

WR 01-0013935 LIFE W6CUF

JAMES MAXWELL
PO BOX 473
REDWOOD ESTATES CA 95044

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Scenes such as this one were common in West Memphis, Arkansas after a tornado struck the area last December. Almost 1,500 people were left homeless. (Photo by John Wood, WV5J; The Daily News, Memphis, TN)

Tornado sweeps through South

Paul Luke, N4NBC
Shelby County ARES

All radio amateurs know that public service is one of the primary responsibilities that comes with an Amateur Radio license. The training and preparedness drills serve one basic purpose: serving our communities in times of emergency.

In the last two months, Memphis-area hams have seen two killer tornadoes, a 100-year flood, a 10" snowfall, and another flash flood in and around its outlying communities. The Mid-South has had to deal with just about everything Mother Nature

could throw at it. In doing so, area hams have been working overtime.

By far the most devastating storm was Monday, December 14, in West Memphis, Arkansas. The Mid-South was warned early for this one. The National Weather Service was predicting a possible outbreak of severe weather throughout the cool December afternoon. It was too cool, many thought. We soon found out just how quickly things could change.

A tornado watch issued by the National Weather Service at 5:20 p.m. was the first sign of the impending storm. First, eastern Arkansas was

covered by a watch, but another watch quickly followed for west Tennessee and north Mississippi. An intense low pressure system was moving into the Mid-South out of Texas. As the system approached, barometers began a rapid drop as surface air temperatures rose sharply. Mid-Southerners felt the seasons change in a matter of hours.

At 9 p.m., Dan Columbus, AA4HV, Net Manager for the Tri-State SKYWARN Net and John Ramsey, KB4BGC, activated the net on the W4BS 146.227.82 repeater. The wait (please turn to page 6)



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Radio club recruits students

Carl H. Nelson, NJ6K

Attempting to bring young people into Amateur Radio is much like the weather: everybody talks about it, but nobody does anything about it. Right? Well, not quite. WARA (Western Amateur Radio Association) of Cerritos, California, decided to meet the challenge head on. The result: two new young hams in a few weeks of training, and more in prospect.

It started when Chip Margelli, K7JA, of Yaesu approached Paul Barron, N6DWR, president of WARA, and asked him if the club would be interested in starting a project of seeking out young people, getting them interested and helping them obtain their tickets.

Paul passed the word around. Russ Roberts, W6SIV, happened to notice an article about the Imperial Middle School (grades 6, 7 and 8) in La Habra, California, that seemed to be project-minded. The science instructor, Granville Yoshina, was contacted. Yes, he was interested. He wanted to know more about the program.

Russ and Floyd Nicholson, W6HRD, met with Yoshina and laid out the plan — that is, what the project would consist of and what would be required of each of the interested parties.

The school administrators showed sincere interest and advised that they would work with WARA all the way. They provided a room for a shack. Yaesu supplied the equipment, and a Hustler antenna was donated by a member of the club. Betty Bidwell, school principal, asked the members of

WARA to present the program to the entire student body, which they did.

The members of WARA suggested that a mini "Field Day" be held, which was agreed upon. And before the "Field Day" became a reality, instruction was underway. A few days later, the mini "Field Day" was held, which was of much interest to students and faculty alike.

Of course, there were problems. The biggest stumbling block was finding a time to hold the sessions. No study period was available. But the solution, although not ideal, was simple: hold the sessions during the lunch period. This would represent a sacrifice on the part of the students, as their free time was taken up with the course. Also, some homework was required — particularly in learning CW.

Six instructors were lined up: Russ Roberts, W6SIV, who actually ramrodded the program; Floyd Nicholson, W6HRD; Paul Barron, N6DWR; Bob Twing, WB6BIM; Craig Herrick, N6PGL; and John Keller, N6FIN. They used ARRL's *Tune in the World* for theory instructions. Gordon West's tapes were the basis for the CW study.

About 20 students entered the class. They met on their lunch hours three days weekly, and listened to di-dahs between bites on their sandwiches. Some dropped out, which is not unusual in this type of arrangement. But seven or eight stayed on and, although meetings were over a relatively short period of weeks, two new hams were "christened." Sean



Russ Roberts, W6SIV, demonstrates Amateur Radio to students.

Blair, age 13, now answers to the call KB6TIN. Robert Hyodo also passed the exam, but at this writing it has not been possible to reach him to determine his call.

An annual affair at the school is an open house program, to which parents are invited. The amateurs were invited (please turn to page 6)

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Let us give proper acknowledgement to those who have recently climbed to the pinnacle of being Worldradio Lifetime Subscribers: George McGrede, N5JDM, of Dallas, Texas; William Barker, WB5MYU, of Anchorage, Alaska; LTC Thomas Barrett, Jr., USAF (Ret.) KX6QU, giving us DX contacts out in the Pacific, and Mark Jensen, KA0WTX, of Fargo, North Dakota.

Glen Winger, W9KXG, of Robinson, Illinois, wrote, "I've been an active amateur for 55 years with the same call, and in that time I've looked at a lot of magazines but none has compared to Worldradio. It tells the amateur lots of things he wants to know and lots of things he should know in a way that is easy to understand."

Greg Lutgendorf, N9DKS, of Oak Park, Illinois said, "I read Worldradio from cover to cover, even the articles which don't interest me."

Certainly an enlightened attitude! For, if one never exposes himself to new things, one may never find new things to eventually be interested in.

Have you heard those on 75 who say, "I only talk to people I know."

Well, if they had that attitude some years back, they would never have talked to the people who are today the only people they talk to.

You've heard those who say, "I'm only interested in..." Fill in the blank: DX, repeaters, building, VHF, whatever. If they had such a closed mind years back, they wouldn't even be interested in their sole interest today.

A tragic thing heard on the bands is someone saying, regarding upgrading, "I'm too dumb." Or, "I'm too old to learn."

Research is showing now that the old noodle does not decrease with age IF it is used! Now that one does not have to give up work time to show up at the Marble Halls of the FCC, but instead takes the test in the evening from his peers, one can get all the chances he wants to keep trying.

We admire those who keep taking the test — five, six, seven. The most we've heard is of 12 times before passing. Sure beats just sitting on the old duff.

Pat Milligan, N7PM, of Wichita, Kansas wrote in to give a second to the proposal that some company make call sign lapel pins.

Paul Mercado, W3FBF, of Broomall, Pennsylvania, said Worldradio is

rather interesting and educational. He said it is well edited, newsy, informative and elegantly organized. (Thank you. We'd like to make it even more newsy if more people would send in more news.)

Paul also publishes, twice a year, the newsletter for the Rotarians who are Amateur Radio operators — *ROAR*.

Rotarians do good deeds. Back in '66 I did an article for *Rotarian* magazine about the medical clinic for civilians they sponsored in Saigon.

Chuck Smith, N6PZA, is Assistant Principal at an elementary school in Weldon, California and is starting up a radio club for 5th to 8th graders. *BRAVO!* To borrow a term from baseball, the school radio clubs could be the "farm clubs" for the local radio clubs. The Amateur Radio community should indeed be "planting the seeds" at as early a level as we can.

The Canadian Ladies Amateur Radio Association sent a note thanking us for donating subscriptions as prizes for their 20th anniversary convention.

The Prime Minister of Canada proclaimed September 11-13 as Canadian Ladies Amateur Radio Weekend. How's that for publicity?

Joseph Phillips, K8QOE, of Fairfield, Ohio was nice enough to mention Worldradio in his column in the Cincinnati *Enquirer*. Appreciated.

Letters coming in tell us how popular *BOB'S CORNER* column is. If anyone has any ideas how we can be of more service to you, just drop us a line.

You may receive in the mail a second copy of Worldradio. Give the extra one to that friend of yours whose arm you've been twisting all these years to get a license. Let him/her see what a neat activity they are missing out on by not getting with it.

I've released the mike button and the receiver is now on.

— ARMOND, N6WR

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My FT-747GX has a super receiver, with a directly-driven mixer for great overload protection. And, Yaesu included the CW filter in the purchase price

(I used the money I saved on postage for the QSL cards!).

And my FT-747GX is loaded with other features. The receiver works from 100 kHz straight through to 30 MHz, and it's a fantastic shortwave broadcast receiver. I can use all twenty memories for that alone! Plus it's got dual VFOs. A noise blanker. Split frequency operation for the pile-ups. And scanning up the band helps me check out openings as they happen.

I just put in the optional crystal oven, and next month I'm going to pick up the FM board. I can't wait to tell my buddies I worked England on a repeater!

And with the money I saved when I bought my FT-747GX, I got

a second ten-meter antenna for satellite work on the high end of the band. I use my personal computer to tell me what satellites are going by, and the computer even sets the frequencies on the radio for me.

Now my friends are getting FT-747GX rigs, too. I knew they'd figure out my secret weapon sooner or later. But now I'm setting the pace!

Thanks, Yaesu. You've made a rig that makes sense."

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"They laughed when they saw my radio.
Then they saw my logbook."



Radio club

(continued from page 3)

to participate. The station was placed in operation, and parents and students came by to view the operation. The District Superintendent of Schools, together with his wife, made a particular point of dropping by the shack to commend those who had given their time. (It didn't hurt a bit that he was formerly a ham!)

According to Russ, W6SIV, the most exciting aspect of this program is that the school administrators and others interested were so pleased with the way the study went forward that, beginning in September, the study of Amateur Radio became an elective subject. Instead of having the study while the students eat lunch, it now takes place during the period immediately following the lunch break.

The members of WARA and the



Paul Barron, N6DWR (left), demonstrates CW. Sean Blair (right of center, in striped shirt) passed the course and now holds the call WB6TIN.

school officials are enjoying a great year for Amateur Radio in the 1987-88

school year at La Habra's Imperial Middle School. □

Tornado (continued from page 1)

wasn't long as reports of high winds and very low barometric pressures were coming in from north Mississippi and southeast Arkansas via Billy Wiley, WB5PAF, and Charles Hall, W5GWD.

At 9:43 p.m., Richard Smith, KB4ZIS, while running an informal net on the Fisherville, Tennessee 224.5 repeater, received a frantic transmission by a West Memphis police officer over his scanner. "Tornado on the ground . . . moving northeast!!" Richard immediately relayed the report to Dana Stine, WA4KRP, who then passed the report to the SKYWARN net.

A tornado warning was issued immediately based on the SKYWARN report, although radar at the National Weather Service did not detect the tornado. After passing through West

Memphis, the twister crossed the Mississippi River into Shelby County, Tennessee and struck the Northaven community just outside the Memphis city limits.

Don Chandler, Shelby County Emergency Coordinator, and Steve Cheeseman, KK4KN, were by now calling up the Shelby County ARES (SCARES) Emergency Net on the 146.28/88 WA4ETE repeater. Initial damage reports began coming in from Northaven by Ham Hilliard, KE4OT. Emergency personnel were also warned of major gas line breaks in this area.

Meanwhile, Jack Chambers, KB4LYD, and Paul Luke, N4NBC, began relaying damage information from West Memphis. Many West Memphis amateurs had personal considerations

after the touchdown, while others assisted law enforcement agencies with rescue operations.

A third net station, W4EM, was brought on the air by John Stephenson, KB4GGD, at the American Red Cross Headquarters in Memphis. Red Cross vans were soon placing emergency generators in the disaster area. With the vans were Jeff Dobisch, N4QWA; Tyler Stephenson, KB4GGE; Chick Wingate, WB4KXN; and Jim Cissell, KI4I.

An emergency shelter was set up at the West Memphis Civic Center where Stu Cole, N5LBZ, stood by throughout the night. Soon, dawn came, and with it we got our first good look at the devastation.

The citizens of West Memphis had little if any warning time of the

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Tornado

storm's approach. The tornado, labeled a Category 3 by the weather service, touched down only 4 miles southwest of the city. It moved into the city at 60 mph, packing winds estimated at over 200 mph. The path of destruction varied from 200 to 300 yards wide at times and ran for 25 miles.

The funnel first struck a residential area, totally destroying or seriously damaging homes in an area three blocks wide. From there, the tornado entered the heart of the city's business district, leveling a grocery store and other businesses. Also in the path of the tornado were an elementary school, a multi-unit apartment complex, more homes, a truck stop, a motel and a restaurant. Six people lost their lives while another 150 others were injured. In all, nearly 1,500 people were left homeless.

Early Tuesday morning, two-man teams were made up of Bill Allen, KA4LEQ; Terry Cox, KB4KA; Dave Spindler, KB4MU; Fred Holzapfel, WA4REJ; Jim Maxwell, K4KTP; and Bill Hall, N4GCF. These teams assisted Red Cross damage assessors compiling property damage information.

As the morning wore on, news of the disaster spread. Stu, N5LBZ, began taking health and welfare inquiries on 40M while Jim McCraw, K4BXJ, and Roy Horton, K4GBN, took traffic on 80M. Traffic grew steadily during the afternoon hours.

Net control operators Pat Lane, W4OQG, and Jim Pogue, KH2AR, prioritized incoming inquiries from the HF bands and the Red Cross before passing them to mobile units in the disaster area. Messages with phone numbers not in the disaster area were passed to Roy Wilson, N4ARH, and Bill Burnett, WA4IQL, for disposition by landline if possible. Mobile units were made up of Buddy Spiegel, KJ4KR; Joey Camp, N4QMI; Suresh Kagoo, N9GSA; Mark Sowell, WB4RRT; Jim Moffatt, WD4SMW; KB4LYD; WB4KXN; KE4OT; KK4KN; KB4KA; N4NBC; and K4KTP. Mike Carlisle, KJ4DZ; Jim Williams, N4EWA; and Art Corey, K4SHJ, worked with net control operators on processing incoming reports. Within the first 24 hours of the tornado, the SCARES net passed well over 275 pieces of formal health and welfare traffic.

The SCARES net was closed shortly after 24 hours of continuous operation, only to be recalled Thursday morning after a failure of cellular telephone communications. The bat-

teries on the cellular phones could not keep up with the demands placed on them. Portable stations were set up in each of the Red Cross disaster centers in the West Memphis and Northaven areas to pass critical traffic between Red Cross HQ and the centers. These stations were manned by Ron Dubbs, NU4U; Lee Dubbs N4EBM; KA4LEQ; and N4NBC with Dan McClellon, N4QLK, serving as net control operator with W4OQG and K4BXJ. Hardline telephone service was restored late in the day, at which time net operations were suspended for the last time.

Warning time is one of the most important factors in surviving a tornado. Unfortunately, in West Memphis, those in the path of this storm had little. In a statement released to the media, Richard Coleman, Meteorologist in Charge of the National Weather Service office in Memphis, credits amateur broadcasts as "instrumental in the broadcast of the tornado warning . . . and provided around 10

minutes of warning lead time for persons in the path of the storm in Shelby County." There were over 60 homes destroyed in Northaven, but no deaths were reported in the area.

As Amateur Radio operators, we did our jobs in two ways. First we made a difference that helped save lives. Second, we tried to help those who had lost everything, communicate with their loved ones around the country. The drills and preparedness time were well spent.

