearby who could help and prod us into getting on the birds! Consider obtaining a book such as *Getting Started on Amateur Satellites* by Keith Baker, KB1SF (available from AMSAT — the Amateur Satellite Corporation), or the ARRL's Satellite Experimenters Handbook. To see some operation in action, check out the *Getting Started on Amateur Satellites* videotape from *CQ Magazine*. All of these sources will help to teach you what birds are out there, what frequencies they cover, the modes of operation (SSB/CW/FM/RTTY/SSTV/PACKET/etc.), the type of orbit they use (Elliptical [Molniya] or Low Earth Orbit [LEO]), types of gear and antennas needed to use them, etc.

Another recent thread has involved the type and use of various antennas, from crossed yagis to discones and eggbeaters. They all have a purpose, and they all work in their respective areas. However, the type of bird will dictate the antenna types involved for RELIABLE communication through it. Often times, for low earth orbit birds, omnis will work very well — I use a discone for most of my LEO work, and it is very reliable. On Oscar 10 & 13 though, I move to the steerable twin yagis in my backyard. In the Molniya orbit, AO-13 (and AO-10) hit a maximum altitude of about 20,000 miles above the earth at APOGEE (the highest point in the orbit), versus 600 to 1500 miles for the LEO's. This may help to explain why yagis or some form of directional gain antenna is needed for the "DX" satellites.

Since I mentioned eggbeaters, some of you may be confused, having never heard of such an antenna. The eggbeater style antenna is basically two half-wave loops placed at 90 degrees to each other physically and fed with a phasing harness. What it allows you to do is have an antenna that is basically in horizontal polarization at the horizon, and becomes circularly polarized above that point. Why circular polarization? The satellite spins while in orbit, and its signal will physically change in phase in relationship to the ground station. By utilizing circular polarization, we can hear the signal consistently, without large drops in the signal. The eggbeater design seems to work well with the LEOs, and many on the PACSATS have been having very good luck with these. This type of antenna is made commercially by M² antennas, and there are many homebrew plans available, both on CompuServe and on AMSAT-BB.

There are many places available on online services to learn more about the satellites. On CompuServe in the Hamnet Forum, there is a section devoted to Amateur Satellites, where you can get the latest keplerian elements, AMSAT bulletins, and general information from regular satellite operators.

The Internet is full of places to look concerning the birds. The first place is AMSAT itself. AMSAT has an FTP site (ftp.amsat.org) that has general information about the current satellites, special articles from G3RUH (one of the control operators for OSCAR 13, and a frequent contributor to all radio magazines), as well as current keps, AMSAT bulletins, and software updates. They also have 3 different mailing lists available to subscribe to: one for Keplerian Elements, one for AMSAT bulletins, and the earlier mentioned AMSAT-BB (or the AMSAT bulletin board). You can subscribe to them by sending a message to listserv@ amsat.org, and in the text say SUBSCRIBE "xxxx" where the xxxx is either KEPS, ANS, or AMSAT-BB.

Also for you web surfers out there, there are a number of fun web sites available. First, let me explain the "web" to the majority of those readers out there that have absolutely no idea what the "web" is! The web is a shortened term for the World Wide Web, a graphic version of the Internet. The web features "home pages" for various institutions, groups, and individuals that you can "connect" to with your computer by using software known generically as a "web browser". These home pages list types of information that you can obtain from these sponsoring groups, etc. They also feature "hypertext links", which are little phrases that show up usually as dark blue type in a text chunk on the page. By clicking your mouse on the hypertext link, you are taken to that "page", and you are off "surfing"! It can be a great deal of fun, and for the satellite operator, it allows you to find volumes of information that you may not have access to otherwise.

AMSAT has a home page at http:\\www.amsat.org, which features info on the organization, catalogs, software offerings that you can download immediately, and many other types of information.

This is just one of an abundance of

Amateur Radio home pages, some of which are specialized, some of which are commercialized, and others that are purely for beginners. AMSAT-UK also has their own home page, as does TAPR, or Tucson Amateur Packet Radio, the national packet radio organization. They work closely with AMSAT on development of Packet Satellites (PACSATS), as well as on decoding hardware for use by the satellite operator (DSP TNCs and similar items). Of course, the ARRL has one as well, and you'll find even local clubs are now developing their own home pages!

If you try connecting to the Amateur Radio Web Server, it will take you to many of these sites with just a click of your mouse button! Its Universal Resource Locator, or URL is http://www.acs.ncsu.edu/HamRadio/. Be careful when entering these "addresses," or URLs...they are CASE-SENSITIVE! Type it into your computer exactly as you see it here, with upper and lower case letters as shown!

Well, I hope this may help some of the "newbies" out there begin to whet their interest in satellite operating. We are in the under one year point before the launch of the largest amateur satellite in history, Phase 3D. It will go up in May of 1996, and should allow many of you the opportunities to get on the birds for the first time. Stay tuned here for further information.

As always, please drop me a note at the addresses at the top of the column if you are looking for help — many of you are taking me up on this, and I look forward to hearing from you.

See you in January! **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!***

Religious interference

James C. Bollinger, W6ETD

This is a story that happened many years ago, early in my life as W6ETD.

I used to baby-sit with our two sons so my wife could attend church in peace. I also had a ham rig in our old Buick at the time.

One morning I loaded the boys in the car, and drove back down to the church to pick up my wife after services. As we waited in the parked car, I decided to see if anyone was on the air. After listening awhile, I called CQ. Almost immediately, my wife came running out of the church, wildly waving her arms! When she got to the car, she told me that the congregation was in the middle of a quiet prayer, when the public address system came alive with the unmistakable sounds of "CQ CQ CQ from W6ETD." **WR**

Watch it!

Watch your thoughts — they become your actions.

Watch your actions — they become your habits.

Watch your habits — they become your character.

Watch your character — it becomes your destiny. —*Key Klix*, SBARC

FM & REPEATERS REPEATERS REPEATERS REPEATERS REPEATERS

BILL PASTERNAK
WA6ITF
28197 Robin Ave. • Saugus, CA • 91350
(Internet)b.pasternak@genie.geis.com
(AOL)BILLWA6ITF
(GEnie) B. Pasternak
(MCI e-mail) 805/324-1437
(24-hr voice/fax) 805/296-7180

A full blown open UHF FM voice repeater will soon be on the air from space! The Germans are putting it there and it is called SAFEX II. The first section of this repeater was carried to the Russian Mir space station by German Cosmonaut Thomas Reiter, DF4TR, when he arrived on Mir for the European Space Agency's EUROMIR 95 mission. The rest of the system will be carried to MIR in the course of several missions over the next few months.

The 70 centimeter space repeater — actually a medium bandwidth FM transponder — was built by Thomas Kieselbach, DL2MDE. Initially it will be FM only, with downlinks at 437.925, 437.950, and 437.975 MHz, and uplinks in the lower part of the 435 MHz space communications subband. SAFEX II will later be improved adding a 23 centimeter to 13 centimeter transponder, capable of broad-bandwidth modes including fast scan ATV.

The German design team has not announced a date when the SAFEX II orbital repeater will come on line, but using it will not be the same as using your favorite local machine. While it will give coverage over hundreds if not thousands of miles, you will need plenty of power and the ability to computer track the Mir space station with a beam antenna in order to use it. Alternatively, hams might consider setting up gateway repeaters — FM repeaters on any band tied to other repeaters with the ability to track the Mir, so that any ham with a handheld could enjoy the soon to be on the air — repeater in space.

In the meantime, regular users of Mir can talk directly to DF4TR who will be on the air using the call sign DPØMIR on the normal 2 Meter frequencies of 145.800, 145.550, and possibly 145.200 MHz. These frequencies were adopted as standard for MIR and SAREX shuttle activities at the IARU session of this year's AMSAT-UK Colloquium. QSLs for contacts with this mission will be handled via the usual German DARC QSL bureau.

An FM and repeater magazine

One of the questions most often asked of me is: "...why isn't there a ham magazine for people who operate on repeaters?"

The simple fact of the matter is that no such national publication exists — at least not yet — because those in the ham radio magazine publishing business simply do not see it to be a viable stand-alone market. If it were, the chances are that a lot of us who specialize in this area of ham radio, would be writing for such a vehicle. But it was not always this way. About three decades ago, there existed a small special interest magazine called the FM Magazine. It was written in California, starting out primarily as a technical publication but eventually becoming more of a magazine describing the exploits of a group of "FM pioneers" who, to this day, call themselves the "76ers." This name is a reference to the simplex frequency of 146.76 MHz on which they built a mini-society that to some degree exists to this very day in the Los Angeles — San Diego RF Corridor.

Had there been as many hams involved in FM and repeaters then as there are now, those behind this publication would probably be multi-millionaires today. As it was, like many other short lived specialty publications, it simply disappeared into the oblivion of time.

The next major effort in the way of a magazine for FMers took place in *73 Magazine*. During the late 1960s, when the world was beginning to find out what every California ham already knew, Publisher Wayne Green, W2NSD, hired Kendall "Ken" Webster Sessions, K6MVH, as his Editor in Chief. Sessions had been an integral part of the Southern California FM scene since he was a teen. He was the originator of the weekly "K6MVH Newsbeat"— a tongue-in-cheek weekly news summary dealing with happenings on 146.76 and played to the world of FM on that same frequency. Sessions had also written numerous serious articles on FM and repeaters, and once at the helm of *73*, he did all he could to put the words "Fun Mode" on the lips of every ham.

The combination of Green and Sessions was masterful. By combining Sessions knowledge of FM and repeaters with Green's ability to write biting editorial comment, hams interested in VHF FM were subscribing in numbers that were unprecedented. In a few short months, *73 Magazine* was recognized as the technical journal and political voice of FMers nationwide. This leadership position continued into the early 1970s under several different editors, with this author starting up the "Looking West" FM column in 1971.

As Wayne Green himself tells it, the idea for his short lived "Repeater Bulletin" was to fill a needed gap. He had so much FM and repeater related material being submitted for publication that it was literally squeezing out all else from *73*. Rather than chance loosing his other "non FM" readers, Green opted to create the "Repeater Bulletin" to serve as an overflow for articles as well as a place for FMers to exchange ideas. It was a niche publication that was created at the right time to serve a specific need. Once the turmoil of the formative days were over, Green simply put the bulletin to rest — having lost several thousand dollars during the publication term.

As FM and repeaters became the ultimate appliance operating aspect of ham radio, most magazines devoted little if any space to what was happening in that area. The ARRL created its FM/RPT column, which was and still is basically a reprint service of material from various radio club newsletters. I continued Looking West in *73* until, after two and a half decades, I thought the subject had been covered from every angle possible. So I too retired, only to bring back the topic here in ***Worldradio*** as the emphasis abrupt-

ly shifted from the technical side of FM over to the operational side. The problem-solving side. The advent of lawyers replacing the technocrats in matters of frequency coordination. Court decisions on who can and who cannot operate through a repeater, and much more to come.

Maybe what is happening on the air and in the courts will be enough to inspire a mainline ham radio magazine for the FMer and repeater operator. It will cost at least a quarter of a million dollars to start. It will have to fight the existing national magazines — *CQ, QST, Worldradio* and *73* to build a subscriber base — or, even more difficult, convince the new no-code Techs who are by and large "uninvolved" in the political aspect of ham radio that there is a reason to subscribe. Finally, it would have to convince those who manufacture and sell the gear used by hams to support it with their advertising dollars. That cannot be done without first proving to the potential advertiser that a readership for an "FM and Repeater Magazine" really exists.

My advice is not to hold your breath waiting. I think it will happen, but I also believe that such a publication is at least a decade away.

New 2 Meter DX record

Paul Lieb, KH6HME, has done it once again! He has set yet another over water distance record on the 144 MHz band between Hawaii and Washington state. On 1 July, operating from his DX location atop Mauna Loa volcano, Paul worked Jim Costello, W7FI, in Woodinville, Washington, near Seattle, a distance of 4333 kilometers.

While not on FM voice, the contact was the result of a tropospheric ducting opening that has been responsible for Hawaiian repeaters being heard on the U.S. mainland and the numerous low power FM contacts made between the US mainland and the island state in years past. This record setting attempt began 28 June when the 144.170 MHz beacon on Mauna Loa at 13,680 feet above sea level, was heard on the West Coast.

In the early evening of 30 June, KH6HME worked WI7Z and N7KSI, both near the coast of Washington, the first ever 144 MHz contacts from that state to Hawaii, and then worked N7AVK, in Oregon.

The breakthrough came the next day, at 0600, when KH6HME worked several Seattle- area stations, beginning with W7FI, and was heard by VE7SKA, who could not make himself heard in Hawaii.

Using computer software, the various Seattle-area stations calculated who was the farthest from Mauna Loa, and the winner was W7FI. The record-setting distance was 58 km farther than the six-year-old record.

Unfortunately, the conditions did not extend to higher bands; KH6HME made 432 MHz contacts with K6QXY and W6SYA, but no others were completed.

The previous record was set between KH6HME and XE2GXQ, in Baja California, a distance of 4276 km, on 13 July 1989. Our thanks to the ARRL and others for providing this information.

A religious experience?

Ed Hill, KE4JCG, in Tampa says via America Online that ham radio 2 Meters in his area has its oddballs too. Ed says that: "...aside from the usual kids beeping the repeater to bring up the phone link/patch we also get this in Tampa Florida. On the 147.105 repeater, one night I heard a man broadcasting for several hours (illegal per FCC part 97). This guy was going on and on preaching the gospel, reading the Bible, reading Greek texts of holy scripture and translating it. While I read the Bible myself, I think God will forgive me for not hassling the FCC with broadcasts.

Of course, these well intentioned broadcasts kept anybody else from using the repeater (heard for a 50+ mile radius), and occasionally the repeater's phone patch is needed to call Tampa PD or Hillsborough Sheriff for accidents or other assistance.

I gotta give this fellow from nearby Zephyrhills an "A" for missionary enthusiasm and an "F" for no brains."

The guest spotlight

DEALING WITH DIRTY WORDS

By Lew Gordon, K4VX
ARRL Midwest Division Director

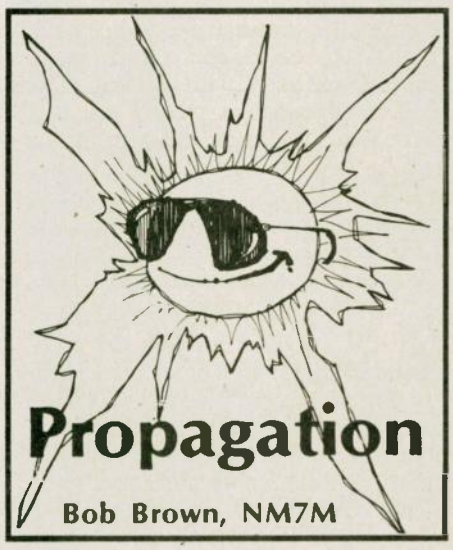
"I have received many comments regarding profanity one hears on the air, particularly on VHF. Our use of the spectrum for enjoyment is a privilege, not a right; however, the filth and obscenities one hears stretches the definition of "free speech" far beyond what the framers of the Constitution had in mind. It has reached the point where it can be embarrassing to demonstrate Amateur Radio to newcomers, especially children. The courts have determined that these acts are criminal.