But this was just one storm, one evening. In the weeks to come, those that were spared the devastating tornado in West Memphis and Shelby County watched their homes and property surrounded by waist-deep flood water. Again, dozens of amateurs spent their Christmas holiday helping those who were left homeless. Public service is just one part of a ham's job. That one part is what shows the world what a fantastic hobby we enjoy. □

Hams vs. cancer?

There has been a tumult of media coverage over the past few weeks about a study out of Tacoma, Washington, which purports to connect ham operators with abnormally high rates of death from cancer.

The study was done by Dr. Samuel Milham, Jr., of the Washington Department of Social and Health Ser-

vices. He reported to the *American Journal of Epidemiology* that "amateur operator licensees in Washington state and California have significant excess mortality due to acute myeloid leukemia, multiple myeloma and perhaps certain types of malignant lymphoma."

Worldradio has been investigating the reports and will keep readers updated. □

Old-Timers Club

In recognition of current amateurs who held an amateur license 20 or more years ago (lapses permitted), the ARRL sponsors an Old-Timers Club (OTC) award. If you qualify, just drop

a note to the ARRL HQ (225 Main St., Newington, CT 06111) with the date of your first amateur license and your call sign then and now, for your certificate. There is no charge, but please include an SASE. — QST □

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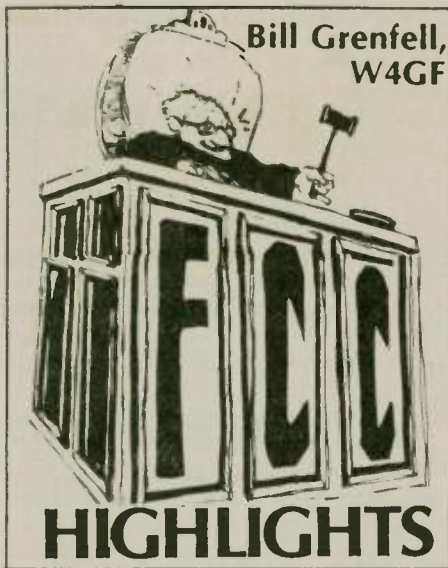
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HIGHLIGHTS

Amateur license applications on outdated Form 610 are being rejected by the FCC. All 610's bearing a lower right corner notation "FCC Form 610 June 1984" or a later date, are acceptable. FCC's Public Notice of October 17, 1985 made the deadline effective as of January 1, 1986.

The ARRL has hired a lobbyist to fight FCC's Docket 87-14, which proposes to allocate the 220-222 segment of the 220-225 MHz band to land mobile services.

Action on FCC's proposed amendment of the Part 15 rules (Docket 87-389), governing the operation of low-power devices without a license, was delayed upon request by the ARRL and 10 other organizations. The extent, complexity and time needed to determine the impact was cited as the basis for the request. The new deadline for comments is March 7, 1988, and for reply comments, May 9, 1988.

The FCC has adopted rules requiring antenna/cable external switches for TV sets to provide at least 80dB isolation over 54-216 MHz, and 60dB from 216 to 550 MHz. The FCC considers these levels of isolation are necessary to prevent signal leakage that may cause QRM to other licensed radio services.

The FCC is requiring cable operators to inform subscribers fully of the

potential for coupling of cable signals across the switch, the interference it may cause, and the measures to take to avoid such conditions. (*ARRL Letter*, 12/16/88)

Ralph Haller, N4RH, has been selected to be the new Chief of FCC's Private Radio Bureau (PRB). A BSEE from the University of Kansas, he began his career with FCC in 1971 as an Inspector at the Los Angeles District Office, transferred to the D.C. headquarters in '76 where he has served in several Offices and Bureaus and has been Deputy Chief of the PRB since December '86.

As *W5YI* reports, Haller becomes the highest ranking FCC official who is also an Amateur Radio operator. As well as I can recall, in the past only two other amateurs have reached that level at FCC: George Sterling, W1AE, and Edwin White, W4AS. Sterling went on to become an FCC Commissioner.

The Chief of the FCC Special Services Division, Raymond A. Kowalski, resigned effective New Year's Eve. He has joined the Washington law firm of Blooston and Mordkofsky.

Charged with jamming FBI communications, amateur licensee Jerry Gastil, K6DYD, plead guilty in federal

court on November 27, 1987. He faces a possible sentence (on January 25, 1988) of 10 years in jail, a maximum fine of \$10,000, and action by the FCC to revoke his amateur and commercial radio operator licenses. (*Westlink Report*, 12/11/87)

In a November 24th release concerning the language used in broadcasting, the FCC also noted that it considered the use of foul language in the amateur and other private radio services unacceptable and intolerable. (*Westlink Report*, 12/11/87)

A pirate AM broadcast station run by a ham has been taken off the air by action of an engineer from FCC's Chicago field office. He was using a tower radiating in the AM broadcast band to rebroadcast satellite music. The FCC believes that he installed the station for the singular purpose of being able to listen to the station while driving around town in his car. He was assessed a \$750 fine.

END-OF-MONTH LICENSE TOTALS

October	1987	November
43,479	Extra	43,608
98,287	Advanced	98,383
114,497	General	114,396
92,267	Technician	92,618
82,216	Novice	82,296
430,746	Totals	431,301

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 January 1, 1988.

For more information about the call sign assignment in the Amateur Radio Service, see Section 97.51 of the FCC Rules, or write to the FCC, Consumer Assistance Branch, Gettysburg, PA 17326.

Radio District	Group A Am. Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	WE0B	KE0SI	N0ITS	KB0BQW
1	NO1H	KC1HN	N1FKK	KA1RKO
2	WC2Y	KE2DV	N2HUN	KB2EWM
3	NM3W	KD3FY	N3FYD	KA3SOL
4	AB4FO	KK4VV	N4RVG	KC4CXJ
5	AA5EE	KG5GP	N5LXI	KB5FCD
6	AA6GH	KJ6CJ	N6RDW	KB6VKQ
7	WI7Y	KF7GC	N7KGT	KB7DQT
8	NZ8T	KE8PI	N8JAS	KB8DSH
9	NW9H	KE9HU	N9HCM	KA9ZYO
N. Mariana Is.	AH0E	KH0AD	KH0AJ	WH0AAH
Guam	KH2G	AH2BV	KH2DE	WH2ALK
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Palmyra, Jarvis Is.	AH5A			
Hawaii		AH6IT	NH6OD	WH6BWB
Kure Is.			KH7AA	
American Samoa	AH8C	AH8AD	KH8AF	WH8AAW
Wake Wilkes Peale		AH9AD	KH9AD	WH9AAH
Alaska		AL7JO	NL7LW	WL7BQC
Virgin Is.	KP2T	KP2BK	NP2CI	WP2AFU
Puerto Rico		KP4OO	WP4NB	WP4HSU



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Worldradio is a two-way communication. Send in Amateur Radio information and news. Share your knowledge with your fellow amateur and Worldradio reader. We are most interested in your comments and suggestions. We would appreciate being placed on the mailing lists of amateur club bulletins.

Collapsible groundplane antenna

Francis Albert Dohanich, WB5PUB

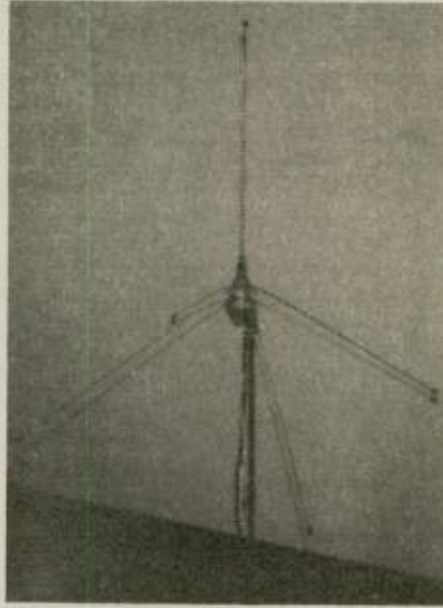
Like thousands of hams across the United States, I enjoy operating on 2M. Also, like many amateurs, I do some traveling in my business. Besides my briefcase and clothesbag, I almost always include a handi-talkie, a small power supply and a 30W amplifier as standard equipment.

The only difficulty I had was deciding on a suitable antenna. I first tried various types of telescoping 2M antennas, and these were good performers, but what I really wanted was some type of groundplane. The main problem here was the transportability of the antenna. The challenge was at hand, so I decided to do a little experimenting.

I constructed a standard 1/4-wave-length groundplane antenna with the typical driven element and four radials. Plans for this type of antenna can be found in almost any radio handbook. The driven element and the radials were made from 3/32" brass welding rod. This size rod fits perfectly into a PL-259 connector when fabricating the drive element.

At a local store, I bought some pieces of rubber which resembled

small rubber stoppers. I fitted one stopper on the end of each of the four radials for eye protection. The screw-in reducer on the PL-259 was not used. A small hole was drilled axially down the center of a rubber stopper and next, the stopper was slid down the driven element so that it fit snugly in what would normally be the place of the reducer. This served to prevent the driven element from shorting against the side of the PL-259.



WB5PUB's collapsible antenna

A rubber stopper was placed on the end of the driven element for eye protection. Now I had a groundplane into which the driven element screwed into an SO-239 socket mounted on a metal plate, and the other end of each of the four radials was bent into a loop and bolted on to the plate using a #8 screw.

As with the groundplane, I needed some type of base which could also be broken down. To accomplish this, I

used a drum cymbal high-hat stand (a device resembling a tripod). This stand collapsed to a fraction of its size and was easily transported. A 3' wooden dowel clamped perfectly into the high-hat stand, and the other end was bolted to the antenna. Voilà, a collapsible 2M groundplane antenna was born. However, I decided that the antenna could be further improved.

I found in my garage a discarded music stand minus the top piece which holds the sheet music. I replaced the wooden dowel and high-hat stand with the music stand. Now I had a much lighter, totally collapsible, 2M antenna system. The final touch was a 4"-diameter, 30"-long cardboard map tube into which the collapsed antenna system fit perfectly.

Assembling the collapsible groundplane antenna is as follows: upon opening the map tube, the entire antenna assembly is removed. The legs of the music stand are opened and the center shaft telescoped out. Next, the four radials are bolted onto the antenna plate, and finally, the driven element (with the PL-259 connector) is screwed on top. There you have it — instant groundplane.

The end of the RG Mini-8 coax is fitted with a PL-259 connector to accommodate standard transceivers and amplifiers, but a BNC adapter makes it totally compatible for use with handi-talkies.

I have used my music stand groundplane for more than three years, and it has served me well. It is very light and is easily transported in a car or aboard an aircraft.

There could be other variations of this antenna scheme. One of my designs is a groundplane with umbrella-type radials which can be quickly opened or closed, thus eliminating the need to bolt on the radials. Nevertheless, I hope this antenna is as helpful to other amateurs as it has been to me. "I won't leave home without it." □

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 * ICOM - Order Model I for all Icom (2AT/02AT). Slides on bottom of radio.
 * TEMPO, SANTEC - Order Model T (Simple mod). Write for spec sheet/info on other radios.
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Enriched Novice

James Betts, KB5BVR is the first student to qualify and receive an Amateur Radio operator license from an enrichment class conducted at Flour Bluff High School in Corpus Christi, Texas.

James made his first contact the day after receiving his Novice ticket. He used the club's 15-meter QRP rig and 40-meter dipole to log a contact with W2SZ in Troy, New York. Commenting after the QSO James said, "Boy, was I ever nervous."

The weekly class is conducted by Bill Hays, WJ5O, and currently has eight students enrolled. □

BOOK REVIEWS

A Radio Journal

A *Radio Journal—1912-1940*, by Russ Rennaker, W9CRC. R & R Press, 1011 Linda Dr., Kokomo IN 46902. Price: \$9.

Nearly all Amateur Radio pioneers have fond memories of our decades of pounding brass or modulating phone rigs, beginning with early spark gaps and telephone button mikes in the antenna lead. And we have hundreds

of stories we can tell about events that occurred and other operators we have known. But most of us old-timers just talk about them with other long-in-the-tooth (or no-tooth) veterans on the air.

But Russ Rennaker not only talks about his recollections; he also writes of them in his 110-page book, *A Radio Journal*. He recaptures the thrill of discovering Amateur Radio when he was a 14-year-old boy on an Indiana farm in 1916. His first rig was a Ford spark coil and his receiver an early "coherer detector." His contacts with a ham just a few miles away was magic.

Still an avid operator, that joy of radio communication remains with Russ Rennaker today at 85 years of age. He tells of his years in radio, both amateur and commercial, and he relates tales by and of other hams and broadcast personalities he has known. His book also contains photos of long-forgotten transmitters and receivers, plus pictures of stations of the elite members of hamdom many years ago.

For a nostalgic recall of Amateur Radio as it used to be, don't miss Rennaker's *A Radio Journal* — Bob Baird, W9NN □



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IC-735 Gen. Cvg Xcvr	999.00	Call \$
IC-745 Gen. Cvg Xcvr	1049.00	Call \$
IC-751A Gen. Cvg. Xcvr	1649.00	Call \$
IC-575A 10m/6m Xcvr	1399.00	Call \$
Receivers		
IC-R7000 25-1300 + MHz Rcvr	1099.00	Call \$
IC-R711A 100 kHz-30 MHz Rcvr	949.00	Call \$
VHF		
IC-275A All Mode Base w/PS	1199.00	Call \$
IC-275H All Mode Base 100w	1389.00	Call \$
IC-27A FM Mobile 25w	429.00	Call \$
IC-27H FM Mobile 45w	459.00	Call \$
IC-28A FM Mobile 25w	429.00	Call \$
IC-28H FM Mobile 45w	459.00	Call \$
IC-2AT FM HT	299.00	Call \$
IC-02AT FM HT	399.00	Call \$
IC-μ2AT Micro HT	329.00	Call \$
IC-900 Six Band Mobile	589.00	Call \$
UHF		
IC-475A All Mode 25w	1399.00	Call \$
IC-47A FM Mobile 25w	549.00	Call \$
IC-48A FM Mobile 25w	459.00	Call \$
IC-4AT FM HT	339.00	Call \$
IC-04AT FM HT	449.00	Call \$
IC-μ4AT 440 FM HT	369.00	Call \$
IC-3200A FM 2m/70cm 25w	599.00	Call \$
220 MHz		
IC-375A All-Mode, 25w, Base Sta.	1399.00	Call \$
IC-38A 25w FM Xcvr	459.00	Call \$
IC-37A FM Mobile 25w	499.00	Call \$
IC-3AT FM HT	339.00	Call \$
IC-03AT Deluxe HT	449.00	Call \$
1.2 GHz		
IC-1271A All Mode 10w	1229.00	Call \$
IC-120 1w, FM, Xcvr	579.00	Call \$
IC-12AT Deluxe 1w HT	459.00	Call \$



HF Equipment TS-440S/AT

HF Equipment	List	June
TS-940S/AT Gen. Cvg Xcvr	\$2349.95	Call \$
TS-940S Gen. Cvg Xcvr	2119.95	Call \$
TS-930S/AT Gen. Cvg Xcvr	1999.95	Call \$
TS-830S Xcvr	1199.95	Call \$
TS-440S/AT Gen. Cvg Xcvr	1299.95	Call \$
TS-440S Gen. Cvg Xcvr	1099.95	Call \$
TS-140S Compact, Gen. Cvg Xcvr	899.95	Call \$
TS-680S HF Plus 6m Xcvr	999.95	Call \$
TL-922A HF Amp	1599.95	Call \$
Receivers		
R-5000 100 kHz-30 MHz	949.95	Call \$
R-2000 150 kHz-30 MHz	699.95	Call \$
VHF		
TS-711A All Mode Base 25w	999.95	Call \$
TR-751A All Mode Mobile 25w	629.95	Call \$
TM-221A Compact FM 45w	419.95	Call \$
TM-2530A FM Mobile 25w	459.95	Call \$
TM-2550A FM Mobile 45w	489.95	Call \$
TM-2570A FM Mobile 70w	589.95	Call \$
TH-21-BT FM, HT	279.95	Call \$
TH-205 AT, NEW 2m HT	279.95	Call \$
TH-215A, 2m HT Has It All	359.95	Call \$
TH-25AT 5w Pocket HT NEW	329.95	Call \$
TM-241A 2m/70cm FM Mobile	TBA	Call \$
UHF		
TS-811A All Mode Base 25w	1,199.95	Call \$
TR-851A 25w SSB/FM	729.95	Call \$
TM-421A Compact FM 35w	439.95	Call \$
TH-415A 2.5w 440 HT	379.95	Call \$
TH-41BT FM, HT	299.95	Call \$
TH-45AT 5w Pocket HT NEW	349.95	Call \$
TW-4100A, 2m/70cm FM	669.95	Call \$
TR-50 1w 1.2GHz FM	599.95	Call \$
220 MHz		
TM-3530A FM 220 MHz 25w	479.95	Call \$
TH-31BT FM, 220 MHz HT	299.95	Call \$
TM-321A Compact 25w Mobile	439.95	Call \$
TH-315A Full Featured 2.5w HT	379.95	Call \$



HF Equipment FT 757GX

HF Equipment	List	June
FT-ONE Gen. Cvg Xcvr	\$2859.00	Call \$
FT-980 9 Band Xcvr	1795.00	Call \$
FT-757 GX II Gen. Cvg Xcvr	1129.95	Call \$
FT-767 4 Band New	1929.00	Call \$
FL-7000 15m-160m Solid State Amp	1895.00	Call \$
Receivers		
FRG-8800 150 kHz - 30 MHz	759.95	Call \$
FRG-9800 60-905 MHz	699.95	Call \$
VHF		
FT-212RH New 2m Mobile 45w	459.95	Call \$
FT-211RH FM Mobile 45w	459.95	Call \$
FT-290R All Mode Portable	599.95	Call \$
FT-23 R/TT Mini HT	334.95	Call \$
FT-209RH FM Handheld 5w	359.95	Call \$
UHF		
FT-712RH 70cm Mobile 35w	499.95	Call \$
FT-711RH FM Mobile 35w	479.00	Call \$
FT-770RH FM Mobile 25w	479.95	Call \$
FT-73 R/TT Mini HT	349.95	Call \$
FT-709RH FM HT 4w	389.95	Call \$
VHF/UHF Full Duplex		
FT-736R, New All Mode, 2m/70cm	1749.95	Call \$
FT-726R All Mode Xcvr	1095.95	Call \$
HF/726 Module for 10,12,15M	289.95	Call \$
430/726 430-440 MHz	329.95	Call \$
440/726 440-450 MHz	329.95	Call \$
SU-726 Satb Duplex	129.95	Call \$
FT-690R MKII, 6m, All Mode, port.	569.95	Call \$
Dual Band		
FT-2700RH FM 2m/70 cm 25w	599.95	Call \$
FT-727R 2m/70 cm HT	439.95	Call \$
220 MHz		
FT-109 RH New HT	399.95	Call \$
Repeaters		
FTR-2410 2m Repeaters	1269.95	Call \$
FTR-5410 70cm Repeaters	1289.95	Call \$



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VE exam schedules

As a service to our readers, **Worldradio** presents a feature listing those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is two months in advance. For example, if your VE group is scheduling an exam for September, please have the information to us by mid July.

Our address is **Worldradio**, 2120 28th St., Sacramento,

CA 95818. Please mark the envelope "VE Exams".

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

p/r = pre-register

w/i = walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
Alaska				Iowa			
Mar 2	Anchorage	KL7HFQ (907) 243-2221	w/i	Apr 17	Des Moines	NA0R (515) 967-3890	p/r by 3/17
Mar 5	Fairbanks	AL7IF (907) 474-0842	w/i	Kansas			
Mar 5	Juneau	KL7KD (907) 789-0292	w/i	Mar 25	Kansas City	NC0M (913) 262-0631	p/r pref
Mar 16	Eagle River	KL7HFQ (907) 243-2221	w/i	Mar 25	Topeka	NA0F (913) 828-3317	p/r pref
Arizona				Maryland			
Mar 19	Flagstaff	W7YS (602) 526-3370	p/r, some w/i	Mar 5	College Park	NF3I (301) 963-4008	w/i
California				Mar 19	Catonsville	KS3L (301) 788-2957	w/i
Feb 27	El Cajon/ Escondido	(619) 465-EXAM	p/r by 2/17	Minnesota			
Mar 5	Burbank	W6JEP (818) 848-9340	w/i OK	Feb 27	Hamel	NA0U (612) 920-7473	w/i (hamfest)
Mar 5	Los Osos	W6ECY (805) 528-2934	w/i OK	Mar 12	Bloomington	KD0CL (612) 881-7181	p/r pref
Mar 5	San Diego	(619) 465-EXAM	p/r by 2/23	Mar 19	St. Paul	K0QBE (612) 222-7253	p/r pref
Mar 5	San Luis Obispo	W6EY (805) 528-2934	w/i OK	Missouri			
Mar 12	Apple Valley	K6BET (619) 244-6080	w/i OK	Mar 5	Independence	K0IXC (816) 373-8976	p/r pref
Mar 12	Jackson	WZ6Y (415) 295-7947	p/r, some w/i	Nevada			
Mar 12	Long Beach	NN6Q (213) 420-9480	p/r pref	Apr 16	Reno	K7HRW (702) 972-3933	30-day p/r; some w/i
Mar 12	Los Altos Hills	KG6XF (408) 255-9000	w/i only	New Jersey			
Mar 12	San Marcos	(619) 465-EXAM	p/r by 3/2	Mar 12	Cranford	N2XJ (201) 635-7686	w/i OK
Mar 16	Eureka	KB6FIW (707) 442-9245	w/i OK	Mar 12	Pennington	AA2F (609) 737-1723	w/i OK; call
Mar 17	Fountain Valley	N6ISY (714) 775-6095	p/r, some w/i	Mar 17	Bellmawr	WA2VQG (609) 546-7710	w/i OK
Mar 19	Chula Vista	(619) 465-EXAM	p/r by 3/9	Ohio			
Mar 19	Huntington Beach	KD6DA (213) 691-1514	p/r, some w/i	Mar 11	Maumee	KU8B (419) 729-5245	
Mar 20	Sunnyvale	W6NLG (408) 255-9000	w/i only	Mar 12	Beavercreek	Francis Swope (513) 426-6699	w/i OK
Mar 26	Eagle Rock	WB6PSY (818) 710-1705		Mar 12	Columbus	K8NIO (614) 864-8370	
Mar 26	El Cajon/ Escondido	(619) 465-EXAM	p/r by 3/16	Mar 27	Madison	KO8O (216) 256-0320	25 day p/r
Mar 27	Hanford	KA6YSW (209) 924-4221	w/i	Oregon			
Mar 27	Santa Cruz	KG6XY (408) 255-9000	w/i only	Mar 26	Eugene	KM7T (503) 746-3047	p/r; w/i
Colorado				Pennsylvania			
Mar 12	Denver	W0IJR (303) 366-9689	p/r pref	Mar 5	Erie	W3CG (814) 665-9124	w/i OK
Florida				Mar 10	Levittown	K3TX (215) 946-1040	
Mar 19	Fort Myers	N8EL (813) 772-2308	p/r			KY3J (215) 295-5787	w/i OK
Mar 19	Melbourne	WB9IVR (305) 724-6183	w/i OK	Texas			
Georgia				Mar 12	Midland	KT5G (915) 694-9450	w/i OK
Mar 5	Atlanta	N4ODI (404) 927-6296		Mar 12	San Antonio	NS5I (512) 681-0702	w/i
Mar 6	Atlanta	WA4ZJJ (404) 461-8542	w/i	Mar 14	Brady	WD5H (915) 597-2561	7-day p/r
Mar 12	Atlanta	WB2YAD (404) 962-9582	w/i	Vermont			
Mar 19	Atlanta	KI4RD (404) 469-6430	w/i	Mar 5	Windsor	WB1GXM (603) 543-1389	30-day p/r; w/i
Mar 27	Atlanta	WA4ABY (404) 875-9450	w/i	Virginia			
Illinois				Mar 5	Hampton	N4IIC (804) 851-5573	p/r pref
Mar 9	Leonore	Don Selbrede (815) 223-2848		Wisconsin			
Mar 12	Oak Forest	NF9N (312) 448-9432	w/i OK	Mar 26	Wisconsin Rapids	K9UTQ (715) 423-6368	
Mar 13	Danville	Betty Collins (317) 793-3573		Mar 27	Fox Point	KB9G (414) 351-5311	w/i OK
Mar 19	Bloomington	Denny Chestney (309) 662-1230		ATTN: Teachers — Send us an order for sample issues of Worldradio, one for each of your students!			
Mar 19	Godfrey	KF9F (618) 466-2306	w/i OK				
Mar 19	Loves Park	Gene Melton (815) 874-6867					
Mar 24	Chicago	W9WBV (312) 929-6550					
Indiana							
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Skip Westrich, WB8OWM

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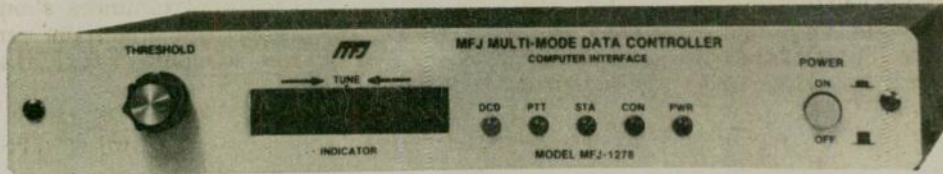
shack for telling the time in various countries throughout the world.

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Packet gives you the fastest and most reliable error-free communications of any amateur digital mode.

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Extensive tests published in *Packet Radio Magazine* ("HF Modem Performance Comparisons") prove the TAPR designed modem used in the MFJ-1278 gives better copy with proper DCD operation under all tested conditions than the other modems tested.

Hardware DCD gives you more QSOs because you get reliable carrier detection under busy, noisy or weak conditions.

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You can copy all shifts and all standard speeds including 170, 425 and 800 Hz shifts and speeds from 45 to 300

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A high performance modem lets you copy both mark and space for greatly improved copy under adverse conditions. It even tracks slightly drifting signals.

You can transmit both narrow and wide shifts. The wide shift is a standard 850 Hz shift with mark/space tones of 2125/2975 Hz. This lets you operate MARS and standard VHF FM RTTY.

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You can transmit and receive 7 bit ASCII using the same shifts and speeds as in the RTTY mode and using the same high performance modem. You also get Autostart and selectable "Diddle".

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The MFJ-1278 introduces you to the exciting world of slow scan TV.

You'll not only enjoy receiving pictures from thousands of SSTVs all-over-the-world but you can send your own pictures to them, too.

You can print slow scan TV pictures on any Epson graphics compatible printer. If you have an IBM PC or compatible you can print to screen in near real time or from disk with the MFJ-1284 Starter Pack.

You can transmit slow scan pictures right off disk -- there's no need to set up lights and a camera for a casual contact.

You can save slow scan pictures on disk from over-the-air QSOs if your terminal program lets you save ASCII files.

The MFJ-1278 transmits and receives 8.5, 12, 24, and 36 second black and white format SSTV pictures using two levels.

Contest Memory Keyer

Nothing beats the quick response of a memory keyer during a heated contest.

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You get lmbic operation with dot-dash memories, self-completing dots and dashes and jamproof spacing.

Message memories let you store contest RST, QTH, call, rig info -- everything you used to repeat over and over. You'll save precious time and work more QSOs.

You get automatic incrementing serial numbering. In a contest it can make the difference between winning and losing.

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Turn on your MFJ-1278 and it sets itself to match your computer baud rate. Select your operating mode and the correct modem is automatically selected.

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Brandt Dixon, Pack 493, Den 8, Duncanville, Texas (left) and Colin Sledge, KA5PZH, concentrate on a Jamboree on the Air contact at the JOTA station operated from BSA Camp Wisdom near Dallas, Texas. (K5ZCO photo)



Al Brinckerhoff, WB5PMR (left), explains Amateur Radio to Dustin and Aaron Brown, Pack 355, Duncanville, Texas at the Jamboree-on-the-Air station located at BSA Camp Wisdom near Dallas, Texas. (K5ZCO photo)

YAK's JOTA operation inspires Scouts

Dan Blackburn, K5ZCO

"CQ Jamboree! CQ Jamboree!" The words rang out loud and clear across the country and around the world on the weekend of October 17-18, 1987, as hundreds of thousands of Boy Scouts participated in the annual

Jamboree on the Air.

Young faces lit up with excitement as the voice of another youngster came across the airwaves, and the two exchanged name, rank, scout troop information, and often traded addresses for further contact.

Talking on all bands and all modes—even satellite, packet and ATV—many scouts and scouters, with the help of interested hams, experienced Amateur Radio for the first time. Many decided that Amateur Radio was for them and made plans to start work on the radio merit badge and an Amateur Radio license.

This was the 30th year for the Jamboree on the Air, which was established at the Jubilee Jamboree in Sutton Coldfield, England. Interest has increased every year, and this year some 300,000 participants in more than 100 countries made this event the largest gathering of scouts and radio amateurs in the world.

In Dallas, Texas, over 100 Cub Scouts, Boy and Girl Scouts, Explorers and their leaders were guests of YAK (Young Amateur Klub) all day Saturday the 17th. The group set up four stations at Boy Scout Camp Wisdom, located in the southern part of Dallas County.

As scouts arrived, they were given a very brief introduction to Amateur Radio, and then saw the 28-minute videotape. *The New World of Amateur Radio*. After the tape the excitement about the hobby was so strong that



Trent Stone, Pack 493, Den 6, Duncanville, Texas, enjoys a Jamboree on the Air contact with K2BSA, BSA HQ Amateur Radio station. (K5ZCO photo)

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the scouts could hardly wait to get on the air. Each had an opportunity to talk as long as he or she wanted to, and some stayed several hours, fascinated with the hobby. Many of the dads seemed just as excited as the scouts!