"With a reduced budget the FCC maintains that they do not have sufficient personnel to effectively police the bands. Even when they do issue citations, they are powerless to collect if the recipients refuse to pay. Apparently it is not cost effective to go to the Federal Court to collect only a few thousand dollars in fines. With further deregulation in the future a distinct possibility, the situation can only worsen.

"What can be done? Some of you suggested forming a SWAT team! Shutting down your repeater only accomplishes what the offender is hoping for. The "ON-OFF" switch on your radio won't stop it. Realistically, the only way to combat ANY crime is to make it very unattractive to commit it in the first place. Tougher laws and tougher sentences could help as starters. Petitioning the FCC does not seem to produce results. We should communicate our concerns to our Congressman. We hear about "downsizing" the Federal Government. It should not come at the expense of increasing crime."

(From the Midwest Division Directors' Newsletter)

From our house to yours, a very Happy Thanksgiving! **WR**



In these days of the Hubble Telescope in space and background microwave signals from the "Big Bang," astrophysicists remind us that we live in a four-dimensional world, three spatial dimensions - x, y, z - and the fourth dimension, time, t. As one trained in the ways of physics, I have no problem with that and can talk glibly about four-dimensional space. But don't ask me to draw one.

Now it would appear that radio amateurs, at least a good fraction of them, operate their radios in a five-dimensional world. Four of the dimensions are spatial, two in the vertical plane of their antenna pattern and two in the plane of the azimuthal equidistant map they use in viewing the world. The fifth dimension is like time but is reckoned in funny units, sunspot numbers.

Okay, I'm going to take those ideas one step, or dimension, further and use all three dimensions of the antenna pattern — gain in dBi, azimuth and elevation — to make it a six-dimensional world for Amateur Radio. In short, I'm going to talk about how a full antenna pattern puts down a "footprint" on the surface of the earth and illustrate it for a given time in a sunspot cycle, when the SSN is 45.

As you well know, the term "footprint" has worked its way into our Amateur Radio vocabulary. Thus, we talk about the "footprint" of a computer on our operating desk, the same for a vertical antenna on our grounds and that of the radiation pattern from a satellite we monitor, like RS-12. Every one of those ideas has what I'd call a "vertical aspect"; now we come to a horizontal aspect, the footprint of an antenna pattern at a DX distance on the earth's surface.

I have Radio Netherlands to thank for introducing me to that idea. As a matter of fact, I have a lot more to thank them for — bringing all of Raymond Fricker's propagation programs out in the open so we could benefit from them: MICROMU2+, MAXIMUF, and IONPRED. Those new ideas came to my attention about a decade ago when my friend N6ZX/7 came back from Holland bearing an Apple 2e disk brim full of source code. After that, the fun and games began!

Anyway, let's look at the idea of an HF footprint, using a program developed by Hans Bakhuizen at Radio Netherlands for their overseas broadcast operation on 9.895 MHz. The method used in the calculation of an antenna's "footprint" requires all the analytical tools of radio propagation: the 3-D radiation pattern for the antenna, ionospheric maps, ray-tracing in the E-and F-regions, signal absorption and ground reflection. Having said that, we come back to reality, the amount of time spent in the computation; that's where analytical approximations come in the picture.

The Radio Netherlands program uses horizontal dipole elements, as many as four (4) dipoles in a line and as many as four (4) lines of dipoles stacked vertically a half-wavelength apart. (Did I hear you say "WOW"?) The height above ground of the lowest dipole can be varied and a passive reflector added to change the radiation pattern from a bi-directional one to a uni-directional beam. In short, the program is flexible and can deal with impressive curtain arrays, well beyond the reach of the typical amateur.

And the same is true of the power fed into such an array, with Radio Netherlands using as much as 500 kW, some 25 dB greater in power than our legal limit. Of course, the antenna gain as well as radiation pattern depends on the number elements and with phasing across an array, it is possible to "slew" the pattern to one side or the other.

With a 4 x 4 array of half-wave dipoles and a passive reflector, a program from the International Radio Consultative Committee (CCIR) of the ITU shows the antenna pattern in free space has a full-width of 30 degrees at -3 dB power points and slewings of +/-30 degrees are possible by suitable phasing. When placed over real ground, that antenna has a gain of 23.1 dBi (!) at an elevation of 7 degrees, almost a pencil beam. So you can see that with 500 kW, the effective radiated power (ERP) could be enormous and that array would put in a HUGE signal wherever its footprint came down. Even at 50 dB less ERP, can you imagine the fun you'd have just putting a QRP rig onto that antenna system!

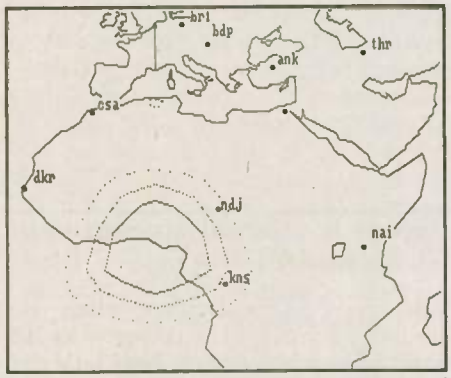


Figure 1. Signal strengths of 75, 72, and 66 dBuV.

But back to reality. When it comes to calculations, the Radio Netherlands program limits the footprint calculations to the center of the antenna pattern and assumes at any latitude used in working out the footprint, the ionosphere is the same in the range of longitudes across the beam direction. With the full 4 x 4 array, calculations are limited to 15 degrees either side of the beam heading and under most circumstances, that assumption is not much of a problem.

Now our interest is in learning what we can from the calculations, not quibbling about the limits imposed; those can always be changed and the program improved. The important thing is to understand what its results show about how the ionosphere works, what it would do to antenna footprints, yours and mine. So let's go to an instructive example, the footprint on a path for Radio Netherlands broadcasts in the month of September and using a 4 x 4 array pointed toward Africa.

By pointing that narrow beam due south, the antenna is aimed toward

the coast around Lagos, Nigeria and if losses from ground reflection and the D-region are neglected, a 2F-hop path at dawn (0600 UTC) covers areas shown in Figure 1. The intensity contours, from the center outward, are for signal strengths of 75 dB, 72 dB and 66 dB, respectively, all those signals above that for a signal with an electric field of one microvolt/meter. In that figure, Ndjemena, Chad and Kinshasa, Zaire are within the footprint but Dakar, Senegal is not. That pattern was for a dawn

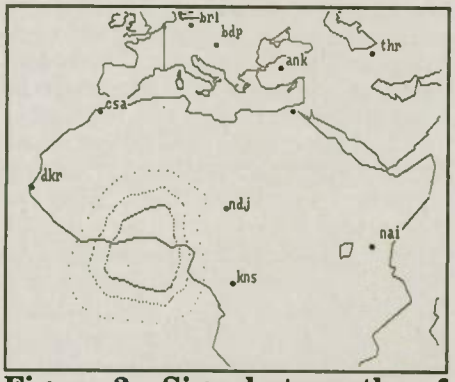


Figure 2. Signal strengths of 68, 65, and 59 dBuV.

ionosphere in September, when the smoothed sunspot number was 45 and without any losses. Now let's put in those losses and see what effect they have on the pattern. In that regard, remember for the equinox in September, the terminator is running essentially N-S, close to Greenwich, England at 0600 UTC. But at that time, there's still some sunlight up at D-region heights to the west of the terminator so there will be some signal absorption in that part of the pattern. To the east of the terminator, it's past dawn so the sun is higher in the sky, giving much greater absorption in the D-region.

As a result, the footprint of the signal from Holland is modified, as shown in Figure 2, the intensity contours now give weaker signals of 68, 65, and 59 dBuV, respectively. So the footprint is smaller in area, signals are weaker because of four transits through the D-region as well as a ground reflection in the Sahara Desert and, more to the point, the footprint is largely in the region with less illumination at ionospheric heights and away from the sunlit area.

It would seem hard to quibble about the absorption calculation and the loss from ground reflection; they're more geometrical in nature than anything else and fairly straightforward. But where the losses take place is another matter as they depend on where the refraction in the ionosphere brings the rays to ground level. And around dawn, the electron density at F-layer heights changes significantly across the terminator.

You'll recall that point was discussed in an earlier column about ionospheric or electron density gradients. For dawn in September, the F-region critical frequency contours run N-S and foF2 values increase in going from West to East across the terminator.

For the present case with a SSN of 45, foF2 is 5 MHz in the darkness over Dakar, 6 MHz over Lagos at dawn and 9 MHz over Kinshasa in sunlight. The increase in ionization to the east of Lagos means that rays leaving the antenna in those directions are refracted more in the downward direction than the others, moving that part of the footprint somewhat northward.

Beyond that, the electron density gradient across the terminator will result in a slight bending of a ray path toward the west.

Those would be higher-order corrections to the Radio Netherlands calculation. But that calculation is good enough for our present purposes, showing how a footprint is affected by absorption. But if we go to our own situation, the same method wouldn't be quantitatively sound as our antenna patterns are too broad. For example, my tri-band Yagi has a full width of about 70 degrees at -3 dB points. It's all I have for a beam and while it seems like a "blunt instrument" at times, I regard it with great affection, even if it's only up 37 ft.

Clearly, there would be a significant variation of electron density across that sort of pattern and the shape of the footprint would be different than that shown in Figure 2. Even though I have the tools for the job, I wouldn't go to the trouble to calculate its footprint because of the labor involved; it's just not worth it with a tri-band Yagi. But when I win the lottery, I'm going to put up a mono-bander, say six elements on 20 Meters at one wavelength above ground.

Now that's worth doing the calculation for and it wouldn't be all that hard as its main features can be found in a variety of antenna books, say Lawson's "Yagi Antenna Design." There, one finds that the vertical pattern peaks with a gain of 16 dBi at about 12 degrees above the horizon and has a full width at - 3 dB points of about 50 degrees at that elevation. One could look at the vertical pattern and try to come up a lobe which matches those features and use the result to make reasonable estimates of other directions which are 3 dB down from the maximum gain; projecting rays along those directions would result in a footprint starting from directions which are 3 dB below maximum gain.

Of course, any calculation that's done for a footprint is for a given set of circumstances - date, time and SSN. But if there were going to be a "New One" out there, it might be fun to work through the problem - coming up with an ionospheric map for the occasion, tracing rays through the ionosphere in small steps of azimuth and elevation across the antenna pattern, working out signal strengths and losses on those paths, plotting the results at the various "impact" points on an azimuthal equidistant map and finally coming up with a footprint.

That sounds like a lot of work; it's a good thing I have a computer or I'd probably just give up on the idea, use my propagation program and lie in wait for the "New One" around the time when my signals would be the strongest there. But all that depends on my winning the lottery and you know the chances of that. WR

County Hunter

Ace Jansen, N3AHA
42857 Hollywood Park Place • Ashburn, VA 22011
e-mail or internet: sjansen@aol.com

What's in a name?

It occurred to me while reading through some DX Internet traffic, some DXers are interested in learning more about the places they contact. There's so much press about rare DXpedition details including the means of transportation, and access and egress techniques to small islands, DXers can't help but learn a little bit about the places they seek to contact. Even the IOTA (Island-on-the-Air) chasers are well informed about the islands they seek to contact. There is a chap from Europe who regularly puts detailed information about upcoming IOTA expeditions on the Internet, including the exact location and the history of the island. But, what about the County Hunters? Do they know the location of the counties they seek to contact? Probably! Do they know the history of the county or the origin of its name? Probably not!

Do you know the history or origin of your own county? Hmph?

County origins

If you're interested in learning about the origins of the American counties, I recommend one source; The American Counties; Origins of county names, dates of creation and organization, area, population including 1980 census figures, historical data, and published sources by Joseph Nathan Kane. This book was originally published in 1960, but I reviewed the 4th edition, published in 1983, when Kane was a mere 84 years old. The book has some interesting facts about counties and is well organized. You might find the book in your local library, most likely in the Reference section. I was lucky and found a library willing to allow checkout.

The book is divided into 9 sections. Section 1 is an introduction and includes a brief description of the origins of counties, and some tabular data for the types of county names. Kane analyzes the types of county names in excruciating detail. Of the 3,067 counties, 2,137 were named for individuals.

The most common county names are Washington and Jefferson. George Washington had 31 counties named for him, while Thomas Jefferson had 26. In all, 203 counties were named for 25 Presidents. There were 243 governors of colonies, territories and states for whom 431 counties were named. Although not a governor, Benjamin Franklin had 23 counties named for him. There are 574 counties named for 288 men who served in the U.S. Congress.

Descriptive words account for 225 counties; words like Beaver, Elk, Forest, and Midland. French words account for the names of 42 counties located in 22 states. There are 69 counties whose names were derived from 65 Spanish words. Most of these counties are located in California and Texas. There are 161 counties whose names were derived from Indian words (including names) and 181 counties from Indian tribes.

The greatest use of Indian names is in Oklahoma and Iowa and the greatest use of Indian tribes is Oklahoma and Kansas. There are also 41 counties named for 33 saints. There are 45 counties named for women in 24 states. Lastly, there are 219 counties named for geographical locations.

The first section also includes a list of the smallest and largest counties in each state. The smallest of these counties are New York, NY, 22 square miles; Arlington, VA, 24 square miles; and Kent, RI, 25 square miles. The largest of the counties is San Bernardino, CA, at 20,131 square miles (about 17 times the size of the state of RI); Coconino, AZ, 18,573 square miles, and Nye, NV, 18,064 square miles. Incidentally, the 1980 census showed the counties with the largest population as Cook (Chicago), IL; Los Angeles, CA; Wayne (Detroit), MI; Philadelphia, PA, and San Bernardino, CA.

The second section of the book contains the preponderance of Kane's research and includes an alphabetical listing of all the counties and information on the date the county was created, the area, 1980/1970/1960/1950 population, county seat, nickname, source of county name, and a reference book suggestion for additional research. For grins, I looked up the four counties I've lived in over the past 10 years. I was most interested in the date created, the origin of the county and the nickname. Here's a snapshot of what it says for those counties.