Among the stations contacted was K2BSA, the Amateur Radio station sponsored by the National Headquarters of the Boy Scouts of America. Amateurs helping with the YAK Jamboree project were: Colin Sledge, KA5PZH; Ron Bookman, KA5HTU; Paul Newman, KA5TYW; Carl McCartney, WD5DDB; Al Brinckerhoff, WB5PMR; KB5EHS; Paul Monda, N5FOO; and M. Daniel Blackburn, K5ZCO. □



Harold Bouse, WD9HPZ, Robert Lehtonen, KA9MUY, and Explorer Scouts from Post 424 of Kenosha, Wisconsin, participated in the 1987 Jamboree on the Air from Camp ODAKDTA near Burlington. Scouts from southeastern Wisconsin talked to scouts all over the world, including Ship 96 of Florida and Troup #1 of Calgary, Alberta, Canada. Pictured left to right are Dean Eckart, Lehtonen and Randy Rugg.

K2BSA does well during JOTA

The staff of K2BSA—the national Boy Scouts of America Headquarters Amateur Radio station—held one of its most successful Jamborees on the Air, October 17-18, according to W.W. Dansby, W5URI, trustee of K2BSA.

"We were able to contact 41 states and Puerto Rico, plus an additional 19 countries," Dansby said after totaling up the log reports, representing more than 250 QSO's. As of November 25, Dansby said he had had more than 350 requests for JOTA contact cards, representing more than 24,000 contacts between scouts throughout the world.

The 16 operators who worked the four operating positions at the K2BSA station—located at the home QTH of Donald Simmonds, K5BDX, of Springtown, Texas northwest of Fort Worth—were able to contact stations in Antarctica, Andaman Island, Saipan, Japan, Cape Verde Islands, Barbados, the U.S. Navy base at Guantanamo Bay, Cuba, Nigeria, Spain, Australia and New Zealand, Dansby said.

Operation was conducted on 10/15/20/40M SSB, 2M FM, plus VHF and HF packet. □

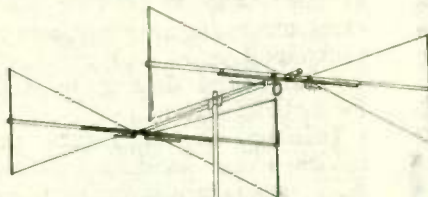
Ohio radio classes

The OH-KY-IN Amateur Radio Society is once again offering Amateur Radio classes beginning Thursday, February 11. Classes — Novice through Extra — will last 10 weeks. These classes will be held weekly at the Price Hill Baptist Church at 4431 Glenway Avenue in Price Hill.

For more information or to sign up, call Bruce Vanselow, N8FWA, at (513) 251-1555. □

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K1PZU: familiar voice to many

"WORLD RADIO ON CASSETTES..." These are familiar words to those who read Worldradio's classified ad section, The Mart, with any regularity. The ad is for cassettes of Worldradio, available to blind amateurs.

For many years, George Hickin, W4GH, was the distributor of these tapes, although the voice on the tapes has always belonged to Father Tom Carten, K1PZU, of King's College in Wilkes-Barre, Pennsylvania. Father Tom is now distributor for the tapes.

The ad first ran in Worldradio in December 1977, three years after Father Carten started reading the Sunday edition of a local newspaper (*Citizens' Voice*) over the air.

Following are excerpts from an article run in the *Citizens' Voice*, September 1, 1986, entitled "12 years of reading to those who cannot."

On a Monday morning in 1974 at WRKC, the King's College FM radio station, an announcer turned on a microphone and welcomed the listeners to a new program which would be broadcast specifically for the blind and visually impaired of the area.



Father Tom Carten, K1PZU (left), and Dave Simms make some adjustments before going on the air with "The Radio Home Visitor," a program that provides the daily newspaper to the blind and visually impaired.

The type of service which began that day was so new that no one really knew what to expect, least of all its creator/producer. He was a student named Tom Carten who had done work with the blind and saw an article about a station which provided the Sunday newspaper over the air.

He's ordained now, back at King's in Campus Ministry for seven years and the program itself, "The Radio Home Visitor," is celebrating 12 years of daily service, providing the newspaper and its distinctly local content to those unable to read it for themselves.

"Hardly anyone in the country was doing this kind of thing," he said recently. "A very few stations were providing it but you needed a special receiver to pick it up. I felt that with the high percentage of elderly in this area, we would have a lot of people who could

see, but not well enough to go through the paper every day. So we tried it — with the assumption that if it could keep going for the first two weeks, it would run forever."

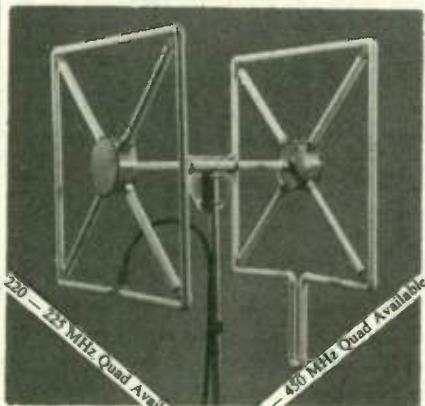
Forever is a long time but 12 years of service is at least a start. It has become a morning tradition for thousands of persons who have limited vision and was one of the original handful of stations which helped the Corporation for Public Broadcasting (CPB) outline what was a "radio reading service."

"CPB was pretty excited when we told them we were main-channel (no special receivers needed) and seven days a week," Father Tom explained. "Even though the first service began five years before us, in Minnesota, the idea was still evolving, and the dozen or so of us on the air at the time were able to help define, or describe, what this thing was that we had created."

The idea of reading the newspaper for visually impaired persons is simple enough, but no one thought of it because the local content of the daily paper is taken for granted. What most persons do not realize is the great influence newspapers have in their lives. The items available only there are important to how we live: obituaries, letters to the editor (a good sense of what issues are), local columnists and many other features help persons feel at home in a community. Take these away and we are isolated; imagine returning from a very long vacation and having to catch up on what has happened.

(please turn to page 18)

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A standard 50 Ohm SO-239 connector is recessed within the base sleeve (fully weather protected). With the IsoPole you will not experience aggravating deviation in SWR with changes in weather. The impedance matching network is weather sealed and designed for maximum legal power. The aerodynamic cones are the only appreciable wind load and are attached directly to the support (a standard TV mast which is not supplied).



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The Hot Rod antenna can be expected to make the same improvement to hand-held communications that the IsoPole antennas have made to base station operation. **Achieve 1 or 2 db gain** over ANY 5/8 wave two meter telescopic antenna. The factory tuned HR-1 is 20% shorter, lighter and places far less stress on your hand-held connector and case. It will easily handle over 25 watts of power, making it an excellent emergency base or mobile antenna. In the collapsed position, the Hot Rod antenna will perform like a helical quarter wave. Three Hot Rods are available; HR-1 1/2 wave 2M Ant., HR-2 for 220 Mhz, and HR-4 for 440 Mhz. Amateur Net Price on all Hot Rods is \$19.95.

For either base station or hand-held operation AEA has the perfect VHF/UHF antenna. Put more punch in your Packet station with an AEA IsoPole or Hot Rod antenna. To order your new antenna contact your favorite Amateur Radio Distributor. For more information contact Advanced Electronic Applications, P.O. Box C-2160, Lynnwood, WA 98036, or call 206-775-7373.

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Model	135-160	210-230	415-465
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2.1 VSWR bandwidth	1 kw	1 kw	1 kw
Power Rating	3 dbd	3 dbd	3 dbd
Gain**	125.5" (3.2m)	79.25" (2m)	46" (1.2m)
Radiating Element Length	\$49.95	\$49.95	\$69.95
Amateur Net Price			

**dbd — db gain over a dipole in free space

Prices and Specifications subject to change without notice or obligation.

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K1PZU

(continued from page 16)

"The Radio Home Visitor" is broadcast daily, a one-hour program which is played twice: 10-11 a.m. and 11 to noon. WRKC is at 88.5 on the FM dial. The program is low-keyed, easy-to-take, and definitely informal, while still professional. Although out-of-town students may not be familiar with local color, they learn quickly how to handle local names.

"We're not the NBC Nightly News," Father Tom says, "and we don't try to be so correct that we become stiff. We are friends reading to our neighbors and there will always be that sense of having dropped by to look over what may be interesting. If we were a high-powered news operation, the listeners would feel they were having the newspaper shoved

in their faces; we sit and chat with them."

The program's expenses are underwritten by the Lions Regional Eyebank, and it is done in cooperation with the Wilkes-Barre Branch of the Pennsylvania Association for the Blind. A lot of the help, of course, comes from the

students at the college and members of the radio station.

You might think that after 12 years of the same format, the program would become stale. But somehow, the interest always is there. Readers have come and gone, sometimes to return to the air when visiting Wilkes-Barre. □

Volunteers needed

1989 Winter Special Olympics

The world will focus on the Reno/Lake Tahoe area as the 4th International Winter Special Olympics are held April 1-8, 1989.

This spectacular event is shaping up to be one of the largest amateur athletic events ever held in the Reno, Nevada and Lake Tahoe, California areas. Expected are 1,400 athletes with mental retardation from all 50 United States and over 30 countries from around the world.

Special Olympics, the world's largest program of year-round sports training and competition for children and adults with mental retardation, serves more than 1 million athletes in the United States and over 70 countries. International Games are held every two years, alternating between winter and summer.

Communications are being organized by members of the Truckee Meadows Amateur Radio Association. Communications Director Timothy R. Melarkey, WA7MOF, along with Chief of Communications Operations Michael J. Butler, WA7RPS, is developing a communications plan to tie together Reno, Squaw Valley and Royal Gorge, the main competition sites for the International Winter Special Olympics Games.

These areas are separated by the Sierra Nevada Mountains, with snow-covered peaks reaching over 10,500 feet. Most modes of communications will be utilized. Operators from Nevada and California radio clubs will be participating.

Ski Incline in Incline, Nevada will be the host for the 1988 Nevada State Winter Special Olympics Games. Combined California and Nevada Winter Games will be held early in 1989 prior to the International Winter

Games. These games will provide an opportunity for the athletes as well as communicators to sharpen their skills.

If you will be in the Reno area during February 1988, early in 1989 or in April 1989 and wish to participate in communications or wish to see the communications control center, contact Tim, WA7MOF, or Mike, WA7RPS, on 443.025/r, 145.730/s or 223.760/r.

The dedication and communication skills shown by participating amateurs will confirm to the world the many benefits of Amateur Radio. □

Alcatraz Triathlon

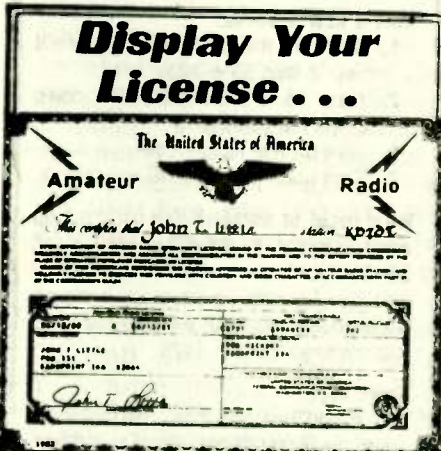
Robert Jenkins, KA6BQF

On August 16, radio amateurs from the Amateur Communications Society and the Marin ARC provided communications for 145 participants in the Alcatraz Challenge Triathlon. They used the ACS repeater facilities on 147.33 MHz, with simplex operation from the more difficult locations.

The race course consists of a swim from Alcatraz Island in San Francisco Bay, to the San Francisco's Aquatic Park; bicycling from Aquatic Park, through San Francisco, across the Golden Gate Bridge, and into Marin County to Old Mill Park in Mill Valley; and running over the Dipsea Trail to Stinson Beach and back to Mill Valley.

Amateur operators manned aid stations and checkpoints, providing safety communications and logistical support for the race officials beginning at 6:30 a.m. and continuing until the last contestant finished at 3 p.m. There were few injuries requiring attention, and fortunately none were serious.

Participating were Dick (K6LRN) and Carolyn (WB6TKD) Wilson; Claude Earwood, WA6MHO; Jan Harvey, WA6MGK; Nigel Lemaire, WA6MSE; Nels Lecklikner, N6AQY; Mac MacCubbin, WB6EFY; Chuck Beasley, WA6UBX; Paul Niederberger, N6MQN; Randy Jenkins, KA6BQF; Len Spencer, WA6CBQ, and XYL. □



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Donations needed

The local chapter of the HANDI-HAMS organization is trying to develop a pool of funds to be used to purchase VHF and HF equipment which will be loaned out for as long as necessary to new HANDI-HAMS in our area.

VHF equipment was recently purchased and presented to a disabled YL who is currently studying for her license in the Weymouth, Massachusetts area. Donations given for this cause would be used to pay off that equipment, and the remaining funds would be put toward other equipment for future HANDI-HAMS whom we hope to help get involved in this wonderful hobby.

Donations of working used VHF and HF equipment would also be welcomed. Whatever you can donate toward this cause will be greatly appreciated. Checks may be made payable and sent to: Towne Conover, HANDI-HAMS, 203 Main St., Acton, MA. 01720.

We are also trying to establish an ongoing list of volunteer HANDI-HAMS helpers for the greater Boston area. These folks would become "Elmers" to disabled individuals in their specific area who are interested in obtaining their ham licenses.

So if you think you would like to get involved and be a teacher of CW/theory, or if you could do some of the physical work of setting up equipment/antennas, or perhaps be on the VEC team which administers exams to the HANDI-HAMS, let us know. For more info, contact: Towne, W1QLT, (617) 623-8742 or Kathy Pate, KA1IYR, (617) 785-1801.
— Wellesley ARC, MA

QSO's and roses

Lenore Jensen, W6NAZ

Of all the unusual operating positions amateurs have found themselves in over the years, "Pete" Hoover, W6ZH, may have set a record for a unique situation on New Year's Day during the Rose Parade in Pasadena. He was operating the ham bands from inside the float of the International Red Cross.

Bouncing along famed Colorado Boulevard on a chair hidden from sight, the grandson of President Herbert Hoover made about 200 QSO's, using a Corsair Ten-Tec rig for 20, 15 and 10, and ICOMs on 2M and 220 MHz.

The antenna system had been designed by Terry Slach, WU6N, partly incorporating the steel stanchions

and other parts of the float itself.

The float, titled "Images of Hope," depicted the good work of volunteers via nine flat aluminum satellite plates that formed pictures as they revolved. (See photo on page 23, January Worldradio.)

Pete has been an enthusiastic volunteer since his Navy days, 1945 to 1947. Later he became chairman of the Pasadena Red Cross and some time later served six years on the national board of governors of the American Red Cross. He and his wife, Meredith, have often flown to disaster areas to set up shelters.

One of the messages from the traveling float was sent, via Paul Gordon, N6LL, to the president of the American Red Cross — Richard F. Schubert — extending greetings. In turn, the president sent messages to his counterparts around the world, at other Red Cross societies, saying, "May the spirit of hope that the Red Cross generates throughout the world flourish as we celebrate our 125th anniversary."

Herbert Hoover III has set about answering QSL's with the specially designed card confirming the unusual contacts with W6KA, the call letters of the Pasadena ARC, which gladly lent them to the day's operation.

Since the theme of the two-hour 99th annual Rose Parade was "Thanks to Communication," it was appropriate that Amateur Radio — which has frequently served the American Red Cross — was so involved.

A smile is contagious

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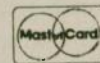
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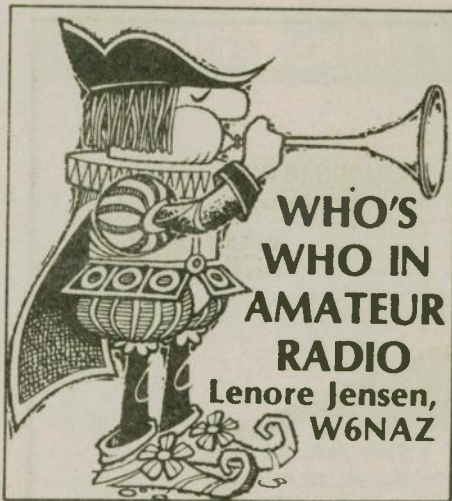
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A 12-year-old rode his bike up to a car sporting a ham license plate, asking, "Could you give me a Novice test?" The driver could. Today, the boy has become a Commissioner of the Los Angeles County Superior Court. He's Mark A. Weiss, K6FG, with an interesting career.

The Novice ticket was traded in for a General in 1956, with an Extra Class to follow. Amateur Radio led him to earn a B.S. in Electrical Engineering at UC Berkeley. He added commercial tickets: Radiotelephone First and Second Radiotelegraph plus radar endorsement.

You'd think that was enough, but after completing his electrical degree, Mark decided to go for one in law at UCLA, which he earned in 1967. "Just as engineering requires 'detective work' in solving problems, so does law." The intellectual challenges, to Mark, were exciting and have proved rewarding.

After several years as a County Public Defender, he went into private law practice — fortunately dealing in a wide range of cases. This would prove highly valuable later. Eventually he also served part-time as a Court Referee.

Meanwhile, he budgeted his time to allow ample hours for chasing DX. "I got DXCC and now have about 200 countries — no big deal, of course, but I do enjoy it. Also, in traveling, I've been able to meet hams in England, Israel, Italy and Hong Kong, operating in some of the countries. I'd like to

visit others, of course."

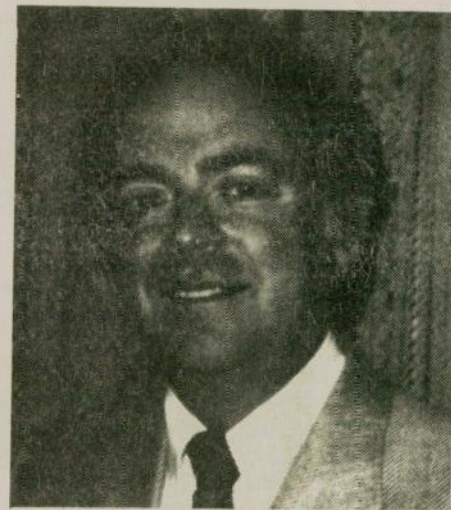
A couple of years ago, Mark took competitive written and oral exams as a candidate for the position of Commissioner. One hundred and fifty others also tried, the race narrowing down to 12. "I was very pleased to be one of those accepted by the Court Judges. A Commissioner has the full responsibility of a judge, pursuant to agreement of the parties involved. At present," explains Mark, "I serve in San Fernando which services a large part of the huge Los Angeles County population."

Mark has presided in civil, criminal, family law, juvenile and mental health cases. At present, he is assigned to the Family Law department.

Is it difficult to make decisions? "Well, when a case is 'on the fence,' it's both challenging and rewarding. I go into chambers, review all the facts, relax a bit, and the decision usually becomes evident."

In those chambers he maintains two computers "which help a lot." One has a very sophisticated spreadsheet program which assists in determining income, tax and support information.

Has his engineering background been of value during a case? "Oh, yes. Several times I have realized I probably know more about the technical



Mark Weiss, K6FG

aspects of a case than the lawyers. Naturally it helps."

He is a member of the Technology Committee for the California Judges Association and is on the Los Angeles Superior Court's ad hoc Committee on Automation.

His position has made possible certain side advantages, like being invited to participate in LAPD work on certain helicopter assignments.

At home, he even has a 450 MHz repeater "temporarily (6½ years!) residing;" he also helps maintain a mountain top system on 6M.

As a volunteer in hamdom, he's worked with the March of Dimes, the City and County Fire Departments, Red Cross, Salvation Army and Ham-watch groups.

Mark and his wife, Chris, live in the western side of the San Fernando Valley. She's with a stockbroker firm.

Not neglecting his years of engineering study, Mark keeps up on developments by regularly reading the IEEE Spectrum. A true Amateur Radio operator, he loves building and upgrading equipment and often uses it on CW.

So, should you QSO K6FG, there are a number of subjects you might bring up! □

Attention: teachers and students

Teachers and students interested in talking to other teachers and students via Amateur Radio, please contact Karen Henderson, KB6DDQ, at P.O. Box 925, Frazier Park, CA 93225. □

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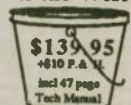
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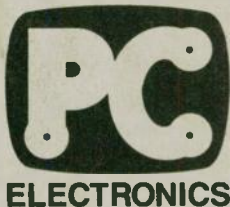
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Any Tech class or higher amateur can get on ATV. If you have a camera you used with a VCR or SSTV & a TV set, your cost will just be the TC70 and antenna system. If you are working the AMSAT satellites you can use the same 70cm antennas on ATV.

DX with TC70-1s and KLM 440-27 antennas line of sight and snow free is about 22 miles, 7 miles with the 440-6 normally used for portable uses like parades, races, search & rescue, damage assessment, etc. For greater DX or punching thru obstacles: 15 watt p.e.p. Mirage D15N or 50 watt p.e.p. D24N or D1010N-ATV.

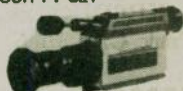
The TC70-1 has full bandwidth for color, sound, like broadcast. You can show the shack, home video tapes, computer programs, repeat SSTV, weather radar, or even Space Shuttle video if you have a home satellite receiver. See the *ARRL Handbook* chapt. 20 & 7 for more info & *Repeater Directory* for local ATV repeaters.

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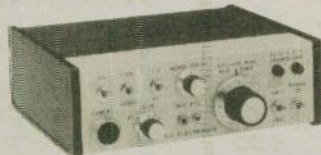
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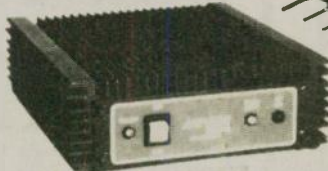
YOUR TV SET



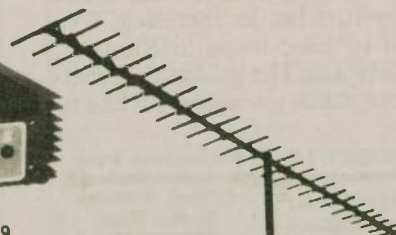
YOUR HOMETV CAMERA



TC70-1...\$299
 ATV Transceiver



Mirage D15N.....\$119
 (optional) 15 watts RF out.
 Mirage D24N.....\$219
 (optional) 50 watts RF out.



KLM 440-27 14dbd \$107
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Silent Keys



Poster showing Bill, W7PHO

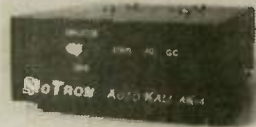
Bill Bennett, W7PHO

On the morning of December 23, 1987, we lost a very dear man and famous worldwide DXer. He was the leader in DXCC numbers and in helping others work the globe. That gentleman was Bill Bennett, W7PHO, of Seattle, Washington. He often used the phonetics of "Pot Hangs Over."

W7PHO often helped the 100W-with-a-dipole group work DX on his daily Family Hour, which was 14.225, and also helped the 10K 150' tower owners. He could get gruff at times with others' mistakes, but had a heart of gold and was usually right with his quick decisions.

Ten years ago, Bill and a couple of other hams, including our then Northwestern Director, put pressure on ARRL to make up an outbound QSL bureau; it is used considerably today.

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AK-4C (Complete unit in metal enclosure with in/out jacks, built-in speaker etc.) \$139.95

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Bill had friends around the world which he visited from time to time — and they visited him and his wife, Ruth. Bill was also active in forming our Northwest Shrine ARC. He did much toward obtaining ham gear for Shrine Hospitals in Portland, Oregon and Spokane, Washington. If they needed coax cable, he would tell us, "Just be a little patient — I have a friend in the cable business and you'll get what you need shortly."

PHO was very active for years with Rotary. Christmas 1986, his group took 75 youngsters who were cold and hungry to an event at Sears Company to get warm clothes, shoes and food treats.

A few years ago, Bill started what came to be known as the "cap fund." He and some of the loyal 225'ers would send caps to European amateurs who regularly checked in, and also hams in Asia, Africa and other countries around the world. Each cap would be emblazoned with the ham's call. The story went that one ham was so proud of his cap that he would wear it to bed.

ARRL has set up a foundation under Bill Bennett's name for annual scholarships to further international studies for deserving youngsters. — Gene Tomlinson, KD7NO □

Frank Uhrus, W9AYP

The keys of Frank L. Uhrus, W9AYP, were silenced on March 26, 1987, when Uhrus suffered a cardiac arrest.

Frank was licensed on January 18, 1926, during the spark gap days. Herbert Hoover was still Secretary of Commerce. W9AYP was not very active on the air during his last three years, says his XYL, Linda, "but how he enjoyed listening." Formerly employed by Motorola, Inc., Frank spent the last 10 years with Zenith Corporation. — Linda M. Uhrus □

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DAYTON

Hamvention

April 29, 30, May 1, 1988

Early Reservation Information

- Giant 3 day flea market • Exhibits
- License exams • Free bus service
- CW proficiency test • Door prizes

Flea market tickets and grand banquet tickets are limited. Place your reservations early, please.

Flea Market Tickets

A maximum of 3 spaces per person (non-transferable). Tickets (valid all 3 days) will be sold IN ADVANCE ONLY. No spaces sold at gate. Vendors MUST order registration ticket when ordering flea market spaces.

Special Awards

Nominations are requested for 'Radio Amateur of the Year', 'Special Achievement' and 'Technical Achievement' awards. Contact: Hamvention Awards Chairman, Box 964, Dayton, OH 45401.

License Exams

Novice thru Extra exams scheduled Saturday and Sunday by appointment only. Send FCC form 610 (Aug. 1985 or later) - with requested elements indicated at top of form, copy of present license and check for \$4.35 (payable to ARRL/VEC) to: Exam Registration, 8830 Windbluff Point, Dayton, OH 45458

Hamvention Video

VHS video presentation about the HAMVENTION is available for loan. Contact Dick Miller, 2853 La Cresta, Beavercreek, OH 45324

1988 Deadlines

- Award Nominations: March 15
- Lodging: April 2
- License Exams: March 26
- Advance Registration and banquet:
 - USA - April 4
 - Canada - March 31
- Flea Market Space:
 - Orders will not be processed before January 1

Information

- General Information: (513) 433-7720
or, Box 2205, Dayton, OH 45401
- Flea Market Information: (513) 898-8871
- Lodging Information: (513) 223-2612
(No Reservations By Phone)

Lodging

Reservations received after Housing Bureau room blocks are filled will be returned along with a list of hotel/motels located in the surrounding areas of Dayton. The reservation will then become the responsibility of the individual.

HAMVENTION is sponsored by the Dayton Amateur Radio Association Inc.

Lodging Reservation Form

Dayton Hamvention - April 29, 30, May 1, 1988
Reservation Deadline - April 2, 1988

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Arrival Date _____
() Before 6 pm () After 6 pm

Departure Date _____

Rooms: [] Single () Double (1 bed, 2 persons)
[] Double Double (2 beds, 2 persons)

PLEASE SEPARATE

Deposit required - Room deposit must be paid directly to the hotel or motel by date shown on the confirmation form sent to you. Use canceled check for confirmation.

Advance Registration Form

Dayton Hamvention 1988
Reservation Deadline - USA-April 4, Canada-March 31

Name _____

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City _____ State _____ Zip _____

	How Many		
Admission	_____	@ \$8.00*	\$ _____
(valid all 3 days)			
Grand Banquet	_____	@ \$16.00**	\$ _____
Women's Luncheon	_____		
(Saturday)	_____	@ \$6.75	\$ _____
(Sunday)	_____	@ \$6.75	\$ _____
Flea Market	_____	\$23/1 space	
(Max. 3 spaces)	_____	\$50/2 adjacent	
Admission ticket must	_____	\$150/3 adjacent	\$ _____
be ordered with flea market tickets		Total	\$ _____

* \$10.00 at door ** \$18.00 at door, if available.

Mail to - Lodging, Dayton Hamvention, 1880 Kettering Tower, Dayton, OH 45423-1880

Make checks payable and mail S.A.S.E. to - Dayton Hamvention, Box 2205, Dayton, OH 45401



Viet-Nam radio

I am researching radio in Viet-Nam during the war, and I would like to contact other amateurs through Worldradio. I'm interested in hearing from readers about their experiences regarding AFVR, clandestine, military, ham and Hanoi Hanna. Please write to:

MARK TATTENBAUM,
KA2VYW
74 Elm Street
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More tubes!

We noticed the vacuum tubes article on page 3 of your November 1987 issue. We have a similar item for the Lockheed Employees Recreation Center/ARC - W6LS. We have in excess of 10,000 tubes on hand, including some transmitter tubes.

We charge \$1 each for receiver tubes and \$5 each for transmitter tubes, which covers packing and shipping charges. We cannot guarantee tubes being in operating condition when they are received, but we pack them suitably for shipment. We've conducted this service for about 20 years.

BILL WELSH, W6LS
Burbank, California

450 MHz closed?

I recently received an edition of the SCRBA (Southern California Remote Base Association) newsletter, containing an article declaring that the 450 MHz amateur band is closed, at least in Southern California. My first thought was that the FCC, by some devious action, had closed the band.

Upon reading further, I discovered that was not the case at all; rather, the

amateur operators themselves had closed the band. Apparently the amateur operators currently using the band have formed a committee. They've decided for themselves that enough users were already present in the band and that no others would be allowed.

To give some measure of credibility, this self-appointed group calls itself a frequency coordination committee and then proceeds to allocate for itself portions of the Amateur Radio spectrum for their private use.

Wow, if only we had thought of that years ago, we could have formed a committee to allocate frequencies in the 20 and 40M band and then, once all the frequencies were assigned to those first few privileged users, we would have closed the band and eliminated all this congestion we now experience. Then by invitation, we would ask other amateurs whom we happen to approve to share our frequency.

Naturally we would allow those amateurs with several interconnected transceivers to have for themselves as many frequencies as they need. To hell with everybody else; we were there first!