New Castle, DE: Established in 1664. New Castle, England; named for the Duke of Newcastle, William Cavendish (1592-1676), created duke 1665; or Newcastle-on-Tyne in England. In Oct, 1664, the name changed from New Amstel to New Castle. Laramie, WY: Established in 1867. Named for Jacques La Ramie, a French-Canadian trapper killed by Indians about 1820. Santa Clara, CA: Established in 1850. Saint Claire. Abbess, went barefoot; observed perpetual abstinence, constant silence and perfect poverty; founded order outside Assisi.

Loudoun, VA: Established in 1757. ("A Good Place to Live to Play and Work;" "I Byde My Time;" "The County Where The Past and the Present Blend Graciously;" "Virginia's Hunt Country;" "The Gateway to the World"; "Virginia's Garden County:" "The History of Centrally Located Loudoun is Surpassed Only by its Beauty"). John Campbell, the fourth Earl of Loudoun (1705-1782). In British army 1726; in French and Indian War lost Forts Oswego and William Henry; failed at invasion of Canada; recalled 1757; acting commander British troops in Portugal 1762-63; promoted to general 1770.

You can see from the above examples, the amount of information varies greatly. I found it interesting that Tennessee also named a county after John Campbell, the fourth Earl of Loudoun, but spell their county Loudon, not Loudoun. The third section lists all the counties by state and includes the county seat, date created (by legislation) and the statute number, if known. An example is Grand

Isle County, VT. Vermont has 14 counties and is the 14th state, admitted as a state 4 March 1791. Grand Isle county was created 9 November 1802, and the statute number is Chapter 84. The county seat is North Hero. The fourth section is an index of counties by date created.

Unfortunately, there are no exact dates when much of the early legislation was passed. In 1634, seven counties were created; Charles City, VA; Henrico, VA; Isle of Wight, VA; James City, VA;Northampton, VA; York, VA; and St. Mary's, MD. It's interesting the counties were created well before the Constitution established the colonies as states. The most recent county created was La Paz,AZ.

Although, I'm not exactly sure when this county was created, it was during the 1980s.

Section five includes a list of counties whose names have changed. An example is Craven County, North Carolina (created in 1712) which was originally Archdale County (created 3 December 1705). Ozark County, Missouri was created 29 January 1841; became Decatur County, Missouri 22 February 1843; then became Ozark County again 24 March 1845. Section six of the book is an alphabetical list of county seats with the county referenced. Hmph! Who's going to write the book for the origins of the County seats? Volunteers? Columbia, Columbus and Franklin are popular county seat names.

Section seven of the book is an alphabetical listing of persons for whom counties have been named. As we're all aware, Smith is a very common surname in America. There are five Smiths who have had counties named for them; Daniel Smith, David Smith, Eratus (Deaf Smith) Smith, James Smith, and J. Nelson Smith. Unfortunately, the book doesn't describe how Eratus Smith became known as Deaf Smith. Kane lists the origin of Deaf Smith county as Eratus Smith (1787-1837). Settled in Texas in 1821; scout for Sam Houston; battle of Conception 1835; destroyed Vince's Bridge before battle of San Jacinto 1836; Captain of company of Rangers 1837. I'm sure the story of how Eratus Smith became known as Deaf Smith could be found in Kane's referenced published source, Bessie Chambers Patterson's book, *History of Deaf Smith County*, published in 1845.

Section eight is a list of independent cities. Kane lists Indianapolis, IN; Baltimore, MD; St. Louis, MO; Carson City, NV; and 41 independent cities in VA. *CQ Magazine* used to allow radio contacts with independent cities and the contacts could be used for any of the adjoining counties. I believe this rule may have changed recently.

Section nine is dedicated toAlaska,

. . . take a step back in history and learn the origin of the county name.

since it doesn't really have any counties. Kane does include some information (population, area, and name origin) for the 29 boroughs. An example is the Wrangell-Petersburg borough which was named for Admiral Baron Ferdinand Petrovich von Wrangell (1794-1870) and Peter Buschmann Petersburg, owner of a sawmill and salmon cannery. It's interesting to note that the number of counties the book counts, 3,067 counties (Alaska not included) or 3,096 (counting 29 Alaskan boroughs) differs from the USA-CA count of 3,076.

The difference is the following; AZ; Kane does not include the newly formed county LaPaz; AK, USA-CA divides the state into four judicial districts (I can't imagine a requirement to contact all 29 boroughs); HI, Kane does not count Kalawao county which is a small part of the island/county. Kane does not count Baltimore City County because it is an independent city; MO, Kane does not count St. Louis City County, another independent city; NM, the book does not include the newly formed Cibola County, a part of Valencia County; SD, Kane counts Washabaugh County which was absorbed into another county in the early 1980s; VA; Kane counts Nansemond County which was absorbed into another county. It's also interesting that USA-CA counts independent cities in Maryland and Missouri as counties, but not the counties in NV and VA.

The book also lists Indianapolis as an independent city in Indiana.

Now, you have something to think about when you make radio contacts with all 3,076 counties. After you locate the county on a state map, take a step back in history and learn the origin of the county name. If you're interested in information for a specific county and do not have access to this book at your local library, I'd be happy to look up the information for you. You can reach me at the addresses on the masthead. In the future, I plan to include an interesting county name origin in each County Hunter column.

Until January, see you on the County Hunter Nets, 14.336 and 14.056, and happy hunting. 73, Ace, N3 aha! WR

CONSTRUCTION

The Windom Ell Vee

Roy Bergstraser, W2TVX

Here's an antenna that will put you on all nine bands from 160 Meters to 10M with no sky hook, no antenna tuner, and no loading coils, with a 2:1 or less SWR across all nine bands.

The double off-center-fed dipole (fed one third the distance from one end), cut for 160M and 30M is known for its extreme broadband-edness, but needs at least one sky hook to hang it as an inverted vee. However, the vertical polarization on 160M is usually minimal at typical heights of 40 or 50 feet.

The Windom Ell Vee is a hybrid of this antenna, consisting of an off-center-fed quarter-wave inverted ell on 160M worked against a counterpoise; an off-center-fed half wave inverted ell on 30M; and an off-center-fed half wave inverted vee on 80M.

This relatively simple antenna consists of a 42.5 foot aluminum pole with four multi-wire radials at the bottom, three wires sloping down from the top, and one wire coming partway down the pole on standoffs.

The feedline consists of 100 feet of 75 ohm coax from the shack to a 4:1 current balun about seven feet from the base of the antenna. A length of 300 ohm twin lead runs from the balun into a hole about two feet above the bottom of the pole (See Fig.1) and up through the inside of the pole to the feedpoint at the top.

The pole consists of eight sections of six-foot telescoping aluminum tubing, starting with two-inch outside diameter. Each section is inserted three inches into the next lower section and secured with a sheet metal screw. The final section is adjusted to achieve a height of 42.5 feet.

A ten-foot pressure treated 2 x 4 is planted about three feet into the ground and a ¼ inch bolt is secured to the 2 x 4 about 2" above the ground for the bottom section of the aluminum tubing to pivot on, after drilling a hole about two inches above the bottom. The pole then can be walked up to the upright position by one person and secured by a U-bolt going around the tubing and through two holes drilled near the top of the 2 x 4 within easy reach.

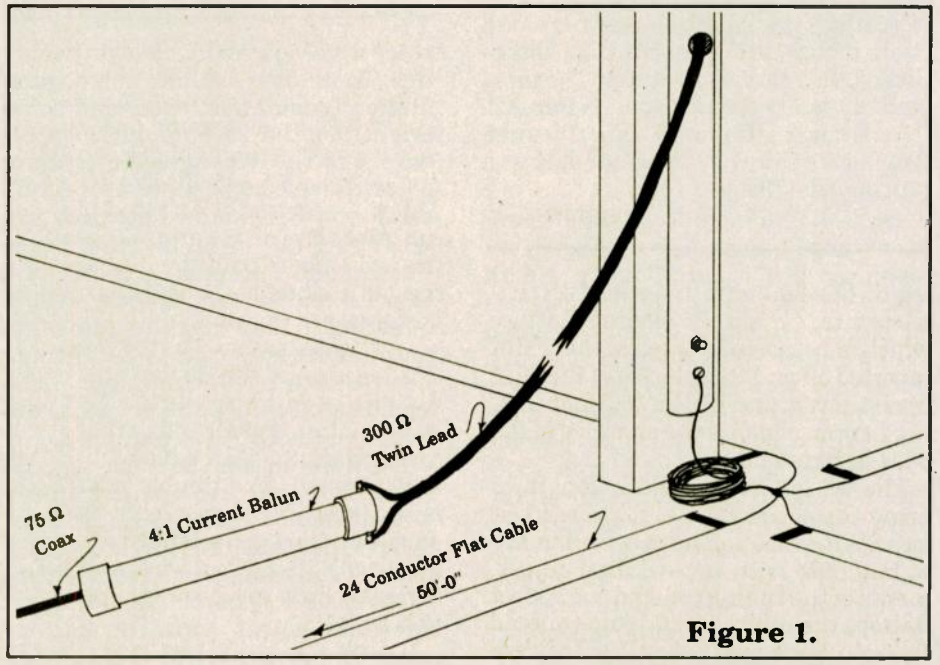
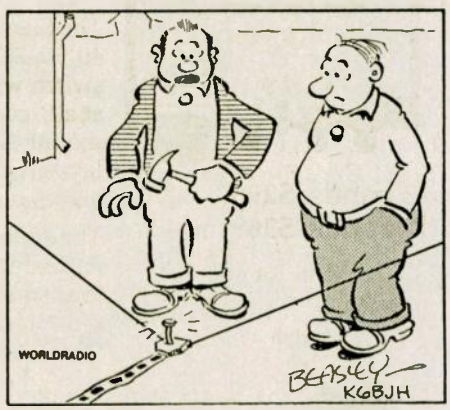


Figure 1.

The counterpoise consists of four 50-foot lengths of 24 conductor flat cable, such as that used in computer hookups, for a total of 96 conductors. The far ends are left electrically open, and the center ends are fitted with insulation displacement connectors. All the terminals on each connector are shorted together using a piece of copper wire as a bus. The four bus wires are then brought together and connected to the bottom of the pole through a tuning coil consisting of about seven turns of #18 speaker wire coiled into a 3-inch diameter loop and held together with a couple of twistems. This coil is adjusted to bring the system into resonance on 160M.

You should be able to find a setting that will yield a 2:1 SWR across the entire band, including differences between wet and dry ground conditions. No part of the antenna is grounded.

One leg of the 300 ohm twin lead at the top of the pole is connected to three elements: (1) the top of the aluminum pole, which is the short leg of the quarter wave inverted ell on 160M; (2) the 50 foot sloping flattop, which is the short leg of the half wave inverted vee on 80M; and (3) the 31' vertical wire on 3.5-inch standoffs (I used drawer pulls), which is the long leg of the half wave inverted ell on 30M. The other



I'LL BET YOU'RE RIGHT--THAT'S SUPPOSED TO BE AN INVERTED VEE!

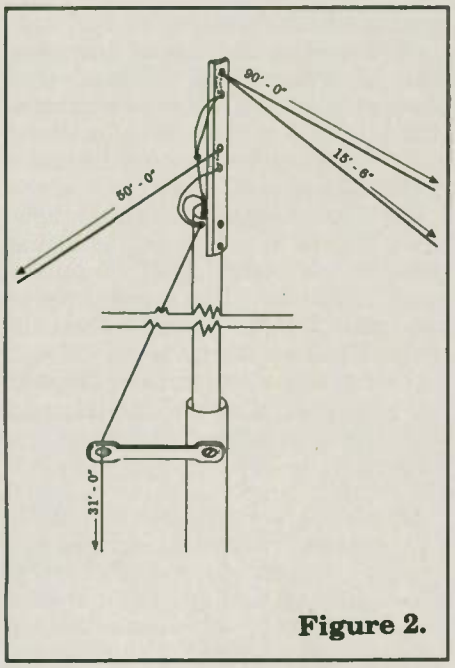


Figure 2.

leg of the 300 ohm twin lead is connected to: (1) the 90'sloping flattop, which is both the long leg of the 160M inverted ell and the long leg of the 80M inverted vee; and (2) the 15.5 foot sloping flattop, which is the short leg of the 30M inverted ell.

The 90' leg is adjusted in length to bring the entire 80M band to a 2:1 or less SWR. Once you have zeroed in 160 M and 80M with several final adjustments of the tuning coil and the 90 foot flattop, the other seven bands should fall into place well below 2:1. Incidentally, it does make a difference which legs of the 300 ohm twin lead are hooked to which terminals on the 4:1 current balun. This has to be determined by trial and error. Results may also vary if the 100-foot 75 ohm coax is made a different length. My antenna happened to be about 100 feet from the shack. I also have several feet of 50 ohm coax between the antenna relay and the rig.

A piece of wooden molding is screwed to the top of the pole and several holes are drilled in it. The flattop wires are threaded through a couple of the holes to take up the strain from the soldered joints with the twin lead (See Fig. 2). Nylon cord is attached to the ends of the sloping flattop wires and used to extend the wires to where they can be secured at or near ground level (in my case above the height of deer antlers). The pole has three built-in guy wires.

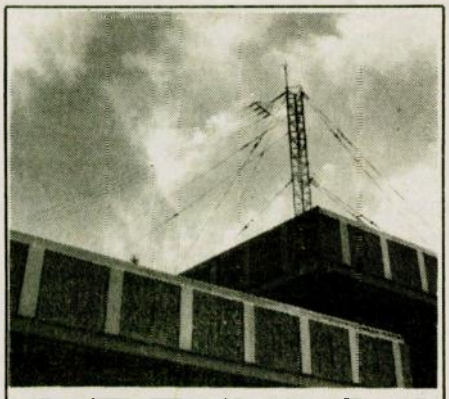
If your real estate isn't that big, you can probably get away with bending the tail ends of both the 90' wire and the 50' radials without affecting the performance that much.

My original intent was to have a vertical version of the double off-center-fed dipole, with a quarter wave inverted ell on 160M and a half wave inverted ell on 30M. I added the 50 foot wire because I had trouble getting the entire 80M band under 2:1 SWR. With a little fiddling you might be able to do away with the 50 foot wire, and possibly get a little more vertical polarization on 80M.

It took me about two years to get from initial brainstorm to final product, including some strictly vertical versions using loading coils. This version turned out to be the most versatile performer on both short and long haul contacts on 160M. If you would like to read a brief history of this two year evolution, request the July-August issue of *Radio Adventure*, available for $2.00 from Radio Adventure, P. O Box 50183, Provo, UT 84605.

The Windom Ell Vee will be available in kit form from Jim Stevens, KK7C, at:

Antennas West, Box 50062, 1500 North 150 West, Provo, UT 84605-0062. Telephone: 801/373-8425. WR



AERIALS

Kurt N. Sterba

On many occasions I've advocated turning the quarter-wave vertical upside down. That is, say on 20M, taking a 16.5 ft. copper or aluminum pipe and running the feed line up inside the pipe and connecting (the center conductor) at the top rather than the bottom. The shield side would connect to the radials which would then be supported horizontally like dipoles. The purpose of all this would be to get the high current point up off the lossy ground. A manufacturer has recently come out with this. Do I deserve a thank-you?

There is a strange phenomenon, indeed. Hams (some of them) do not want the truth. Relayed to us here at Radio Ranch was the news that many are angry at what dear Lil recently said. No one challenged the actual accuracy of her statements. It was just the idea that such things were said.

Then, the Publisher of this fine journal received heat for statements *I* had made. It was said that I made "personal attacks" on an individual. No, no "personal" attacks were made, only references to what had been printed. Then, what I said was called "negative destructive commentary."

I had truly planned to move on to other subjects than the errors in that particular set of license manuals. I've got some original ideas for you. However, since in a message to Publisher N6WR, he was pointedly asked "Why do you do this? How can you justify these actions?" I answer: Because no one else speaks out!

As I said I had washed my hands of the license manuals, but now something told me I should look at the chapters I had previously ignored. Here is what I found.

On page 47 of the General book it says that conditions on 20M actually improve during sunspot minimum.

I will make no comment because even from here I can hear the sounds of all the experienced DXers groaning. But the question is, should I allow that to go uncorrected? A book selling in thousands of stores across the country has such a statement in it.

On page 58, you and I are told "Tune the antenna noise bridge (the picture is of the MFJ unit) for minimum noise, and then read the impedance on the dial."

Well, I see two knobs. One is for resistance and one is for reactance. But, nowhere do I see a dial with which to "read the impedance."

And then in a license manual for Novices and Technicians we find this: "If a directional RF wattmeter reads 90 watts forward power and 10 watts reflected power, what is the actual transmitter output power?" The answer given is, "80 watts." This will, of course, come as big news to the manufacturers of directional wattmeters, and engineers in our profession.

I shall close the chapter on the license manuals.

Am I guilty of negative destructive commentary when I talk about a book sold nationwide, in which, the author tells us, he is a Fellów, Institute of Electrical and Electronic Engineers and he prints this:

"A three-element Yagi has a directive gain of about 7 dB, whereas a five-element Yagi has a directive gain of about 15 dB." If I ask "what is wrong with that statement?" have I made a "personal attack?"

Then there is this: "In the five-element Yagi of Figure 3-3a, the driven element is a folded dipole. Its impedance is 300 ohms." The drawing shows "300 ohm lead-in" coming from the driven element. Wrong! Have you seen any other five element Yagis fed with 300 ohm line? There would be great difficulty in matching driven element impedance to 300 ohm line — even if the element were folded.

Should old Kurt whip out some of his "negative destructive commentary" or should I not give a hoot and let you go ahead and put that up and keep quiet while you wonder why you have a big mess on your hands? (The feedpoint impedance, because of the coupling of the parasitic elements is somewhere around 30 ohms or less, not 300.)

Oh, yes I do have my detractors. But Lil told me about a philosopher who said that you are known by the enemies you make. So, considering who my enemies are, I must really be OK!

From enemies, I move to friends. Very recently a letter came from the magnificent Arch Doty, K8CFU. I see that on 17 November at the 86th Annual meeting and awards banquet of the Radio Club of America, Arch will receive the Barry Goldwater Award for his intensive study of Amateur Radio antenna systems. (No, he didn't tell me that, I already knew it.) I wonder when I will get my due recognition from the RCA for my Don Quixote-type performance. But anyway, Arch sent in some material he came across from the manufacturer of a cellular phone antenna. And, I quote: "Revolutionary new approach to antenna design is the result of many years of research . . . resulting advance . . . unique approach . . . most amazing attribute . . . remarkable effects . . . higher performance levels . . . unique characteristics . . . dramatic realization."

WOWEE! Well if they don't make it in cellularville they can move into hammy land. Hey everybody! Why don't we all make a pact? Whenever we get a brochure from a company and in the specs on their VHF antenna it says "4.2 dB gain" let's just dump it in the trash where it belongs. When they say dBi or dBd we will start reading it again.

And if you get a catalog and the scoop on the 4-element Quad promises 15 dB gain, make a little paper

glider and fly it. 15 dB gain over WHAT, you turkeys? A claw hammer?

I remember when an article in a major hammag (about Yagis) said something like adding a good ground system could add 3-4 dB. To keep some of my younger and less experienced readers from spending weekend after weekend pounding in eight-foot stakes I quickly challenged the statement by asking the author to describe such a ground system. If the magazine that month contained nothing else but that, we all would have felt we had got our money's worth. He has been mad at me ever since but has never again printed anything about such a ground system. I'm sure interested, aren't you?

A magazine reviewer, writing about a mobile antenna, praised it because the SWR bandwidth was greater than his other mobile antennas. Well, a lossy, inefficient antenna will have wide SWR bandwidth, and this may have been his great discovery.

Remember, the dummy load gives nice smooth responses across the band. Any band, all bands.

Recently both ***Worldradio*** and *The Newington News* have featured articles about "HF Mobile Shootouts." While the basic idea is a good one there are some aspects of the reports that are troubling.

Worldradio makes no pretensions of being a technical publication and unlike the other has no EE grads on staff. I do wish ***WR*** had sent me their "Shootout" article prior to publication.

First of all, to print results down to one-tenth of a dB (when using moderate test equipment) strains the imagination when you consider that the most expensive (really big bucks) equipment only promises two-tenths of a dB accuracy.

In the printed standings three stations were ranked as having 58.4, 58.3, and 58.2 dB. Professionals who deal with field strength in their daily life either laughed or cried (after reading the articles) depending on their particular personalities. In actuality, if the test were an hour later, the standings could have been reversed.

For a better shot at reality the procedure is to conduct three separate tests of each antenna and then average the three.

I was very surprised that the article from Main Street did not challenge or explain to the gathered masses what those 59.2 down to 47.5 dB of the entrants really represented. dB over what? In RF there is no such thing as just "dBs" by themselves.

They are not like volts or ohms, or amperes etc., measuring something like pressure or flow or resistance, etc. dBs only represent a ratio.

What was the reference at these "Shootouts?" You could say that antenna #1 is 3 dB stronger than antenna #2. You could say that antenna #1 is 10 dB stronger than antenna #7. However, I am puzzled indeed at the bottom ranked antenna with a reading of 47.5 dB.

RF dBs are NOT like dollars, that is, with a number value of their own. dBs are only showing relationships in power in vs. power out (the amplifier had an 11 dB gain). Or, the three-element Yagi has six dB gain over a dipole. It can express losses too.

Also puzzling was this business of a voltmeter set up so that one volt change was interpreted as a one dB change. If you want to call these recorded differences between measured antenna dBs at least let them be the dBs with which the rest of us are somewhat familiar. Otherwise give your type of testing results a new name like dZ. (Zlotzee)

Before everyone takes all of the "Shootout" results as the true gospel, just how linear is all the test gear? Where on the curve are the readings? Are, possibly, the results of the stations at the top and the bottom of the lists not realizing their true numbers?

Admittedly, I am not a big mobile expert BUT (to digress, no antenna in the competition could be longer than 13.5 feet from the ground) one antenna, longer than the allowed, was permitted to be tied and bent into an arc. It came in second, (58.4) being 0.8 dB lower than the winner at (59.2). Well, what if you were allowed an antenna long enough but in an arc 13.5 ft. up from the left rear bumper then traversed the entire vehicle, and went to another high mast located (and insulated from) the front right bumper. Would that one win?

Also, the five toilet bowl floats gracing the top of one antenna (to fight coronal discharge) could be replaced. Short rods (for the same effect) would lessen the impression to the rest of the world that we are a bunch of whackos.

The idea of the HF "shootouts" is a great one. (There are similar events for VHF and UHF beam antennas. The measuring gear and technical expertise are top-notch.) But the HF version might be better if some of the more professional-level equipment was brought to the site. And it would help if the volunteer conductors were folks who were familiar with the more stringent techniques.

If I have misconstrued any of what has been reported in the magazines I'd be pleased to print the correct version and eat crow.

(The drawing for the MFJ Antenna Analyzer and accessories ($275 retail) was held on Monday, 18 September. There were 802 entrants. The winner was Linda Gloster, WA9OMM, of Chicago, Illinois. Our congratulations! WR

The Contest Corner

Don Durk, KA1DWX
76226.1414@compuserve.com

Despite the poor propagation for the WAE CW 'test, some of the big guns had pretty high scores.

During the past year I've noticed some of the larger contest stations have interfaced database call sign programs with their contest programs. This is adding a new dimension to the contest exchange and they now address you by name during the exchange. It's kind of neat, more personalized and perhaps the start of a trend towards customizing the contest exchange. Who knows? What with worldwide weather, data on-line, and demographic data from prior QSOs in your computer, a future contest exchange may be a pseudo QSO. Just imagine something like this: "Hi Don, 599096 snow 5DegC Sri ur rain Hi toAndy Hpe u got tower fixed."

Of course no human interaction, merely database to database. Perhaps multipliers will include the number of data updates per QSO.

At the end of the contest your logging program will then update the old database. For example: New tower, newly retired, needs QSL, etc.

Thanks for the comments on contest free zones. Remember, I am writing this column mid-August so I'll address the incoming mail in the next column.

If you know of upcoming contests or you have a topic to discuss, drop me an e-mail or snail mail.

November is Sweepstakes month! You can earn a pin with 100 QSOs and a mug for a clean sweep (work all ARRL/CRRL sections). Check QST for details.

Most contests require separate logs per band, check sheets for over 200 Qs, a summary sheet and a signed and dated affidavit attesting to observance of the rules of both the contest and your local regulating authority. A statement wherein you agree to be bound by the decisions of the contest committee is also needed. All times are in UTC.

Late October 'tests

THE BIG ONE

•CQ WW SSB (59+CQ ZONE)

28 October 00:00 -29 October 24:00

Q 1x/band. 1.8- 28 MHz. NO WARC BANDS. You must sign portable if your call sign indicates a different zone or country than actual. Single ops need 12 hrs or more for awards; multis need 24. 10 minute rule and antenna details CK RULES! Pts (diff continent 3 pts; own country 0 pts but OK for mult; NA other NA countries 2 pts; non NA stns - same continent 1 pt) x Mults (ea CQ zone+ea DXCC/WAE per band). Single op asstd/unasstd// single band/ all band/single band// multi op - 1 tx/1 hi/ lo /QRP power//multi multi. CQ.

•THE BIG ONE (CW)

CQ WW CW (599+CQ ZONE)

28 October 00:00 - 29 October 24:00

Q 1x/ band. 1.8- 28 MHz NO WARC BANDS. You must sign portable if your call sign indicates a different zone or country than actual. Single ops need 12 hrs or more for awards; multis need 24.10 minute rule and antenna details CK RULES! Pts (diff continent 3 pts; own country 0 pts but ok for mult; NA other NA countries 2 pts; Non NA stns - same continent 1 pt) x mults (ea CQ zone+ea DXCC/WAE per band). Single op asst/unasstd//single band/ all band/ single band// multi op - 1 tx//hi/lo /qrp power//multi multi. CQ.

November 'tests

•ARRL SS(CW)(599+A/B/Q+YR)

4 November 21:00 - 6 November 03:00

Q U.S. and Canada 1 time only, not 1 time per band. 1.8 - 28 MHz NO WARC BANDS. Exchange format example: W1AW NR 001AKA1DWX 56 EMA. Give Stations call; consecutive serial #; A if <150 watts, B if > 150 watts or Q if < 5 watts; ur call; Last two digits of year first licensed e.g. 1956 and ARRL Section. Score - 2 pts per Q x mults per band (ARRL + Canada sections+ VE8/VY1, Max 77). KP4 = Puerto Rico Section, KV4/KP2/ KG4 = Virgin Island Section, KH6/ U.S. Pacific Possessions = Pacific Section.

Single op, non packet/ multi op 1 transmitter/ QRP single op/ club competition. ARRL

•ARRL INTL EME(Call+RPI)

4 November 00:00 - 5 November 24:00

Q 1x/band. Acknowledge call and report. Pts (100/Qxmults/band). Mults = U.S.+VE call areas+DXCC countries (not U.S/Canada). S op multi band/ single band// multi op. ARRL

•RAC QST SSB Sprint

4 November 15:00-21:00

Radio Amateurs Of (du) Canada.

QSO any 8 of the 11 QST stations in Canada on phone and get award. IRC/ SASE to VE3IAE.

•JA INT'L DX 'test SSB

(59+NR/Prefecture 01-50)

10 November 23:00 - 13 November 23:00.

Q 1x/band. Q JA only. 3.6 -28.9 MHz NO WARC BANDS. Single ops 30 hr. max., multis 48. Ten minute rule. Rest period of at least 60 mins. Score - pts (1 for 40-15; 2 for 80 and 10) x mults (prefectures per band). Single op/single band//single op multi band//multi op/ multi band. *59 Magazine,* P.O. Box 59, Kamata,Tokyo 144, Japan.

•WAE RTTY 'test (599+NR)

Q 1x/band. 3.5 - 28 MHz NO WARC BANDS. 36 hour max for single ops. For WAE RTTY work all stations including your continent, BUT no QTCs within your own continent. EU and non EU may both receive QTCs. QTC is a list of prior exchanges. Send and receive no more than ten to or from each station outside your continent. The format is: grp 1/10, 2/10, 3/5, 415 etc. This means your first group having ten exchanges, your fourth group having 5 exchanges etc. You then send time/stn/nr for example 0001/DJ6QT/ 020 0002/DL1IAO/034 0004/DJ6RB/ 023 etc.

Score - # of QSOs + QTCs x multipliers (non EU = # of EU countries per band (WAE Country List) x2 for 14/21/ 28; x3 for 7 MHz; x 4 for 3.5 MHz.) EU = 1 mult per band for each non EU country per DXCC list.) single op all bands/multi. WR

DOES YOUR NEW BEAM CATCH MUCH WIND?

CONTESTS

ALARA Australian Ladies' Amateur Radio Association Contest

Saturday 11 November 1995, at 0000 UTC, through 2359 UTC.

Eligibility: All licensed operators throughout the world are invited to participate. Also open to SWLs.

Object: Participation: YL works everyone, OMs and Clubs work YLs only.

Logs: Single log entry (but Australian YL Novices entering for the Mrs. Florence McKenzie CW trophy should indicate their CW score separately). Logs must show date/time UTC, band, mode, callsign worked, report and serial number sent, report and serial number received, name of operator of station worked, whether it is a club station, and points claimed. *Logs must be signed.* Logs also must show full name, call sign and address of operator, and show final score (points claimed). Logs must be legible. No carbon copies. No logs will be returned. Decision of the contest manager will be final, and no correspondence will be entered into. Logs must be received by the contest manager by 31 December, 1995.