As absurd as this scenario sounds, this is exactly what's happening in the

present 450 MHz amateur band.

It seems that if you were fortunate enough to establish yourself on the 450 MHz band years ago, you automatically obtained some special right to a frequency or, more probably, several frequencies for your exclusive use — and, of course, for the use of those with whom you are inclined to invite to share the use of your frequencies. The fact is, the channels are only saturated on paper. By simply monitoring the 450 MHz with a conventional radio scanner, it becomes apparent that there is very little real activity on the 450 MHz amateur band.

Now I certainly find no fault with someone who wishes to restrict the use of their equipment, network or whatever, from use by just anyone who comes along. I'm not personally inclined to let just anyone operate my personal equipment either. I do, however, find fault with any reasoning that somehow grants any amateur the exclusive right to a frequency, just because he happens to have equipment located on some mountain that happens to have crystals installed for that frequency.

This abusive use of spectrum rightly exposes the amateur community to further spectrum raids by the com-

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mercial land mobile community, and perhaps others, with good cause. The channel loading on these "private" frequencies is only a fraction of the loading experienced in the business and public safety spectrum in the same region. The public safety licensees in Southern California don't even enjoy the level of interference protection enjoyed by the self-appointed "coordinators" and users of the 450 MHz amateur band.

I certainly find no fault with an amateur, or group of amateurs, who want to install a private repeater or network. I simply submit that they have no right to hold a specific frequency in reserve until they decide to control something to talk on it, beyond the customary rules that apply to the use of amateur frequencies. In other words, when they stop using

the frequency, it immediately becomes available to any licensed amateur wishing to use it.

This doesn't mean that sophisticated remote control stations and networks must be abandoned; it simply means the frequency becomes available to anyone wishing to use it when it becomes idle. Commercial radio operators have been sharing frequencies for years. How does this elite group of 450 MHz amateur operators reason that they don't have to share?

Naturally, I would welcome any rebuttals or favorable comments on this point of view.

RICHARD L. MILLER, KJ6W
Past National President
Associated Public Safety
Communications Officers, Inc.
P.O. Box 1146
Palmdale, CA 93550

Stress the positive

For some time we have been hearing anguished cries of alarm from Wayne Green and others, who wail that Amateur Radio is in a tailspin, suffering from a dearth of newcomers to our ranks, and well on the way to extinction.

Seems it ain't so, from the figures turned up by the ARRL (page 13, October 1987, *QST*). From the U.S. Bureau of the Census and the FCC

come these figures:

While the U.S. population has nearly doubled since 1930, the number of licensed radio amateurs now is almost 22 times larger than it was at the beginning of that period. In 1930, one out of every 6,500 people was a ham; as of 1984, one out of every 580 people was a ham. Out of an estimated total U.S. population of 237 million today, the ham population now exceeds 430,000.

Wayne Green frequently sneers at

what he considers doddering old-timers (he is almost one of them himself, now), saying that they just sit around throwing wet blankets on state-of-the-art "progress." Well, let us look back at what some of those old-timers did in the good old days.

In the mid-1920's, Fred Schnell (now deceased) — Traffic Manager of the ARRL — was invited by the U.S. Navy to bring his 100M ham equipment aboard a battleship for a trip to Australia and back.

Fred's gear out-performed the Navy's huge arc rockcrushers. This led to prompt abandonment of that gear and installation of high-frequency equipment. Also, the Navy lost no time in enlisting amateurs into its reserve force — a practice which continues to this day.

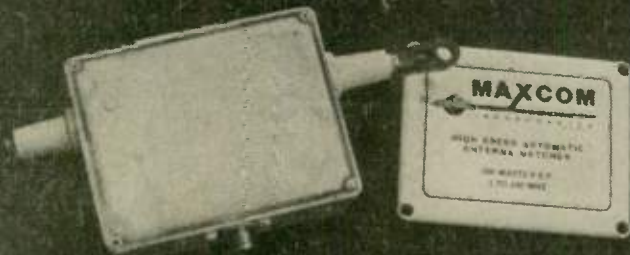
It would be interesting to find out just what is the rate of participation of hams going into the communications industry. Wayne thinks it is too low; he cites the ascendancy of Japanese-made amateur equipment as proof. But maybe there are other factors, such as the more positive worker/employer relationship in Japan. And I wonder if Wayne is not blind-sided by his concern of getting more advertising for his *73 Magazine*.

At any rate, we now know that the number of hams has been and still is on the increase in the United States. Also it's evident that now, as in the 1920's, hams are finding ways to improve the art of communication. Witness the development by hams of 2M repeater operation, including the recent establishment of linkages between separate repeater areas; the upsurge of fast newsgathering and dissemination by the *Westlink* bulletins, *W5YI Report*, etc.; the marriage of computers and Amateur Radio into packet radio; and the constant striving for exotic ham contacts by satellite, moonbounce, meteor burst and other phenomena.

Maybe it is not very smart to go around crying "Wolf!" and yelling that the sky is falling down. The chimera of nose-diving ham numbers just isn't there. Let us instead eliminate such negative reactions, and accentuate the positive.

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The Ham Hut-Amarillo, TX
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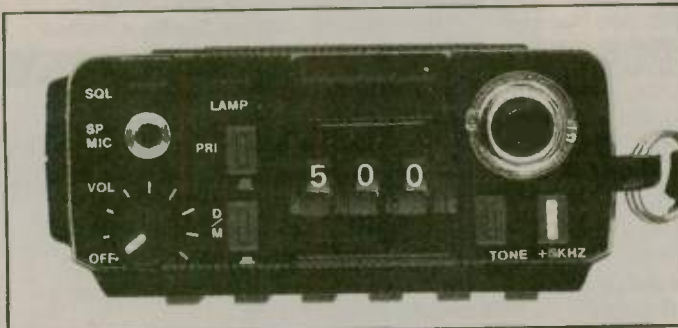


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STATION APPEARANCE

MARCH WINNER
Richard Imbordino, KS9V

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



Winner for this month is Richard Imbordino, KS9V, of Lombard, Illinois. His station description follows:

"The console is homebrew and is in a semi-"U" shape for easy equipment access. The interior of the console has a built-in ground system and whisper for cooling system. The switch on the electrical outlet controls the fans.

"Equipment includes: (left module) ICOM IC-730, PS-15 power supply with 12V outlet in front of console, Sony 9" TV used as a monitor; Commodore VIC 20 for RTTY use, AEA CP-1 interface, Midland 13-510 for 2M and Yaesu speaker; (center module) Yaesu FT-980; Yaesu SP-980 speaker/patch; UTC clock (24-hour), local time clock, MFJ electronic keyer, Yaesu desk microphone and Bencher key; (right module) Kenwood SW 2000 SWR/power meter, CDE antenna rotor control, Yaesu speaker/patch, Yaesu YO-100 scope, Yaesu FL-2100 amplifier and Heathkit SWR/power meter for ICOM low-band radio.

"Antenna system includes: Hy-Gain TH6DXX at 60', Tri-X LM 354 crank-up tower (motorized), Cushcraft 2M beam up 70', Hustler 4BTV trap vertical, and an assortment of dipoles for 40/80/160M."

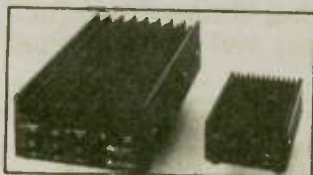
A clue to Imbordino's profession (firefighting) can be seen on top of the console and on his QSL cards. □

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AWARDS

DARA scholarships

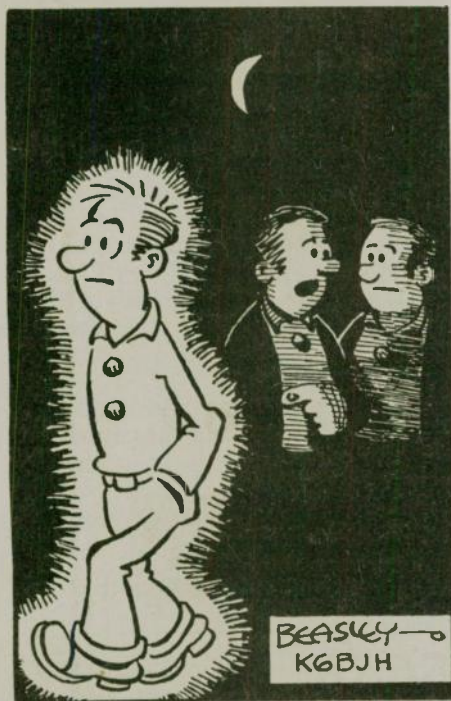
The Dayton Amateur Radio Association (DARA) is now accepting applications for its 1988 Scholarship Program, reports Robert R. McKay, N8ADA, DARA Scholarship Committee Chairman. The program is open to any licensed amateur graduating from high school in 1988.

Awards will be based on a combination of financial need and academic accomplishment with consideration given for service to Amateur Radio and community involvement.

There are no restrictions on the students' course of study. Applicants are not restricted to those preparing to pursue four-year baccalaureate degrees. Those working toward associate degrees or planning to attend an accredited technical institution will also be considered.

Each winner will receive \$1,000 toward their tuition at the school of their choice. All entries must be post-marked no later than May 15, 1988. Award winners will be announced on or about June 1, 1988.

For information and application forms, write to: Scholarship Committee, 317 Ernst Ave., Dayton, OH 45405. □



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Have the listed QSL's verified by two Technician Class or higher licensees, and send the application to the CQ Novice Century Club Manager, c/o CQ Magazine, 76 No. Broadway, Hicksville, NY 11801. There is no application fee. That's all there is to it.

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ARC scholarships

The Atlanta Radio Club announced that it will have up to two \$1,000 scholarships available for young hams this year.

In addition to being licensed amateurs, successful applicants must be high school seniors graduating in 1988 and entering an accredited college or university as freshmen for the first time.

Candidates will be judged on their high school grades, Amateur Radio achievements and citizenship/leadership qualities. Residents of Georgia and its contiguous states will be given extra consideration.

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The 1988/89 officers of the Young Ladies' Radio League are:

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Activities Calendar

- 13-14 Feb VERON PACC Dutch Contest
- 13-14 Feb RSGB First 1.8 MHz Contest (CW)
- 13-14 Feb SRJ Yugoslavian DX Contest (CW)
- 20-21 Feb RSGB 7.0 MHz Contest (CW)
- 20-21 Feb ARRL Int'l DX Contest (CW)
- 27-28 Feb UBA/REF French Contest (SSB)
- 05-06 Mar ARRL Int'l DX Contest (SSB)
- 26-27 Mar CQ World-Wide WPX Contest (SSB)
- 02-03 Apr PZK SP DX Contest (CW)
- 23-24 Apr USKA Helvetia H-26 Contest

Baker and Howland Islands (KH1)

DX News Sheet reports that the latest word from Jim Smith, VK9NS, is that he has received final permission to operate from these islands. The operating period will be two to three weeks during March. Plans call for the main station to be set up on Howland Island, with the possibility of a shorter operation from Baker Island.

Financial assistance is needed, as in all these DXpeditions. Most likely you can contribute through your favorite DX foundation, or send your help direct to Jim at P.O. Box 90, Norfolk Island, AUSTRALIA 2899.

Aruba (P4)

The ARRL Awards Committee accepted the recommendation by the DX Advisory Committee that Aruba

be added to the DXCC Countries List. The new listing has Aruba separate from the Netherlands Antilles listing per Point 1 of the DXCC rules of Country Criteria. All contacts made since January 1, 1986 will count.

Do not submit any Aruba cards for credit prior to April 1. When doing so please submit with your Aruba card any card confirming a contact with Curacao or Bonaire if you already have credit for Netherlands Antilles. If your Netherlands Antilles credit was for a contact made before January 1, 1986, you can submit that one regardless which island was contacted.

This should be like fishing in a barrel for all DXers, especially those who frequent the DX contests. There always seems to be an Aruba station in these tests. Check your past contests logs; you may have an Aruba QSO that needs a confirmation!

Fernando de Noronha (PY0F)

The Long Island DX Bulletin reports that PY0FNI should have left the island by now after much activity on 40M. However, PY0FF is a permanent resident and plans to check into the W7PHO Family Hour on 3.780 MHz from 0300 UTC often.

PY0FF, who was formerly PY7CW, has been fairly active on 40M, both CW and SSB. Look for this one between 7.003 and 7.015 MHz from 0300 UTC and on SSB near 7.075 MHz around 0400 UTC. 20M activity includes various spots 14.005 MHz at 0100 UTC, 14.162 MHz at 0130 UTC and 14.236 MHz at 2345 UTC.

Turkey (TA)

Many stations from this one have been reported, although not much activity from any particular one of them. 40M seems to be a favorite band for several of them, as we have for the following:

TA1L	7.001	0130
TA2Q	7.010	0015
TA3D	7.005	0300
TA4A	7.004	0100

On 80M, TA1AN was found on 3.501 MHz around 2200 UTC, working the East Coast with TA2D on 3.500 MHz at 0145 UTC.

Active on 15M there was a

TA1KA/2 working near 21.300 MHz around 1400 UTC on December 12. He was also on CW near 21.025 MHz at 1530 UTC. Also on this band was TA1E/2 on 21.227 MHz at 1400 UTC, TA2L on 21.243 MHz at 1430 UTC, and TA3C near 21.250 MHz at 1445 UTC.

20M has also been represented by the following:

TA1A	14.027	2130
TA1E/2	14.012	1330
TA1KA/2	14.038	1600
TA2AO	14.007	1545

Good luck with working one of these. After almost 34 years of Amateur Radio, we haven't worked this one yet. Maybe 1988 will bring us a TA.

Cocos Island (TI9)

Carlos, TI8CBT, finally made his promised trip to Cocos Island, showing as TI9M on December 10, according to *The DX Bulletin*. QRZ DX reports that Carlos made a total of 10,755 contacts during his one-week stay on the island. This included all bands 10 through 160M.

It is also reported that while going ashore, one of his linear amplifiers was dumped into the sea when the rubber raft capsized. According to *Inside DX*, when Carlos attempted to save the amplifier, both Carlos and his camera went in with it. The amplifier was recovered, but it was a total loss due to the effects of salt water.

Carlos also reports through one of the newsletters that he is receiving many QSL requests with insufficient return postage. With your request please include at least 2 IRC's, a "green stamp," or the proper Cost Rican postage. The DXpedition cost over \$3,000.

Cameroon (TJ1)

Amateur Radio Action, an Australian publication, reports Peter, TJ1DL, showing on the bands recently with a very strong signal into the Pacific, although we have seen no stateside reports for him.

Inside DX reports that Mike, a teacher from Germany, has been active as TJ1DK with around another 18 months to go. He has been worked near 14.255 MHz at 2100 from his

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The 1988 officers of the National Capitol DX Association take time out for their photo. From left to right: Craig Stevens, KZ3H, secretary; Tom Hutchinson, W4PBC, vice president; Henry Herman, W3UJ, treasurer; and Ken Miller, K6IR, president. The 100% ARRL affiliated club has over 75 active members dedicated to furthering the pursuits of DX. Additional information is available from Craig at 4409 Clifton Spring Ct., Olney, MD 20832; (301) 774-3410.

location at Buea in the Cameroons.

Also active from this one is TJ1BM and TJ1BP. Check the ET Net on 14.160 MHz after 2000 UTC. TJ1BM has also been found up on 14.236 MHz at 2130 UTC.

On both CW and SSB, TJ1CH has been fairly active. Check 14.045 MHz after 2015 UTC, and 14.183 MHz from 1900 UTC.

Gabon (TR8)

Jean Louis, TR8JLD, has been very active recently and has been on several bands as shown in the following schedules:

1.835	2315	14.183	1945
3.509	0430	21.289	1530
7.010	2230	28.590	1815

Also active was TR8SA found near 21.296 MHz at 1830 UTC working into British Columbia, and later on 14.226 MHz at 2100 UTC working into California.

Dividing his time between 40 and 20M is TR8JJC, as he was found on 7.001 MHz after 2115 MHz and about the same time on 14.010 MHz.

Active on 20M near 14.226 MHz was TR8CA after 2130 UTC, with TR8GA on 14.203 MHz at 2030 UTC, and TR8RLA checking into the ET Net the day after Christmas on 14.160 MHz around 2145 UTC.

Reported working Europeans on 10M, we have TR1G who was found on 28.020 MHz around 1245 UTC.

Auckland Island (ZL9)

Ron Wright, ZL1AMO, reports via *DX News Sheet* that his DXpedition to Auckland and Campbell Islands is to take place during February. Activi-

ty will be for two weeks with operation on both SSB and CW. Two scientific types will be joining Ron and his group to ensure excellent documentation and photography. DXers included with Ron include ZL1BN, ZL1BQD and Wayne, N7NG.

Ron also states that the group needs about \$8,000 to meet costs such as transportation, supplies, food and fuel.

Kenya (5Z4)

Several reports have been made for this one during the last two months. *Inside DX* reports that 5Z4DU is active almost daily on or near 21.320 MHz after 1900 UTC. Also near the frequency, 5Z4JB has been reported.

On 20M, 14.183 MHz appears to be a popular frequency for these stations from Kenya. Look for 5Z4BP, 5Z4JB and 5Z4MR there after 1900 UTC. 20M CW brings out 5Z4FA, who has been found on 14.026 MHz at 1400 UTC and later up the band at 14.045 MHz at 1900 UTC.

Other stations from Kenya include the following:

5Z4DW	21.320	2000
5Z4DA	21.320	1930
5Z4ET	21.298	1900
5Z4MN	21.258	1915
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5Z4RB	21.291	1900
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5Z4WD	14.238	2000

Long Skip

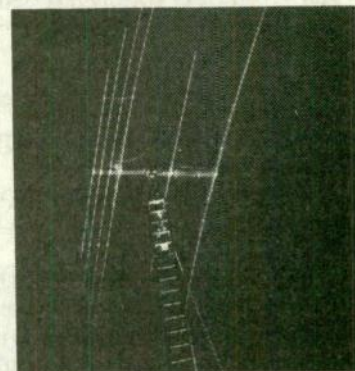
An interesting publication that we have been receiving for some time is *Long Skip*, a monthly publication of The Canadian DX Association. *Long* (please turn to page 34)

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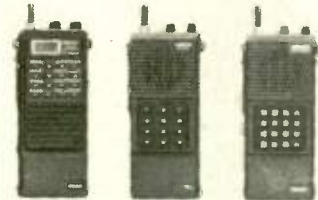
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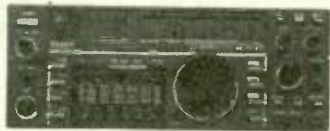
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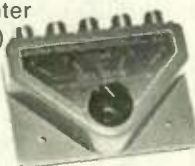


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DX World

(continued from page 31)

Skip is edited by John Sklepkowycz, VE3IPR, and is written from the Canadian slant. The usual content includes the latest DX information found in every other DX publication.

John also includes a 'DXer Profile,' which is a short write-up of selected DXers along with pictures. In addition, photos of other DX stations are included in each issue. Often information is included on various awards that are available.

For more information on the Canadian DX Association, write to P.O. Box 717 Station Q, Toronto, ON M4T 2N7, CANADA. Be sure to include an SASE — in Canadian postage. We suggest you send a "green stamp" or an IRC.

QSL help

Phil Tucker, WA5FIT, is looking for some QSL routes that he made over 20 years ago. They include the following: HK0AI (1966), MP4BEM (1967), VS6AJ (1966), VS9AJC (1966), VS9APW (1967), XV5AA (1965), XT2HV (1966), ZC4TX (1967) and 5A2TV (1967).

The QSL manager for HK0AI was

W9WHM, with W4UWC the manager for XV5AA. For VS9AJC the QSL manager was G3TTJ. You might try contacting them, but don't be surprised if they no longer have the logs. VS6AJ and ZC4TX were club stations. Perhaps some of our readers can help Phil out on the others.

Antique QSL Department

Forty years ago the MX2 prefix was used for Korea. Bob Leo, W7LR, of Bozeman, Montana, worked MX2AG in Korea, using his former California call, W6PBV. The contact was made on 20M CW back on April 26, 1947. The operator was Sandy.



QSL information

Lance Wight, WK6T, reports that he is still QSL manager for Bob Smith, KH9AC. Bob is rather slow in sending his logs to Lance, hence the delay in the return of your QSL requests. The last set of logs Lance has received from KH9AC is September.

This, of course, makes the poor QSL manager the "bad guy" when he really isn't. We had sent him a second card since we hadn't received a card for our KH9AC 160M contact last winter. In our particular case, Lance didn't know what happened as he had the logs. Therefore, cards can get lost in the mails. But isn't it interesting that incoming bills never seem to get lost — or other junk mail!

Dick Tesar, WA4WIP, corrects our error for the QSL route for V31AB in the January issue where it was incorrectly listed as K6BWX. Dick is the QSL manager for this one except for Japan. Japanese DXers should QSL V31AB via JA1ELY. Dick also handles QSL cards for J73EH, V44KT, J88AR, J88BN and VP2EDX.

Charles Lloyd, K2CL, writes that he is the QSL manager for N2PC/KX6.

Tim is active on all bands using SSB, CW, RTTY, AMTOR and packet radio, 80 through 10M, including 24 MHz.

Glenn Tracey, KC3EK, writes that he is no longer the QSL manager for HK1AMW. It had become increas-

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MARCH 1988 WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(10)	12	18	(9)	15
12	(19)	11	16	(8)	17
14	27	13	17	20	30
16	31	(12)	17	23	37
18	29	(11)	15	20	39
20	24	25	24	(13)	40
22	20	31	33	(10)	39
24	17	33	38	(9)	30
2	15	30	40	9	24
4	12	22	35	10	20
6	(11)	15	25	10	17
8	(11)	13	20	(9)	15

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	(13)	9	18	(9)	15
10	(21)	9	16	(8)	15
12	34	8	14	20	24
14	39	10	18	24	33
16	39	(9)	(16)	24	37
18	29	(8)	(17)	22	39
20	24	20	30	18	40
22	20	25	36	(10)	39
24	17	25	40	9	29
2	15	21	37	9	24
4	15	(11)	25	8	20
6	14	(10)	21	9	17

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	(14)	(9)	16	9	15
9	(18)	8	15	15	15
11	34	11	16	23	23
13	39	(10)	19	26	33
15	40	(9)	(17)	25	36
17	33	(9)	(15)	24	39
19	26	(15)	25	21	39
21	22	23	34	(11)	39
23	19	23	39	10	29
1	16	17	32	9	24
3	15	(10)	22	9	20
5	15	(9)	19	8	17



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2 " " " " " " " " " " " "	40 ft. "	\$39.99
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2 " " " " " " " " " " " "	85 ft. "	\$62.99
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ingly difficult for him to obtain the logs and suggests that cards for HK1AMW be sent direct. Glenn says that, most likely, HK1AMW will not answer a bureau package.

Glenn will continue to be QSL manager for YU7XX, YZ7DX, 8P6RE, 8P6OX, 6Y6A and 6Y5HN.

QSL routes

A22RB	-KA3OYY	TZ6FS/4S7	-DL4BC
AY2FFV	-LU2FFV	U4AKD	-U2AXN (See Note 1)
BV0RY	-JG1RVN	V31AS	-I(See Note 2)
C9MKT	-SM5KDM	V31AB	-WA4WIP
C68/G3VLH	-G3VLH	V31EA	-K6BWX
CF8XA	-DL3NAZ	V31EE	-WB9JKI
CR9BZ	-OH2BH	V31EJ	-KB0G
CS6BWW	-CT1BWW	V31FQ	-W0JLC
CU2DR	-CU2ARA	V31JD	-K0RWL
CX0XY	-CX2CS	V31JZ	-NN7A
DK1ZN/ 4S7	-DK1ZN	V31MZ	-K1MZB
EA8XS	-OH5XT	V44KAA	-N0DA
EL2MS	-KD8IW	V44KG	-WB2LCH
FK/ JH4RGF	-JH4RHF	V44KT	-WA4WIP
FK/ JG3WDN	-JH4RHF	VK9YV	-VK6YX
FK/ JR3KEG	-JH4RHF	VK9ZG	-VK9KZH
F04UTO	-FD6HSI	VK9ZR	-G4UCB
FT5ZB	-F6EYS	VK0NE	-VK9NS
G6ZY/EA6	-G6ZY	VP2EDX	-WA4WIP
G0AAA/LX	-G3SXW	VP2MLH	-DK7PN
GB2LNM	-GM4LDU	VP6CPU	-VE3CPU
GM3PZO	-G3PZO	VP6AEF	-G4ZDP
HC2CG	-KE7PL	VP6BKK	-G4RHA
HC2GG	-KE7PL	VP6BPZ/A	-GW8VHI
HD5X	-KQ2M	VR6ID	-KB6ISL
H18DNH	-N9CZ	VU2BEG	-DK8BE
HK0BKX	-WB9NUL	VU2TJW	-KE3A
HL9CU	-AA6BB	VU2TTC	-W8XM
HP3XUH	-KA4MVK	VU40AJ	-VU2AJ
IY5MR	-I5KQA	VU40TTC	-VU2TTC
J6A	-WD8IXE	W0YZS/9K2	-K0TLM
J6LRQ	-W8WPV	XE1FUX	-KB9AW
J6LRR	-W8PR	XF1C	-WB6JMS
J6LRS	-W8RKL	XF4CIS	-XE1J (See Note 3)
J6LRT	-NC8Q	XO7ECZ	-VE7DRW
J6LRU	-W8ILC	YB3ASQ	-W7TSQ
J6LRV	-K6GXO	YZ1U	-YU1ABH
J6LRW	-W8IMZ	ZD9CM	-KY0T
J6LRX	-WD8IXE	ZF2AG/ZF8	-N8AG
J6LRY	-W8UMD	ZF2KH/ZF8	-W7KNT
J6LRZ	-W8UMD	ZF2KZ	-OH1ZAA
J20YD	-F6FYD	ZF2LQ	-LA4HW
J41SL	-SV1SL	ZK1XS	-VE7RG
J73EH	-WA4WIP	ZX8ET	-PR8ET
J88AR	-WA4WIP	ZZ1KF	-PY1OL
J88BN	-WA4WIP	ZZ6IW	-PP6IW
KC6BA	-AA6BB	3B1FK	-3B8FK
KG4GN	-AA6AC	3C3CR	-F6AJA
KP2AH	-WA2YMX	3D6AN	-WK4Y
LS5XX	-LU Bureau	3X6A	-I8YGZ
LX9BV	-DL7MAE	4K1LPK	-UY500
N2PC/KX6	-K2CL	4K0D	-RA3YA (See Note 1)
OA4BUL	-WA2GMC	4K0E	-UA1ADZ (See Note 1)
OX1LX	-OZ1DJJ	4N7V	-YU7AJJ (See Note 1)
P22DD	-W4BAA	4S7YLR	-DJ6CP
P29DE	-W7HQO	4T8A	-OA9K
PA3DKE	-W9NTU	4U11TU	-I(See Note 4)
PJ2X	-K1XM	5H1HK	-OH3XT
PP8ZAT	-KC8YW	5L7M	-OH2KI
RG0G	-UG7GWA (See Note 1)	5L7U	-K4ZKG
RW3DR/ VE8	-VE3CDX	5N1MRE	-W4JVU
S42CA	-ZS2JL	5T5DX	-DL3KCE (See Note 5)
T30BC	-ZL2QW	5T5EV	-N9CLS
T19M	-T18CBT	5T5MH	-N4NX
TJ1BP	-VE3NPL	5T5FU	-F6FNU
TJ1CH	-F6FNU	5T5RA	-W4JVU (See Note 5)
TJ1DK	-DL4FBC	7J3AAB	-N9CLS
TL8DC	-F6EWM	7J3AAC	-W1YY
TO8KB	-FK8FN	7P8DN	-W8JBI
TO8KC	-FK8ES	7P8DP	-W8JBI
TO8KE	-F6EWK	8P9EL	-K2SX
TR8CA	-W6BF	9NYDY	-JA8RUZ
TR8JLD	-AK1E	9Q6FF	-WA9PCI
TR8SA	-F6FNU	9X6NH	-DJ8EA
TT8AQ	-F6EYS		

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P29JD - P.O. Box 5878, Bokoko, PAPUA-NEW GUINEA

PA0GAM/
ST2 - P.O. Box 3794, Khatoon, SUDAN
PJ2WOL - P.O. Box 3508, Curacao, NETHERLANDS ANTILLES
PY0FF - P.O. Box 1, Fernando de Noronha, BRAZIL 053990
PY0FNI
TA6OZ - Mehmet Ozcan, Cukurova, Gazetesi, Adana, TURKEY
TJ1BM - P.O. Box 5622, Yaounde, CAMEROON
TZ6KL - Larry Schultz, c/o Protestant Mission, Kenieba, MALI
VK0HI - 64 Orana Drive, Victoria 3087, AUSTRALIA
VK0ML - 18 Yorktown Cres., Henley South, South Australia 5022, AUSTRALIA (See Note 6)

WA9YHW/
HR6 - The Rev. John Miller, French Harbor, Roatan Island, HONDURAS (See Note 7)
ZK1WL - P.O. Box 127, Raratonga, Cook Islands (See Note 8)
ZS21RSA - P.O. Box 2337, Johannesburg, REPUBLIC OF SOUTH AFRICA
5T5BC - 1510 Pine Creek Drive, Lawrenceville, GA 30245
6W1GT - P.O. Box 3865, Apia, WESTERN SAMOA
9N5QL - Yasme Foundation, P.O. Box 2025, Castro Valley, CA 94546
9V1XE - 53 Martin Street, Belgrave, Victoria 3160, AUSTRALIA

Notes

1. As for all QSL cards sent via Soviet managers, they (please turn to page 52)

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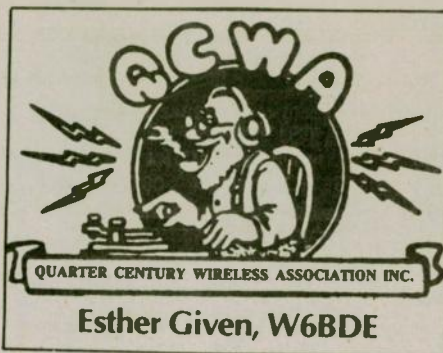
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QCWA members who have been amateurs 25 or more years have survived being called whiz kids, radio nuts and static stenos. Today many are trying to live down the stigma of "has beens," "old-timers" or "senile citizens," but what's in a name? We are reminded that Sanitary Engineer, Building Supervisor or Domestic Engineer raise the image of garbage collectors, janitors and housewives. Is there a title out there that would better identify radio experimenter operators than "amateur" or "ham"?