Contest manager: Mrs. Marilyn Syme, VK3DMS, P.O. Box 91, Irymple, 3498 Victoria, Australia

Mrs. Florence McKenzie CW Trophy: This will be awarded to the Australian YL Novice operator with the highest CW score (not necessarily an ALARA member). Minimum score 50 points. The actual trophy, because of the size and weight, will not be forwarded to the winning YL.

Sample log:

Date UTC	Time UTC	Band MHz	Mode	Call sign	RS(T) & Serial No. sent	RS(T) & Serial No. rec'd	Name	Pts.
12/11	0135	28	SSB	VK6DE	59001	58028	Bev	5
	0141	21	CW	VK3KS	599002	599045	Mavis	5
	0600	14	SSB	FK8FA	59025	59011	Aimee	5
	1100	3.5	CW	VK2PX	599129	59904	Bobbie	10
	1103	3.5	SSB	VK3BSP	59130	59006	Joe (Club)	5

One contest (combined phone and CW) run over 24 hours.

Suggested Frequencies: Bands to be used are 3.5,7,14, 21, and 28 MHz only. The following are suggested frequencies for easier location of contacts: 28.380 to 28.410; 21.170 to 21.200 and 21.380 to 21.410, 14.250 to 14.280; 7.070 to 7.100; and 3.560 to 3.590.

Operation: Phone and CW operation. Each station may be counted twice on each band for credit — once on phone and once on CW. All contacts must be made in accordance with operator and station licence regulations. No net or list operation, no crossmode.

Procedure: Phone: call "CQ ALARA contest." CW: YLs call "CQ TEST ALARA." OMs call "CQ YL. "

Exchanges: ALARA member: RS or RST, serial no. starting at 001, ALARA member, name. YL non-member, OM or club: RS or RST, serial number starting at 001, name, and whether club station.

Scoring: Phone: 5 points for ALARA member contacted, 4 points for YL non-member contacted; 3 points for OM or club station contacted. CW: Contacts where at least one operator is Novice Class count double points, otherwise same as phone. SWL: 5 points for ALARA member logged, 4 points for YL non-member logged.

ner, but a certificate bearing a photo depicting the trophy is sent to the winner each year.

Certificates: Top score overall; Top score phone only; Top score Australian YL CW; Top score Australian YL Novice CW (Florence McKenzie certificate); Top score ALARA member in each country and VK call area; Top score YL non-member in each continent; Top score OM in each continent; Top score SWL in each continent; Top score VK Novice; Top score overseas YL CW; Top score VK Club station.

Trophies: Top scoring Australian YL; Top scoring DX YL.

Club Stations: Operators of club stations must use the club call only for contacts, and *must* identify each contact with a club station. Use of personal call signs while operating as a club member is not permitted.

International Police Association Radio Club

The International Police Association Radio Club, U.S. Section, invites all radio hams worldwide to take part in their Radio Club Contest, 4-5 November 1995.

The contest gives participants the opportunity to acquire contest awards, as well as awards offered by the U.S. Section, and other IPA section radio clubs. (Such as the U.S. Section - Cop and J. Edgar Hoover Awards, and the Sherlock Holmes Award)

Contest times: CW 4 November 1995 0000 - 2400Z SSB; 5 November 1995 0000 - 2400Z

By opening up the U.S. Section contest to the full 24 hrs each day, this will allow all members a chance to get on the air no matter what their work schedule. Everyone will have a chance to get on the air to work the contest. You can work your own times and have a chance to make scores in the contest. All contacts during the 24 hrs will count. You can work on the air the best times for your area, to work other parts of the world or the U.S.

Frequencies: CW 3.550, 7.050, 14.050, 21.050, 28.050 (all bands +/- 10kHz) SSB 3.650, 7.150, 14.275, 21.300, 28.600 (all bands +/- 25kHz) 28.355 (all bands +/- 25kHz).

Additionally, look for members/participants in the Novice bands.

All frequencies on a band are available, these are just suggested areas to work so members can find you.

Classes

A) single operator
B) multi operator
C) SWL

Winners in each category will be the top 3 scores. Members of the IPA and non-members compete in the same classes. Check your logs carefully, as 3 or more dupes will disqualify an entry from any awards.

Contest traffic: Participants call "CQ IPA CONTEST." The contact number is composed of the RS(T) plus a QSO number starting with 001, each day. US IPA/RC members add, "IPA" after the QSO number and their state abbreviation after "IPA." ie; "599 001 IPA MI." Stations may be worked once per band, per day.

Multiplier: IPA/RC member U.S. state worked per band. Each state worked counts as a multiplier. Work an IPA member in a state to get the multiplier for that state. Each additional IPA member worked in that state just counts for points. So if you work six IPA members in California, your points are 6 x 5 points, for 30 points, plus one multiplier for the state of CA. Therefore you can have a total of 50 multipliers per band worked. One multiplier for each state worked with an IPA member per band. Additional IPA members worked in a state just count for additional points for that band.

Scoring: Non-members count 1 point, U.S. Section IPA members count 5 points, U.S. Section IPA/RC Club call signs worked are 10 points, and all other IPA members outside the USA count 2 points. Each band score is determined by multiplying the QSO points times the band multipliers. Then the bands operated are added together to get the total score. You must submit separate contest result sheets, and logs for CW and SSB. Do not add them together as CW and SSB is scored separately, and awards are issued for CW and for SSB scores. *There are no* mixed awards issued.

Club station call signs: You can only use one call sign at a time. You can use the club call sign, or you can use your own call sign, to work stations, but you cannot use both call signs at the same time. You can work a station under both call signs, but they must be at different times, you cannot work a station under both call signs during a single contact as was done in the past.

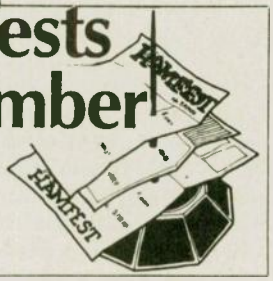
Due to the fact that by putting a club station call sign on the air and anyone that works you will give them extra points and you can not work yourself, if you put the club station on the air you will receive 10 points for putting the club station on the air. Mark on your log, club station and add 10 points for a club station. Contest logs must be postmarked by 31 December 95.

Return to: U.S. IPA/RC, Contest Manager, N6EIK, Ed Roach, 6119 Mill Branch Rd., Columbus, GA 31907 U.S.A.

If you need additional rule sheets or contest result sheets, please contact Ed Roach at the above address. Good luck in the contest, and I will be looking for all of you on the air that weekend.

Note: For multi op entries, all contacts must be made using one call sign, that of the primary station owner, awards will be issued under that call sign and name. however, please also include a list of all the names and call signs of the other operators, somewhere on the front or back of the result sheet, or on a separate sheet. **WR**

hamfests November



Alabama

The MOBILE ARC will hold a hamfest and computer show on 4 November from 8 a.m. to 4 p.m. at the Abba Shrine Temple, 7700 Hitt Rd., off Schillingers Rd. VE testing will begin at 9 a.m. You must have copy and original of your current license, copy and original of current CSCE, two IDs (one must be a photo) and $5.95. For information, contact Richard Ireland, AE4EO, 334/824-2749 or write: MARC, P.O. Box 81791, Mobile, AL 36689. Talk-in on 146.82(-), ragchew on 146.94(-).

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The MONTGOMERY ARC will host the 18th annual Montgomery Hamfest and Computer Show on 11 November from 8 a.m. to 3 p.m. in Garrett Coliseum at the South Alabama State Fairgrounds on Federal Drive in Montgomery. Flea market and hamfest will be held indoors, and parking is free. VE testing will begin at 8 a.m. Admission $4. Vendor setup from 3 p.m. to 8 p.m Friday, and 6 a.m. to 8 a.m. Saturday. Contact Hamfest Committee, c/o 2141 Edinburgh Dr., Montgomery, AL 36116; 334/272-7980, or Fax 334/264-1150. Table reservations, c/o 2736 W. Aberdeen Dr., Montgomery Dr., Montgomery, AL 36116 or phone Steve at 334/270-0536. Talk-in on 146.84(-).

California

THE LIVERMORE ARK is sponsoring an Amateur Radio/Electronic/Computer Swap Meet on 5 November from 7 a.m. to 12 noon at Las Positas College. Features include refreshments, free parking and covered spaces in the event of rain. Admission is free. Sellers pay $10 space fee. Talk-in on 147.045(+) from the west, 145.350(-) PL 100Hz from the east. Contact Noel Anklam, KC6QAK, at 510/4473857 eves. or leave message days at 510/783-2803.

Connecticut

The SOUTH CENTRAL CONNECTICUT ARA will hold its 16th annual flea market 12 November from 9 a.m. at the Branford Intermediate School in Branford. The site is handicapped-accessible. VE testing will be held, call for details. Admission is $5. Vendor cost is $15/table in advance, $20 at the door. Reservations required no later than 1 November. Vendor setup time, 7 a.m. Contact SCARA, P.O. Box 705, Branford, CT 06405-0705; or call Brad, 203/265-9983, 24 hrs. Talk-in on 146.61(-).

Florida

PELICAN CHAPTER #128, QCWA, will host its annual Catered Fried Chicken Picnic on 8 November from 10:30 a.m. in Shelter #13 at Lake Seminole Park in St. Petersburg. The menu is fried chicken with all the trimming, including dessert and drink. There will be prizes and goodies before the picnic. The price will be $7.50. QCWA members and guests are all invited. Tickets and reservations can be obtained from Don Bice, W4PCO, at 813/347-2707. Check-in and directions will be given on the QCWA repeater, 145.29(-).

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The LAKE AMATEUR RADIO ASSOCIATION will hold a hamfest and electronic exposition on 4 November from 9 a.m. to 5 p.m. at the Lake County Fairgrounds in Eustis. Admission is $4 in advance, $5 at the door. Tables are $15 (includes one admission ticket). Tailgate space $5 per space. VE exams (walk-ins are OK). For information, contact Tony Summerlin, KE4NLG, 9205 Ferney Rd., Leesburg, FL 34788; 904/787-1449. Talk-in on 147.255(+).

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The FLORIDA GULF COAST AMATEUR RADIO COUNCIL will hold their 20th annual Amateur Radio and Computer Convention 18 and 19 November at the "Florida Expo Park" Expo Hall. Directions: Interstate 4 and U.S. 301 (I-4 travelers take exit #6; I-75 travelers take exit #52B). Easiest access is from the north on south bound U.S. 301. Additional information for tickets, swap tables, or tailgating reservations, contact (after 6 p.m.) Jean 813/525-5178; 1556 56th Ave., North, St. Petersburg, FL 33703.

The WEST PALM BEACH ARC will hold a free flea market on 4 November, 8 a.m. to 2 p.m. in John Prince Park in Lake Worth at Mound Circle. Free tables, admission, tailgating and parking. Good food available at reasonable prices. For more information, contact Marvin Kaskawits, KD2CK@KB4VOL, 407/683-2930 or p001471b@pbfreenet.seflin.lib.fl.us Talk-in on 147.135(+).

Illinois

The CHICAGO ARC will hold a "Ham Auction" on 19 November from 12 noon until all sold, at DeVry Institute of Technology, 3300 N. Campbell Ave., Chicago. Bring all your electronic gear, parts, books, etc., and we will sell it for you. For more information, call 312/545-4740.

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The LEWIS AND CLARK RADIO CLUB, Inc., will hold an Amateur Radio Expo on 4 November from 8 a.m. in the River Bend Arena located on the Lewis and Clark Community College campus in Godfrey. Features include forums, plenty of parking, handicap accessible, VE exams (p/r by 27 Oct) 10:30 a.m. Admission $4; tables $10 (call early to reserve). For hamfest info, call Harold, KC9GL, 618/466-1909; table reservations, call Larry, W9MXC, 618/466-0041; exam info, call Rich, KF9F, at 618/466-2306. Talk-in on 145.23(-) repeater.

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The LAMOINE EMERGENCY ARC will hold a hamfest on 12 November from 8 a.m. (vendors 7 a.m.) at the 4-H Center, 2 miles west of the Macomb town square on Rt. 136 (West Jackson) on the curves. Admission is $3 in advance, $4 at the door. Tables $5 (or donation for door prize). VE exam testing on site, door prizes and re-

freshments. Talk-in on 147.06(+), 444.300(+) or 146.52(S).

Indiana

The ALLEN COUNTY ARTS will hold their Fort Wayne Hamfest and Computer Expo on 18 and 19 November from 9 a.m. (both days) at the Allen County Memorial Coliseum on U.S. 30 in Fort Wayne. Activities will include forums, VE testing and ladies' events. Shopping center shuttle will be available. Admission is $5 at the door only. children under 11 free. Parking is $2. Vendor cost is $15 flea market, $30 premium, and $25 electricity. Setup is Friday evening and Saturday morning. Talk-in on 146.88(-). Contact ACARTS, P.O. Box 10342, Ft. Wayne, IN 46851; or call John for table info at 219/ 483-6305, or Don for general info at 219/ 484-3317.

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The EVANSVILLE ARS is sponsoring the Evansville Winter Hamfest on 25 November from 8 a.m. to 2 p.m. (setup 6 a.m.) at the Vanderburgh County Fairgrounds (U.S. 41 at Boonville—New Harmony Rd. between I-64 and Evansville). Features include free parking, flea market, food provided by the Old Post ARS. Free outdoor flea market with paid admission (weather permitting), Admission is only $5. Vendor cost is $10/table. Contact EARS, 1506 S. Parker Dr., Evansville, IN 47714; Neil, WB9VPG, at 812/479-5741. Talk-in on 145.15(-) Evansville, 146.925(-) Vincennes.

Louisiana

The TWIN CITY HAM CLUB will hold a hamfest on 11 November from 8 a.m. to 3:30 p.m. at the West Monroe Convention Center (on the corner of North 7th and Ridge Ave.). Features include VE testing (9 a.m.), forums, movies for the kids, and on-site parking. For information, contact TCHC Hamfest Director, P.O. Box 1871, West Monroe, LA 71294.

Mississippi

The WEST JACKSON COUNTY ARC will hold a ham/swapfest on 17 (6 p.m. to 9 p.m.) and 18 November (8 a.m. to 3 p.m.) at the Latimer Community Center, 4 miles north of exit 50 on I-10 in Ocean Springs. Admission is $1 per person with maximum of $3 per family; tables, $5 per table. For information, contact Stan Hecker at 601/ 875-0222 or Ernie Orman at 601/392-2816. For tables, call Kim at 601/826-5811.

North Carolina

The CABARRUS ARS will hold their 15th annual Hamfest/swapmeet on the 6th from 8 a.m. to 4 p.m. at the Cabarrus County Fairgrounds in Concord. Plenty of free parking, and free tailgating in the fairgrounds courtyard with admission ticket. VE testing will be held, walk-ins will be accepted. Admission is $5 in advance, $6 at the door, children under 12 admitted free. Reserved tables are $10. Vendor setup is 3 to 10 p.m. on Saturday, and 6 a.m. Sunday. Talk-in on 146.655(-). Contact CARS Hamfest, P.O. Box 1290, Concord, NC, 28026 (reservations please include SASE); Jeff, WA1WXL, 704/ 933-7238 for general info, Bill, WD8SAS, 704/ 788-2873 for dealer information.

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The JOHNSTON ARS is sponsoring the 7th Annual JARSFEST on 19 November from 8 a.m. to 4 p.m. at the American Legion Complex in Benson. Admission is $4 in advance, $5 at the door, and children accompanied by an adult enter free. Vendor tables are $8, and tailgating spaces are $4. Vendor setup time is 6:00 a.m. Contact Bill Lambert, AK4H, 8917 NC 50 N., Benson, NC 27504; 919/894-3352 eves between 7 and 10 p.m. Talk-in on 147.27(+).

Oklahoma

The ENID HAMFEST GROUP is sponsoring the Enid Hamfest on 54 November from 8 a.m. to 5 p.m. in the Hoover Building at the Garfield County Fairgrounds. Features include free coffee and doughnuts in the morning, free hot dogs and soda in the afternoon, and a covered dish banquet at 7 p.m. VE testing is at 1 p.m. Admission is $2. Vendor tables are $1 each. Contact Tom Worth, N5LWT, at 405/ 2338473; 2302 Eucalyptus Ave., Enid, OK 73701 or e-mail EnidARC@3\aol.com, ATTN: Tom. Talk-in on 147.375(+), or 444.825(+).

Pennsylvania

The CENTRAL PENNSYLVANIA RAC will sponsor their Hershey Hamfest on 11 November from 8 a.m. to 2 p.m. (vendor/ tailgate setup at 7 a.m.) at the Hershey Armory, 28th Div. Infantry on Baum St. in Hershey. Features include heated inside dealers' stands, outdoor tailgating, free parking. VE testing sign-up by 8:30 a.m. Admission is $4. Advance tables are $16, tailgate spaces are $5 each. Contact Harold Baer, KE3TM, 619 W. 2nd St., Hummelstown, PA 17036; 717/566-8895. Talk-in on 145.47(-).

South Carolina

The GRAND STRAND ARC will hold a "Beachfest" on 11 November from 9 a.m. to 4 p.m. at the Myrtle Beach High School in Myrtle Beach. Admission is $5, tables $12. VE exams at noon (contact Les at 803/ 236-3036). For reservations, contact David Berry, KE4OOW, Grand Strand ARC, P.O. Box 2135, Myrtle Beach, SC 29578-2135; 803/248-9401.

Texas

The GULF COAST HAM CONVENTION will take place on 3, 4, and 5 November in Houston. For information, call 800/231-3057 or write P.O. Box 890307, Houston, TX 77289-0307. Booths are selling fast.

Wisconsin

The MILWAUKEE REPEATER CLUB is sponsoring their "Friendly Fest" on 4 November from 8 a.m. to 1 p.m. (vendor setup 6:30 a.m.) at the Waukesha County Expo Arena "Forum." Features include swapfest, indoor ground access and exams. Admission is $4; vendor tables are $4/four-foot table, $8/eight-foot table, reserved. Talk-in on 146.91(-), and 146.52(S). Please call Burt, N9VBI, 414/328-0535. Send SASE to The Milwaukee Repeater Club, P.O. Box 2123, Milwaukee, WI 53201. WR

Please allow at least 2 month's advance notice for hamfest or convention announcements. Send your request to our 28th Street address to the attention of: Hamfests. Thank you.

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

PK-96 and PK-12 with software included

Advanced Electronic Applications' PK-96 dual speed 9600/1200 bps Packet controller is now shipping with GPS firmware. The PK-96 now also includes in the packaging: AEA's PC PakRatt Lite™, the Packet-only, DOS FNC terminal control software and the Automatic Packet Reporting System (APRS™) software developed by Bob Bruninga, WB4APR, for GPS use, as does AEA's PK-12 1200 bps packet TNC.

Just a few months ago, AEA put the GPS firmware in the PK-12, 1200 bps packet TNC. Already AEA has improved the GPS firmware in the PK-12 and now added it to the PK-96. The new GPS firmware incorporated in both the PK-12 and PK-96 automatically detects if there is a GPS receiver—connected to the TNC upon power-up. If a GPS receiver is detected, an initialization string will be sent and the TNC will be ready for GPS work; if no GPS receiver is detected, the TNC will be ready for traditional packet data work.

The biggest new feature of the AEA's PK-96 and PK-12 is that the GPS commands can be remotely programmed, so in Stand Alone Tracking applications where a TNC, GPS receiver, and radio (no computer) are installed in a vehicle—the unit does not need to be removed and connected to a computer to change GPS parameters—it is all done remotely. PK-96s and PK-12s automatically transmit their position information at user defined intervals and now can also be remotely polled for GPS location information at any time. This remote polling is great for those who use the TNCs in a Pete Bros. Ultimater-II™ weather set-up. Each member of a group in a region can set up a weather station in the back yard, then other members can poll (at any time) the various weather stations for information. Doing this forms a picture of the region's weather on the Automatic Packet Reporting System (APRS™) map. In addition, certain GPS receivers can be remotely programmed via the PK-96 or PK-12. You can even configure the system to transmit location information when a button on the radio control head is pushed.

Other new GPS firmware features include time and date setting from the GPS receiver, remote programming of the GPS receiver itself, and the ability to operate as a WIDE and RELAY digipeater. Exact time and date information can be extracted from the GPS receivers to set the PK-96 and PK-12s internal clocks. The TNCs' firmware allows remote programming of some GPS receivers via the TNC. The ability to operate as a WIDE and RELAY digipeater means that mobile packet users can be transmitting their position information in a Stand Alone Tracking configuration and still act as a message forwarding mailbox—all while mobile.

Both TNCs work with AEA's APRS Adapter Cable which saves a communication port on the computer. This cable allows the TNC and GPS receiver to connect to a single COM port. This cable is important when used with laptop computers because there is only one free COM port available.

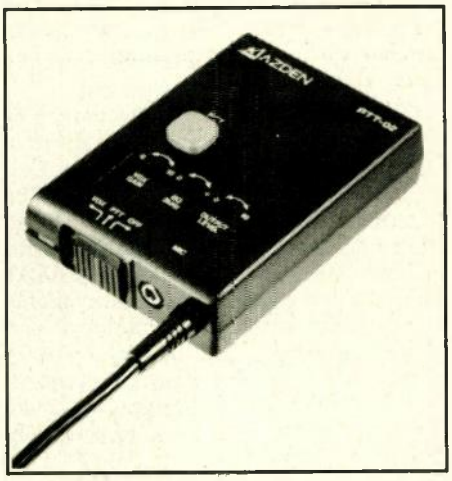
AEA has developed significant technological advancements for GPS packet applications with the PK-96 and PK-12. Packet users can now choose which full featured TNC they wish to use: the dual speed PK-96 9600/1200 bps TNC or the PK-12 1200 bps packet controller; and join in the GPS excitement either way.

GPS firmware upgrades for early PK-96s and PK-12s are available directly through AEA for $10 (free shipping). Call the AEA Upgrade Hotline at 206/774-1722 to order the GPS upgrade. The PK-96 and PK-12 packet controllers and AEA APRS Adapter Able, as well as the rest of AEA's high quality product line, are available from your favorite Amateur Radio dealer. For more information about any AEA products, call AEA's Literature request line at 800/432-8873 or Fax 206/775-2340. Write to: AEA, Inc., P.O. Box C2160, Lynnwood, WA 98036.

Universal Voice Operated Switch (VOX)—PTT-02

A new unique voice operated (VOX) switch model PTT-02 has been announced by the Communications Division of Azden Corporation, a manufacturer, distributor and dealer of Azden brand amateur and commercial radios and accessories. They are located at 147 New Hyde Park Road, Franklin Square, NY 11010. Telephone 516/328-7501; Fax is 516/328-7506.

This device can give any radio the advantages of remote manual or voice triggered transmission. Variable microphone



gain, adjustable frequency equalization and VOX gain are included. It is usable with all types of microphones including dynamic and electret. A removable belt clip, Velcro tape and a soft desk pad permit universal mounting.

An OFF-PTT-VOX switch permits either normal push-to-talk or VOX operation. An adjustable (from 0 to +8 dB) 2 kHz gain control coupled with an overall gain control (0 to +10 dB) provides matching of most microphones to most radios as well as shaping the frequency response for improved DX operation. The unit measures 2.4W x .87H x 3.35D inches. A single 9-volt alkaline battery is used. The suggested price is $50.

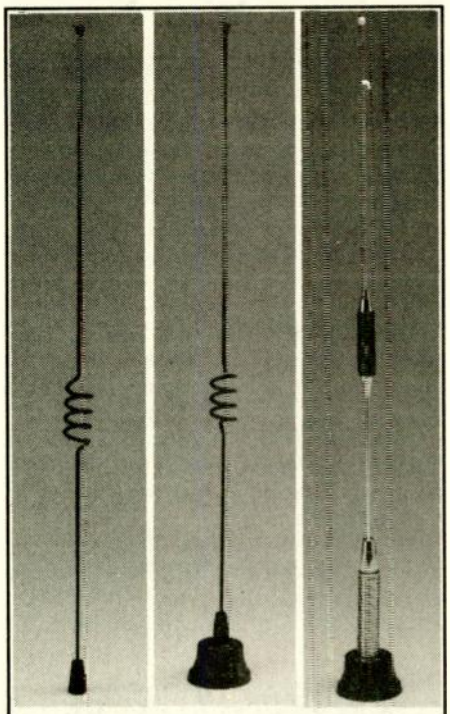
For additional information, write for a data sheet or call Syd Wolin, Manager, Communications Division.

Dual Band Antenna series

Larsen Electronics introduces the new LMC 2/70 B, NMOQ 2/70 B and the NMO 2/70 SH dual band antennas designed for simultaneous use of VHF and UHF frequencies in amateur applications. The new dual band antennas frequency range is 144-148 MHz on VHF and 440-450 MHz on UHF. Each antenna is factory preset to guarantee optimal performance with no tuning required.

Our popular Larsen mount style antenna, the LMC 2/70 B, is a ¾" hole, 5/16-24 threads stud type that combines mechanical durability with high efficiency ground plane contact for full antenna gain potential. The simple, reliable low noise mount comes with a Kulrod copper plated 17-7 stainless steel rod for maximum RF signal transmission

Larsen's own version of the standard



LMC 2/70 B NMOQ 2/70B NMO 2/70 SH

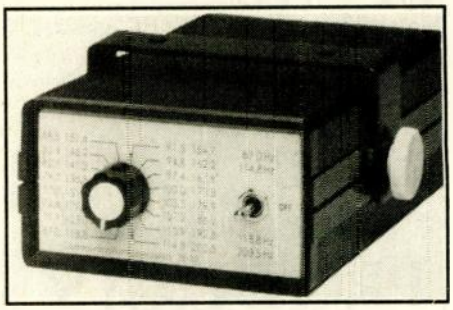
¾" Motorola TAD/TAE type mount, the NMOQ 2/70 B, is designed to meet the very highest standards in electrical performance and mechanical durability. The NMOQ 2/70 B premium mount's short, Kulrod copper plated whip is just 18" high.

The NMO 2/70 SH also provides a short whip, just 17" tall with an enclosed coil construction that reduces wind noise. This dual band antenna provides a heavy duty spring base that adds greater durability to this popular mount. The NMO 2/70 SH is designed to reduce problems with low clearances that can damage whips.

Larsen Electronics is a world class manufacturer of mobile antennas for the radio and cellular industry. With facilities in Vancouver, Washington and Burnaby, British Columbia, the company serves a growing worldwide market for wireless communications. For more information, contact Larsen Electronics, Inc., P.O. Box 1799, Vancouver, WA 98668; 800/426-1656 or Fax 800/525-6749.

Communications Specialists tone encoder

Communications Specialists, Inc., announces a new variation of their popular SS-32P CTCSS tone encoder. The model TE-32 provides direct access from a front



dial rotary switch to all EIA CTCSS tones from 67.0 to 203.5 Hz, allowing users to access repeaters that require CTCSS tones.

The TE-32 is housed in a high impact plastic case that measures 5.25" x 3.3" x 1.7" and is supplied with mounting bracket, hardware, and 3' long shielded cable. Great for mobile or test bench applications!

Specifications

- Powered by 11 to 26 VDC, unregulated @ 12 mA.
- Low impedance (lK), low distortion adjustable since wave output, 5V peak to peak.
- Frequency accuracy ± 1Hz maximum over -40C to +86C temperature range.
- Output level flat to within 1.6dB over entire range selection.
- Reverse polarity protection built-in.
- Immune to RF

Features

- Perfect for mobile or test bench applications.
- Three foot,3 conductor shielded cable for radio interface.
- Three position range switch, tones 116, off, and tones 17-32.
- High impact plastic case with mounting bracket (6.25" x 3.3" x 1.7" less bracket).
- Full one-year warranty when returned to the factory for repair.
- Immediate 1 day delivery.

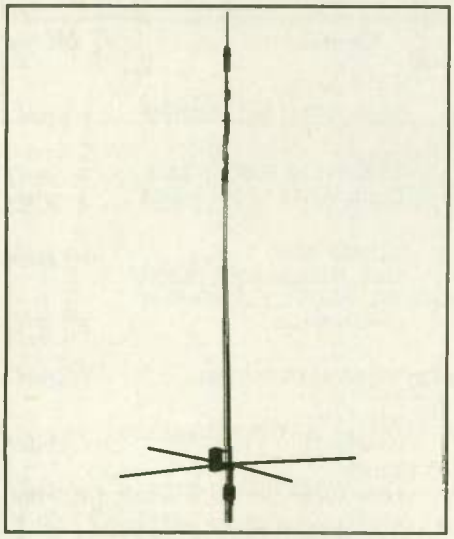
Priced at $49.95, the unit is available from stock and comes with our standard "no hassle" 1 year warranty. Communications Specialists, Inc., 426 W. Taft Ave., Orange, CA 92665. Within the U.S. and Canada telephone 800/854-0547; Fax 800/850-0547. International telephone 714/998-3021; Fax 714/974-3420.

DX77 Advanced Vertical Windom

Telex introduces its new Hy-Gain DX77 Advanced Vertical Windom with advanced features, surpassing any verticals currently on the market. The superior mechanical design, high-power capabilities and 55% greater bandwidth than competitive verticals on 20 and 40 Meters make it an exceptional value for a high performance system.

The unique design of this vertical antenna provides no-compromise performance without the need for ground ra-

dial wires. It will operate 10, through 40 Meters, including the WARC bands. Capable of handling more power than any other vertical designed without ground radials, the DX77 AVW can handle 1,000 watts of RF output. Automatic band switching and low angle of radiation al-



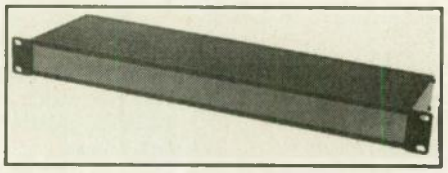
lows for enhanced DX capabilities.

The Hy-Gain DX77 features Telex's superior quality and reliable mechanical design with double-wall tubing, steel mast clamps and all stainless-steel hardware. The 29-foot vertical also features a new easy-tilt mount that makes lowering it for tuning an easy, one-person job. The DX77 comes with Telex's 2-year limited antenna warranty.

The DX77 can be mounted on a pole, chimney, rooftop or deck and is superb for portable operation. The suggested retail price is $419.95. For information, contact Telex Communications, Inc., 8601 E. Cornhusker Highway, P.O. Box 5579, Lincoln, NE 68505; telephone 402/467-5321, Fax 402/467-3279.

Rack Chassis

SESCOM has introduced its expanded line of a rack chassis. There are three new depths of 12", 15" and 17", in three rack heights of one, two and three rack units high, constructed of anodized aluminum panels with special corner extrusion for easy assembly. The units are shipped unassembled, enabling the constructor to



fabricate the panels easily. Please send for the Constructors Catalog which includes over 200 items for the constructor to: SESCOM, Inc., 2100 Ward Dr., Henderson, NV 89015. Telephone 702/565-3400; Fax 702/565-4828.

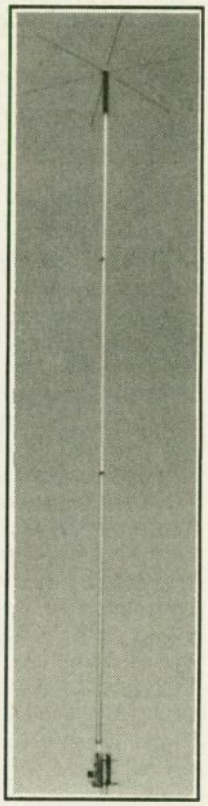
Please include addresses and telephone numbers when submitting press releases for New Products.

MFJ-1792 80/40 Meter Vertical Antenna

MFJ Enterprises, Inc., announces the MFJ-1792 super 80/40 Meter VerticalAntenna, only $159.95.

The MFJ-1792, was designed for high performance, and features efficient end loading — used for 80 Meters. This is accomplished by a virtually lossless 4½ foot capacitance hat and a high-Q coil, wound with Teflon covered wire on a low loss fiberglass form. The entire length of the antenna radiates.

It also features a unique, built-in, L-network for lowest SWR and is made of extra high strength 6061-T6 aluminum tubing, super strong solid fiberglass insulating rod, and stainless steel hardware.



This vertical antenna will handle 1500 watts PEP SSB. It comes with a heavy duty mount and will require guying.

MFJ also offers the 80/40/20 Meter Vertical Antenna, which is the same as the MFJ-1792, but has a full-size 20 Meter quarter-wave radiator. This model, the MFJ-1793 offers the 20M inclusion for only $179.95.

Both models come with MFJ's one year, unconditional guarantee.

For more information or to order, contact any MFJ dealer or MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762 or call 601/323-6869, Fax 601/323-6551, or order toll-free at 800/647-1800.

Note: In the October '95 issue on page 64, the *Call sign License Plaque* should have been listed as *The Executive Desktop call sign.*

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 February, please have the information to us by mid-November.

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

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

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

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

Date	City	Contact	Notes
Arizona			
12/16/95	Tucson	Joe, K7OPX 520/886-7217	w/i
12/9/95	Tucson	Micki, AA7RR 602/883-8305	p/r
Arkansas			
12/9/95	Siloam Sprgs	Ward, WA5NRT 918/326-4631	p/r pref.
California			
12/9/95	Carlsbad	Rusty, AA6OM 619/747-5872	w/i pref.
12/23/95	Chula Vista	Jim, KK6KZ 619/428-8418	w/i pref.
12/21/95	Colton	Harold, AB6RN 909/825-7136	
12/3/95	Concord	Gene, WW6H 510/254-5090	w/i
12/30/95	Culver City	Scott, K6PYP 310/459-0337 or Dave, N3BKV 818/559-2572	w/i
12/30/95	Escondido	Harry, WA6YOO 619/743-4212	p/r
12/30/95	Fairfield	Dick, AB6EY 916/791-0268	w/i pref.
12/9/95	Fontana	Ken, KE6GRY 909/685-7694	
12/21/95	Fountain Vlly	Cam, KI6WK 714/846-6984	
12/5/95	Fremont	Greg, KJ6EP 510/791-6818	w/i
12/6/95	Lake Isabella	Tom, KN6TS 619/379-2947	
12/2/95	Novato	Recording 415/883-9789	
12/9/95	Oakhurst	Ken, K6LRF 209/683-8245	w/i
12/16/95	Petaluma	Dale, N3AC 707/762-9414	p/r pref.
12/16/95	Porterville	Phil, WA6WRS 209/535-4288	w/i
12/16/95	Redwood City	Joe, KB6OWG 145.23(-) PL=100Hz	w/i
12/6/95	Sacramento	Jim, AB6OP 916/334-4487 or Larry, KD6OLN 916/361-2476	p/r pref.
12/16/95	Sacramento	Phil, N6ZVA 916/338-3223	w/i
12/16/95	San Diego	Jeff, AB6NE 619/295-5852	w/i pref.
12/13/95	Santa Ana	Cindy, KC6OPI 714/971-3448	p/r pref.
12/2/95	Santee	Knick, K6SK 619/466-8219	w/i pref.
12/16/95	Stockton	Mark, W6DKI 209/465-7496	w/i
12/9/95	Sunnyvale	24-hr recording 408/255-9000	w/i
12/9/95	Torrance	Joe, WB6MYD 310/328-0817	
12/9/95	Willits	Don, WA6ACX 707/459-3980	w/i
Colorado			
All Colorado exams		24-hr recording 303/360-7293	
12/9/95	Colorado Sprgs	Rick Brown 719/531-9423	p/r pref.
12/9/95	Denver	Glenn, WØIJR 303/366-9689	p/r pref.
12/9/95	Greeley	Rick Hubbard 303/353-3577	p/r pref.
12/2/95	Littleton	David Avery 303/795-5718	p/r pref.
12/23/95	Longmont	Randy Abbott 303/651-1075	p/r pref.
12/2/95	Sterling	Blaine, WAØJTB 303/522-5787	p/r pref.
Connecticut			
12/27/95	Shelton	Lee, WA1TSW 203/735-9476	p/r pref.
Florida			
12/16/95	Melbourne	WB9IVR 407/724-6183	p/r pref.
12/21/95	Vero Beach	Roger, KC4NHB 407/567-3979	p/r pref.
Georgia			
12/4/96	Marietta	Delaine, KM4FV 770/993-9758	w/i
12/16/95	Marietta	Joanne, AC4JQ 770/955-3171	w/i
Idaho			
12/9/95	Boise	Lem, W7JMH 208/343-9153	p/r pref.
12/27/95	Grangeville	Steve, KD7EV 208/628-3452	p/r pref.
Illinois			
12/16/95	Loves Park	Dennis, W9SS 815/877-6768	p/r pref.
Indiana			
12/3/95	Indianapolis	Pete Zinkan 317/259-7610	p/r
12/16/95	New Albany	Dick, K8GVU 812/246-6377	p/r pref.
12/3/95	Terre Haute	Fred, K9EBK 812/466-2122	p/r pref.
Iowa			
12/16/95	Council Bluffs	Lorraine, AAØBS 712/322-1454	p/r pref.
Kansas			
12/27/95	Emporia	Ray, KØJDB 316/343-2158	p/r
12/7/95	Newton	KAØRCK 316/283-6042	p/r pref.
12/15/95	Leavenworth	Martha, WBØERI 913/651-7350	p/r pref.
12/9/95	Olathe	Joe, WKØG 913/764-2822	p/r pref.
Maine			
12/27/95	Brunswick	Steve, WZ1J 207/725-5155	p/r pref.
Massachusetts			
12/10/95	Gloucester	Rick, WZ1B 508/283-2278	p/r pref.
12/16/95	Melrose	Scott, WB1F 617/665-7654	p/r pref.
Michigan			
12/13/95	Dearborn	313/676-6248	p/r pref.
12/9/95	Marquette	Rick, N8GBA 906/249-3837	
12/2/95	Mt. Clemens	Bill, N8CVC 801/468-8345 (before 9 p.m.)	p/r pref.
Missouri			
12/2/95	Kimberling Cty	NQØG 417/739-2888	p/r pref.
Montana			
12/5/95	Great Falls	George, AA7GS 406/453-2360	p/r pref.
Nevada			
12/14/95	Reno	Don, WS2Z 702/851-1176	p/r pref.
New Jersey			
12/9/95	Cranford	24-hr hotline 201/377-4790	p/r pref.
12/13/95	Ft Monmouth	Gerry, WB2GYS 908/532-5354	p/r pref.
12/4/95	Sayreville	Larry, N2ELW 908/754-5800 day; 908/613-8967 nite	p/r pref.
New York			
12/12/95	Hicksville	Bob, W2ILP 516/499-2214	w/i
12/16/95	Huntington	Joe, W2DDZ 266-3192	
12/16/95	Long Island	Les, AA2FJ 516/364-0030	
12/3/95	Yonkers	Emily, AC2V 914/237-5589	p/r pref.
North Carolina,			
12/3/95	Hendersonville	W2YTO 704/891-4359	p/r pref.
Ohio			
12/7/95	Cincinnati	Herb, WA8PBW 513/891-7556	p/r pref.
12/16/95	Hermitage	Dennis, WM3H 412/347-5960	p/r pref.
12/9/95	Van Wert	Robert, KA8IAF 419/795-5763	p/r
Oregon			
12/13/95	Medford	Dale, N7IXS 503/772-6865 or Rick, KG7PX 503/779-3404	p/r pref.
12/12/95	Pendleton	Mike, AA7SL 503/566-3597	p/r pref.
12/13/95	Roseburg	Dick, AA7GC 503/672-7564	p/r pref.
Pennsylvania			
12/2/95	Erie	Norma, W3CG 814/665-9124	p/r pref.
12/7/95	Levittown	David, K3TX 215/946-1040	p/r
12/16/95	Mercer	Dennis, WM3H 412/347-5960	p/r pref.
12/8/95	Nazareth	John, WX3C 610/767-4778	w/i
12/20/95	Pittsburgh	Mac, KC3RJ 412/279-8756	p/r
12/9/95	Shrewsbury	Carol, KC6GMN 717/235-0273	p/r pref.
12/16/95	Stockdale	Lou, KA3FLU 412/938-8125	p/r
Rhode Island			
12/14/95	Providence	Judy, KC1RI 401/231-9156 or Al NN1W 401/454-6848	p/r pref.
South Dakota			
12/9/95	Rapid City	Frank, NUØF 605/348-6564	p/r pref.
Texas			
12/16/95	Austin	Jim, AB5EK 512/327-6184	p/r pref.
12/2/95	Brownsville	Bob, N5VCG 210/546-4779	
12/9/95	Dallas	Larry, WR3J 214/350-5803	p/r pref.
12/28/95	Garland	Bill, K8DNE 214/272-4499	p/r pref.
12/10/95	Houston	Harold, ND5F 713/464-9044	p/r pref.
12/19/95	Houston	Steve, KK5GA 713/270-1505	p/r pref.
12/16/95	Lubbock	Gerry, WB5R 806/765-5526 or Doug, W5JUV 806/745-1504	
12/16/95	Mission	Vince, W9KGT 210/580-1957	

(continued on page 65)

THE MART

Classified
• Buy • Trade
• Sell • Inform

MART deadline 15th of the month two months prior to issue date. Please include an address on all ads so prospective clients can contact you by mail, if they prefer.

Commercial rate: 35¢/word, prepaid.
Private rate: 20¢/word, prepaid.

THE MART *Worldradio*
2120 28th St., Sacramento, CA 95818

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CERTIFICATE FOR PROVEN TWO-WAY RADIO CONTACTS with amateurs in all 10 USA call areas. Award suitable to frame and proven achievements added on request. Send SASE to W6LS, 45527 3rd St. East, Lancaster, CA 93535-1802 to get data sheet. F296

CODE PROFICIENCY DRILLS are transmitted from WB3IVO Brass Pounders ARC each Saturday, Sunday, Monday and Thursday on 7040 kHz, starting 2000Z, each Tuesday and Friday on 14060 kHz, starting at 2000Z. Speeds range 20-60 wpm. F296

EDITING A CLUB PAPER? Need one for your club? Interested in Amateur Radio public relations? Need some help? Amateur Radio News Service would like to hear from you. For info write PAM MYERS, N8IAK, 510 W. Harrison, Alliance, OH 44601. F296

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. F296

PEAK CONVERTER! Transforms averaging wattmeters to read PEP with flip of switch. Peak hold adjustment to 10 seconds. $19.99 ppd. kit. HI-RES, 8232 Woodview, Clarkston, MI 48348; 810/391-6660. 4-1295

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HAMS — DO YOU NEED COMPUTER PRINTER ribbons? Lowest prices. Color or black. State your needs. Free information. HARCLY, P.O.Box 830, Coquille, OR 97423. 595-1295

PACKET RADIO. Join TAPR, connect with the largest packet/digital group in the U.S. Creators of the TNC-2 standard. Benefits: newsletter, software, discount on kits/publications. $15/year US, $18 Can/Mex, $25 elsewhere. Visa/MC. When joining, mention ***Worldradio***, receive TAPR's new book, "Packet Radio: What? Why? How?" ($9 value) Free! 817/383-0000, Mail: 8987-309 E. Tanque Verde Rd. #337, Tucson, AZ 85749-9399. F296

FREE HAM GOSPEL TRACTS. SASE, N3FTT, 5133 Gramercy, Clifton Heights, PA 19018. 894-1096

TRANSMITTING TUBES WANTED FOR MUSEUM. Amateur or commercial. Tubes purchased, traded or donations welcome. All correspondence answered. Visitors welcome. K6DIA. YE OLDE TRANSMITTING TUBE MUSEUM, P.O. Box 97, Crescent City, CA 95531; 707/464-6470. 3-1295

WANTED: ELECTRON TUBES, ICs, semiconductors. ASTRAL, P.O. Box 707WM, Linden NJ 07036. Call 800/666-8467. 1294-1295

PERSONALIZED HOURLY HF SKYWAVE PREDICTIONS from your city or town: SKYCOM v1.5 floppy disk for Apple Macintosh or IBM PC and compatible personal computers. Includes complete mathematical description of theory ($30). DX window v2.0 floppy disk circular projection world radio map centered on your QTH shows sunrise-sunset gray line for any time of interest. Includes feature which displays any of 400 prefixes on world map instantly. For all Apple Macintosh machines ($50). Satellite Predictions MACSAT 3.1, $50; P/H $5 N. America; $10 International. SASE for more info: ATTN: DX; ENGINEERING SYSTEMS INC., P.O. Box 939, Vienna, VA 22183. F296

ELECTRON TUBES Transmitting, receiving, military obsolete...all types. Large inventory. Fast delivery. DAILY ELECTRONICS, 10914 N.E. 39th St., Ste. B-6, Vancouver, WA 98682; 360/896-8856, 800/346-6667, fax 360/896-5476. 295-296

R-390A SALES & SERVICE info SASE MILTRONIX, P.O. Box 80041, Toledo, OH 43608. 395-396

RTTY DIGITAL JOURNAL. The premier source of digital radio news and knowledge! Published ten times per year by the American Digital Radio Society. Whether a beginner or veteran, you need the RDJ for its coverage of all modes/bands from technical data to contesting. $20 per year (foreign higher). ADRS, Box 2465, New York, NY 10185. F296

AMATEUR RADIO REPAIR— Prompt service. ROBERT HALL ELECTRONICS, 1660 McKee Rd., Ste. A, San Jose, CA 95116; 408/729-8200. 295-296

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WANTED FOR MUSEUM: Apple-1 and other pre-1980 micro-computers, also early microcomputer journals, newsletters and advertising literature. KK4WW, P.O. Box 341, Floyd, VA 24091, 703/231-6478 or 703/763-2321. 1294-1295

QSL SAMPLES —50¢ SAMCARDS, 48 Monte Carlo Dr., Pittsburgh, PA 15239. 6-1195

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CHAVERIM-WESTERN USA AND MEXICO CHAPTER. Jewish amateurs and friends interested in our chapter or the Chaverim, contact KA6BJO, 2242 #N, Laguna Hills, CA 92653. 595-596

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R-390A POWER INPUT CABLES. P.O. Box 80041, Toledo, OH 43608. $25 shipped. 419/255-6220. 895-196

VE exam schedules *(continued)*

Date	City	Contact	Notes
Vermont			
12/2/95	Bennington	Robert KA1PXF 802/447-0032	p/r pref.
Virginia			
12/2/95	Virg. Bch	Judy, KD4JMA 804/468-9166	p/r pref.
West Virginia			
12/9/95	Huntington	Stephen, K8SUS 614/886-5922	p/r
12/9/95	Parkersburg	Dana, WV8G 304/422-1823	p/r pref.
Wisconsin			
12/2/95	Oak Creek	Jack, W9JK 414/774-6999 or 414/466-HAMS	p/r pref.
12/2/95	River Falls	Chuck, KA9YRV 715/425-2428	p/r pref.

The MART (cont.)

QSL CARDS. Standard and custom. Your ideas or ours. Excellent quality. Foil stamping available. Many designs and type styles. Catalog and samples $1.00 refundable. WILKINS, Dept. D, Box 787, Atascadero, CA 93423. 5-1295

RADIO RUBBER STAMPS. Free brochure. REID ASSOCIATES, 6680 Mellow Wood, West Bloomfield, MI 48322. 7-1195

MORSE CODE COMPUTER INTERFACES for IBM compatibles $49.95. CW filters $39.95 plus $3 shipping. Free IBM Shareware and ham catalog. DYNAMIC ELECTRONICS, Box 896, Hartselle, AL 35640, 205/773-2758, Fax 205/773-7295. 7-1295

2-METER INTERMOD. Our notch filter eliminates the pagers in the 152-153 MHz region that are responsible for 99% of intermod. No insertion loss, no need for +12, transparent at 70cm. See Jan. 95 CQ product review. Ruggedly built in solid brass. High power version VHFDN-152 with UHF conn. $62. HT version with M/F BNC VHFDN-152HT $68, $4 s/h. We also ship C.O.D. no charge. PAR ELECTRONICS, 6869 Bayshore Dr., Lantana, FL 33462. 407/586-8278, Fax 407/582-1234. 8-1295

WANTED: IC-751A with FL52A 500Hz CW filter. Hildreth Engineering Model 210 Commaudioprocessor. D. PALMER, 638 Benvenue, Los Altos, CA 94024. 9-1195

QRP TRANSMITTERS. 3- and 5-watt kits and assembled models for 80M, 40M, 30M, or 20M. Fun to build! Two stamps for "Milliwatter/MX" info. TECHSONIC, 32F Plymouth Park, Conshohocken, PA 19428. 10-1195

J-POLE ANTENNA KIT. 2M, 1¼M or 70 cm. Kit of parts with instructions (less ½" copper tubing). Build dual band antenna with 2 kits. Only $24.95 plus $4.50 S/H. Catalog $1. KILO-TEC, P.O. Box 10, Oakview, CA 93022. 9-1295

2 KW ANTENNA TUNER KIT $149, HV variable capacitors, roller inductors, counter dials, plus more! Catalog $1. KILO-TEC, P.O. Box 10, Oak View, CA 93022. 7-1295

RADIO CLUB BANNERS, Shocards, Decals, more! Free information. OLD WEST GRAPHICS, 749 S. Lemay, Ste. A3-355, Dept W, Ft. Collins, CO 80524-3251. 6-1195

DXtreme™ STATION LOG SYSTEM. Designed for HF DXers, this cost-effective logging program lets you maintain a database of your contacts and track the DXCC performance of your station. DXtreme features attractive, easy-to-use screens, and a full range of inquiries and reports. PC/AT-compatibles, MS-DOS 5.0+. Only $29.95 plus $2 shipping in NA. Write for data sheet. DXtreme SOFTWARE, 26 Langholm Dr., Nashua, NH 03062 (dxtreme@ix.netcom.com). 10-1195

AMATEUR RADIO REPAIR. Two technicians — combined shop experience of over 60 years. We repair real radios that "glow in the dark," as well as the latest SMD construction. BORSCH ELECTRONICS, 9935 SW Johnson St., Tigard, OR 97223; 503/684-5201. 1095-0396

COMMERCIAL LEGAL RADIOS. For less than $400 you can have an American made mobile or handheld VHF radio, legal on search and rescue, volunteer police, fire, medical, etc. Also available for new CAP splinter channels. Free spec sheet. 800/755-7169, ask for Gar or Sue. AXM ENTERPRISES, 11791 Loara St., Ste. B, Garden Grove, CA 92640. 1195

UNUSUAL OPPORTUNITY. Miniquad (from Miniproducts) for sale. 20, 15, 10 and 6 Meters. Hambands $350. Also wanted 18-TD Hygain tape dipole. ALBERT KEEN, KI6UY, 6051 Lindley Ave., Tarzana, CA 91356; 818/342-9467. 1195-296

COMMODORE 64 HAM PROGRAMS—8 disk sides—over 200 ham programs $16.95. 32¢ stamp gets software catalog. HOME-SPUN SOFTWARE, Box 1064-W, Estero, FL 33928. 1195

KEYS II: THE EMPORIUM, the hottest book on keys ever published. 80 pages w/sharp photos of keys, bugs and paddles. All new. Includes dating/pricing guide. Order direct from noted author DAVE INGRAM, K4TWJ, 4941 Scenic View Dr., Birmingham, AL 35210. $15 plus S/H ($1.75 4th Class/$3.50 Priority mail). 9-1195

THE HANDY HAMBOOK by K2EWA. 200 pages, 5½ x 8½". Technical data and practical info including formulas, tables, nomographs, charts, operating aids and much more. Only $12 plus $2.50 s/h. NJ residents add 6% tax. ROMANCO P.O. Box 34, Milltown, NJ 08850. 6-1295

NOW! SCAN OR PRINT. Turn your FAX machine into a full-page scanner and printer with the touch of a button. New Faxmate Pro SX101. $99 postpaid (CA add 8.25% tax). ICS ELECTRONICS COMPANY, Suite 207-W, Downey, CA 90240; 310/923-1837. 10-1195

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The trouble with troubleshooting

Jim Bersie, N2IGC/8

The trouble with electronic troubleshooting is that many of us hams prefer guessing at a problem than systematically isolating its cause. Why do we do that? Because:

- it's quick
- it's easy
- and if it's somebody else's problem, we can do it over the radio.

Guessing the cause of a problem over the radio is usually not the best method of diagnosis. It's like guessing the length of a board instead of measuring it. You might be close if you do it a lot, but seldom exact.

Let's take an example. Recently I had a problem with my mobile rig. The display dimmed when I keyed up. A ham suggested over the air that I had a battery problem. I doubted that because; 1) an experienced radio installer installed my radio with the power leads connected directly to the battery and; 2) The battery terminals were clean and my car battery was less than a year old.

I still checked the voltage to the radio and it was good. That was a classical troubleshooting step because I had "isolated," or removed low voltage or a break in the wires as a problem.

Isolation is a classical step in systematic troubleshooting. That is finding out what the trouble is NOT. It may seem tiresome finding out what a problem is not, but it is a methodical way of getting closer to finding what the problem IS. It reveals one of Life's Cruel Truths: much of troubleshooting is drudgery.

I write technical manuals for a living. Those manuals are for equipment usually costing over a million dollars so they have to be correct. Each manual has a *Troubleshooting Table* to help the operator pinpoint and solve problems. There is nothing creative about following them. There is a logical sequence so that all the probable causes narrow down the problem. Following the steps is a disciplined process.

Another ham suggested my problem was the microphone. Shortly afterward, my radio display went completely dark on receive and transmit, and there was no audio. I disconnected the mike and it was still dead. If it was the mike, I could have borrowed one from a friend to verify the problem. This is called substitution.

Substitution is a classical troubleshooting step. Substituting replaceable components can be easy, quick and decisive in finding the problem.

Reviewing what we've covered, isolation and substitution are the two initial troubleshooting steps. Even if you have no intention of "opening the box," these steps give you an idea of what needs service. Also, be sure your radio is the problem, and not the repeater or interference. Determine that again by isolation and substitution, simply try another repeater.

Regarding my rig problem. I read the manual and looked at the troubleshooting table. It gave me some ideas so, with power off my rig, I opened up my radio. Note: I said with power OFF.

All amateurs should own a multimeter which is helpful in finding SHORTS and OPENS and taking voltage measurements. After opening the radio, make a careful examination. Look for loose connectors or evidence of scorching or corrosion. Next, look for *cold solder joints.* They generally look a milky-gray instead of bright and shiny. Resoldering a cold solder joint may fix the problem.

Here's a soldering trick many know, but some may not. When removing solder, sometimes it's hard to get old solder to flow. Put some fresh solder on the joint first, then use a solder sucker or wick to remove it. It usually works! CAUTION: On PC boards, use as little heat as possible (needed) or you may damage the PC board.

If you've checked for SHORTS and OPENS, then you should check for voltages according to the table in the manual. CAUTION: Be careful as you may be risking personal injury and/or cause static damage to sensitive components. DO SO AT YOUR OWN RISK!

Reviewing troubleshooting, here is a checklist:

1) Diagnose, don't guess
2) Isolate
3) Substitute identical elements
4) Look for opens and shorts
5) Measure voltages
6) When all else fails, ship your equipment to a competent repair shop. Remember, UPS requires electronic equipment be packed in its original boxes with foam, etc., or they won't insure it, so save your equipment boxes.

To conclude my problem, I found an open in my mobile rig but couldn't determine what it was, so I sent it off for repair. When it came back, the problem had been corrosion in an 18 pin connector and also on the PC board.

I was not alone with the problem, it was the subject of a manufacture's service bulletin. A battery or microphone problem it was not! —*The Purple Crystal,* Independent Repeater Assoc., Byron Center, MI.

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FCC sending renewal notices

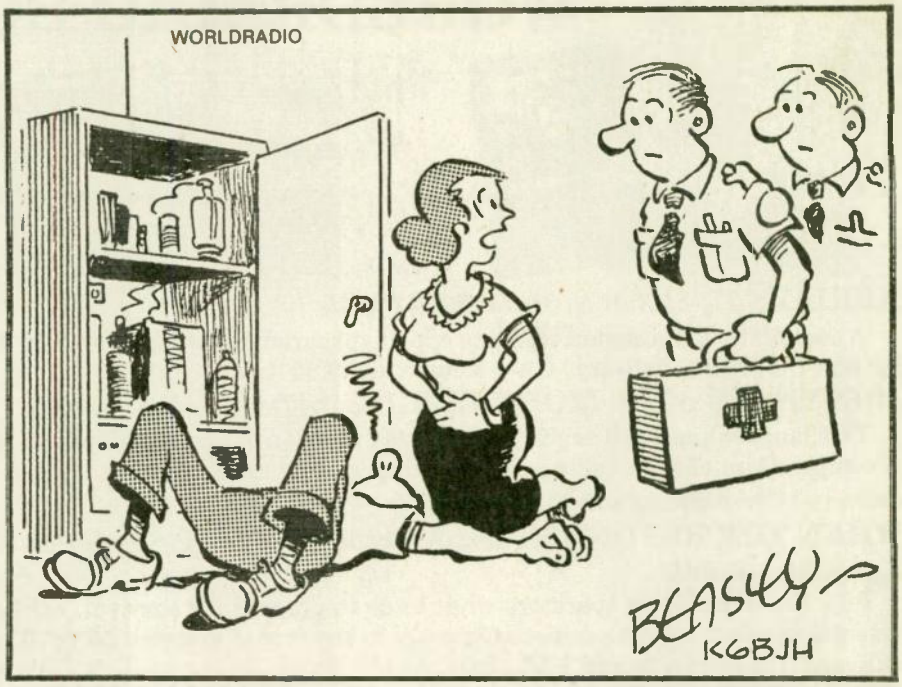
Amateurs whose licenses are due to expire in December, 1995, will be the first to receive mailed renewal notices from the commission. The new short form 610-R will be sent by first class mail. This new form is designed to be signed, dated and returned to the FCC, as long as no substantial changes are made.

While simple misspellings may be corrected on the 610-R, if a name or address change is needed, use a regular form 610 instead. There is **no fee** required to file for changes or renewal with either form. **WR**

International license update

The Federal Communications Commission has assigned RM-8677 to an ARRL petition for rule making to implement U.S. participation in an International Amateur Radio Permit. A permit covering countries in the Western hemisphere.

As previously reported, such a permit will allow temporary operation in any other country in the Americas that has signed the agreement to people licensed in their own country. **WR**



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—Happy Thanksgiving —

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