There are two definitions to the word "amateur":

- 1) One who practices an art, sport or science for pleasure without pay.
- 2) One who is not expert.

For whatever reasons, the titles "amateur" and/or "ham" have never been understood by the general public as they apply to radio. Individual experimenters in wireless telegraphy who were licensed after testing and proved their technical knowledge and operating capabilities, have been lumped by the citizenry with the folks whose major talent is the ability to press an on-off switch and speak into a

microphone. How can the public be educated to recognize definition #1 for hams and #2 for button pushers?

Occasionally one may read the mail or become one of the participants in a friendly on-the-air QSO, stimulating debate on topics concerning pioneers in the Amateur Radio Service. A small percentage of these musings may be submitted as letters to an editor and appear in print.

The current (winter '87) issue of the *QCWA Journal*, carries an editorial by Ted Heithecker, W5EJ, which addresses this topic and poses some challenging ideas worthy of consideration.

From the inception of wireless communication until the personal computer entered first grade in our school systems, Amateur Radio was the portal for young people interested in what became known as electronics. This start inspired them to professional heights, which in some cases meant policy-making positions in the com-

munications commission of our government.

As we approach the end of the 20th century, there is growing sentiment that it is time for the pioneers of wireless telegraphy to consider what — if anything — can or should be done to dignify and exalt Amateur Radio, which for three-quarters of a century many young people in our nation chose as the gateway to their future.

QCWA Headquarters, 1409 Cooper Dr., Irving, TX 75061 would be interested in reader response to this topic.

ARK-LA-TEX Chapter 85 of QCWA, located in the area surrounding Shreveport, Louisiana, is working on a very worthy project. A local high school conducts an enrichment program which includes an Amateur Radio club, and the chapter has been instrumental in locating and donating equipment and helping motivate the students. As a result, the school has gear operating on SSB, CW, FM and RTTY.

In one instance, the widow of a chapter member donated a valuable transceiver to the school's program in her husband's memory. Students currently involved in the program range from Novice to Extra Class licensing, while the QCWA chapter members boast 25 to 60 years of amateur participation.

Chapter members who are free during school hours volunteer valuable assistance in code and theory training and practice. Here is an instance where a whole QCWA chapter is serving as the Elmer for its community.

QCWA members are reminded to participate in the 31st Annual QSO Party. CW — 0001 UTC, February 13 to 2400 UTC, February 14; Phone — 0001 UTC, March 12 to 2400 UTC, March 13. □

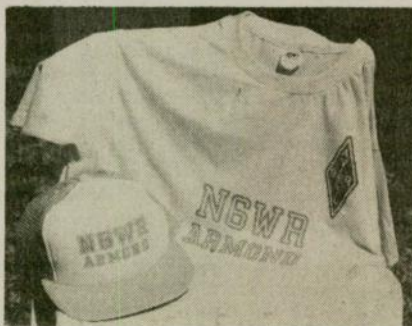
Correction

On page 36 of our February issue, Moe Joffe, W6PHE, was one of the three QCWA charter members shown receiving spark gap replicas. However, both his last name and call sign were misprinted in the cutline. Our apologies to both Joffe and Charles Sermay, W6THE, for the error. □

•••••

HAM LOAF RECIPE: Ingredients are one Amateur Radio operator, two trees and a hammock. Mix well, cover and allow to remain undisturbed for several hours. Garnish with one handi-talkie and a rubber ducky. —Antelope Valley ARC, CA □

Only One Person in
the World has your call . . .
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High quality golf shirts available, printed one side \$14, both sides \$15.

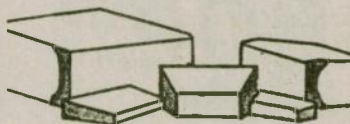
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Visit Your Local RADIO CLUB.

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

ALABAMA

Birmingham Amateur Radio Club, Inc. (BARC)
Meets at the American Red Cross Building
2225 3rd Ave. North in downtown Birmingham, Alabama
1st and 3rd Thursdays/monthly at 7:30 p.m.
For info call Chuck Conkell, N4MLN, (205) 833-9555

Montgomery Amateur Radio Club, Inc. (W4AP)
Alabama State Trooper District Office
Intersection of Coliseum Blvd. & Federal Dr.
Randy Smith, N4LZK, (205) 832-4598
Meets 3rd Monday/monthly — 7:00 p.m.

ALASKA

Arctic Amateur Radio Club
Geophysical Institute West Ridge U of A
PO Box 81389
College, AK 99708
1st Friday/monthly - 7:30 p.m.

ARIZONA

Arizona Amateur Radio Club
Meets 2nd Thursday/monthly — 7:30 p.m.
1510 E. Flower Street, Phoenix, AZ
Net: W7IO Information Net every Thurs., 7:00 p.m.
W7WGW/R 147.88/147.28 Rptr.

Old Pueblo Radio Club
Meets: 2nd Wednesday/monthly — 7:30 p.m.
Location: Franklin Building
University of Arizona
N.E. corner of 6th St. & Park.

Tucson Repeater Association
P.O. Box 40371, Tucson, AZ 85717-0371
2nd Sat./monthly — 7:30 p.m., Pima Co.
Communications Bldg., 2145 E. Ajo. Net Thurs. 7:30 p.m.
146.28/88 (146.22/82, 147.68/08, 147.70/10-PKT)

CALIFORNIA

Amador County Amateur Radio Club
P.O. Box 1094, Pine Grove, CA 95665, Pioneer Elementary
School, Pioneer, CA • 1st Thurs/monthly 7:30 p.m.
WA6WIY Rptr. — 146.835, 146.235.
Net Tues. 7:30 p.m.

Associated Radio Amateurs of Long Beach, Inc. W6RO
P.O. Box 7493, Long Beach, CA 90807
Meets: 1st Friday/monthly — 7:30 p.m.
Signal Hill Recreation Hall
1708 E. Hill St., Signal Hill, CA

Citrus Belt Amateur Radio Club
777 East Rialto Ave.
San Bernardino, Calif.
P.O. Box 3788, Zip-92413
Meets: first Friday/monthly—7 p.m.

Contra Costa Communications Club WD6EZC/R
P.O. Box 661, San Pablo, CA 94806
Meets 2nd Sunday at 9:00 a.m.
Hickory Post Restaurant/Lucky Lanes
For info call Carl KA6OLK (415) 237-2621

Fresno Amateur Radio Club, Inc.
P.O. Box 783, Fresno, CA 93712
Meets 2nd Friday/monthly — 8:00 p.m.
Manchester School, 2307 E. Dakota,
Fresno, CA. W6TO/R 146.34/94

Gabilan Amateur Radio Club
South Valley J.H.S.
385 IOOF Ave. • Gilroy, CA 95020
Meets: 2nd Thursday/monthly — 7:30 p.m.
Talk-in 145.47-

Golden Empire Amateur Radio Society (VEC)
P.O. Box 508 • Chico, CA 95927
Club call W6RHC — Repeater 146.25/85
Meets at Esplanade House, 1528 Esplanade
Room 101, 3rd Friday/monthly — 8:00 p.m.

The Hayward Radio Club, Inc.
Fire Station #6 — 1401 West Winton Ave.,
Hayward, CA. Classroom in back of station.
Meets: 3rd Friday/monthly — 7:30 p.m.
For info contact Mrs. Elfy Griffiths N6DOC

Hilltop Amateur Mastertie Society (HAMS)
Informal mtgs. weekly/Mon. 5 p.m. at Shakey's Pizza,
12924 Washington Blvd., Mar Vista, CA.
Meets 3rd Mon./monthly at Bicycle Shop Cafe,
12217 W. Wilshire Blvd., W. LA. Info, N6FD 213/823-0767

Kern River Valley Amateur Radio Club
P.O. Box 1902 • Lake Isabella, CA 93240. Meets 4th
Sat./monthly at 4 p.m. (Pot Luck). Veteran's Hall, Lake
Isabella WABUYW Reprts.—146.085/146.685 224.22/Down
1.6 WB6ODZ Repr.—224.58 Down 1.6. Low-Level

Livermore Amateur Radio Klub (LARK)
St. Bartholomew's Episcopal Church
Meets: 3rd Saturday/monthly — 9:30 a.m.
Net Mondays 7:00 p.m. 147.12 +
For info call WD6J (415) 829-5229

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

North Hills Radio Club
P.O. Box 41635, Sacramento, CA 95841
3rd Tuesday/monthly — 7:30 p.m., Carmichael Elks Lodge
5631 Cypress Ave. • Carmichael, CA
Net 145.19 Thur. at 8:00 p.m.

Radio Amateur Mobile Society
Meets: 2nd Tuesday/monthly — 7:30 p.m.
Carmichael Elks Bldg.
Cypress and Hackberry, Carmichael, CA
Net Saturday a.m. 224.84 8:30/146.79 9:00

River City A.R.C.S.
Meets: 1st Tuesday/monthly — 7 p.m.
SMUD Building, Room A
Elkhorn and Don Julio, Sacramento, CA
For info: (916) 483-3293

Sacramento Amateur Radio Club, Inc.
Contact: Bob Lyman, KI6FT, (916) 726-2694
Meets Sacramento Blood Bank
32nd St. & Stockton Blvd., Sacramento, CA
2nd Wednesday/monthly—7 p.m.

Sacramento "Old Timers" Ham Radio Brkfst Club
Meets 2nd Wednesday/monthly — 8 a.m.
Carrows Restaurant near Watt Ave. and Hwy 80 exit
For info contact Paul Wolf, W6RLP (916) 331-1830

San Fernando Valley ARC Inc. (W6SD)
Meets 3rd Friday/monthly — 7:30 p.m. • Red Cross
Bldg. 14717 Sherman Way, Van Nuys, CA 91407. Exams
8 a.m. 1st Sat./monthly • Pre-registration via P.O. Box
3151, Van Nuys, CA 91407

San Gabriel Valley ARC
Bowling Green Clubhouse
405 S. Santa Anita Ave. • Arcadia, CA 91006
Meets: 1st Tuesday/monthly — 7:30 p.m., except Dec.
W6QFK — Repeater 147.165/765

San Mateo Radio Club
Bersford Park Recreation Center
28th Ave. and Alameda de las Pulgas
San Mateo, CA 94403
3rd Friday/monthly — 7:30 p.m.

Santa Clara County Amateur Radio Assoc. W6UW
P.O. Box 6 • San Jose, CA 95103. W6UU 146.385 +
Meets: Santa Clara County Service Center
1555 Berger Dr., Building 2 Auditorium
2nd Monday/monthly — 7:30 p.m.

Santa Clara Valley Repeater Society (SCVRS)
P.O. Box 3085 • Sunnyvale, CA 95087
(408) 247-2877. 146.76 (-600 KHz),
224.26 (-1.6 MHz), 444.60 (+5 MHz). 2 meter/220 net
Mon. 9 p.m. • Mtgs.—3rd Fridays.

Sierra Foothills Amateur Radio Club
P.O. Box 3262 • Auburn, CA 95604
Office of Education Bldg., 360 Nevada St. Auburn, CA
Meets: 2nd Friday/monthly — 7:30 p.m. Nets: Tues.
7:30 p.m. 28.443 MHz. Thurs. 7:30 p.m. Rptr. 145.43/223.86

Solano County Amateur Radio Society
P.O. Box 457 • Fairfield, CA 94533
Meets: 3rd Wed. 7 p.m. — Vanden High School
441.150 + 5 (Remote 145.69 simplex)
PL 77Hz, (707) 448-1461

Sonoma County Radio Amateurs, Inc.
Meets 1st Wednesday/monthly (except Dec.)
at the Emergency Operations Center
(behind the County Courthouse)
600 Administration Dr., Santa Rosa, CA 95401

South Bay Amateur Radio Association
Los Cerritos Community Center, Fremont, CA
Dick Melcher, WA6MDI
Call-in 147.615/015
Meets: 3rd Wednesday/monthly — 7:30 p.m.

Southern Calif. Amateur Transmitting Society (SCATS)
P.O. Box 1770 • Covina, CA 91722
Meets: Cortez School
2226 E. Rio Verde Dr. • West Covina, CA 91791
1st Monday/monthly — 7 p.m. (coffee 6:30 p.m.)

Southern California Six Meter Club
P.O. Box 448, Cypress, CA 90630
USB Net Tue., 8:00 p.m., 50.150
FM Rpt. Net Thur., 8:00 p.m., 52.28/88
FM Smlpx Net Thur., 9:00 p.m., 50.300

Stanislaus Amateur Radio Assoc. (SARA)
P.O. Box 4601 Modesto, CA 95352
Stanislaus Co. Administration Bldg.
12th & H Streets • 3rd Tues./monthly — 7:30 p.m.
145.39 MHz WD6EJF, 223.68 MHz

Stockton-Delta Amateur Radio Club, Inc.
U. of the Pacific, Rm 122
Kensington & Mendocino
2nd Wed. monthly, 7:30 P.M.
Rptr. 147.165/765 Net Wed. 8:00 P.M.

Tehama County Amateur Radio Club
13620 Trinity Ave. • Red Bluff, CA 96080
Meets: 1st Friday — 7:00 p.m.
Lincoln Street School
Net Wednesday 8:00 p.m. 147.705 repeater

The Trinity County ARC
P.O. Box 2283, Weaverville, CA 96093
Meets 2nd Wednesday/monthly,
at the CD Hall in Weaverville, — 7:30 p.m.
WD6FHX Repeater 146.13/73

Victor Valley Amateur Radio Club
P.O. Box 869, Victorville, CA 92392
Meets: Victor School Board Room, 6th & "A"
2nd Tuesday/monthly — 7:30 p.m.
WA6EFW Repeater 146.34/146.94

Western Amateur Radio Assoc.
Cerritos Park East
166th St. and Carmenita Ave.
Cerritos, CA.
1st Tuesday/monthly 7:00 p.m. - 145.400

Yucaipa Valley Amateur Radio Club (YVARC)
Gibraltar Saving's Community Room
34880 Yucaipa Blvd., Yucaipa, CA 92399
Pres: Fred Schmidt KG6QN (714) 794-1244
Meets: 3rd Monday/monthly — 7:30 p.m.

CONNECTICUT

Tri-City ARC
Groton Public Library
Route 117
Groton, CT 06340
2nd Tuesday/monthly — 7:30 p.m.

FLORIDA

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

Platinum Coast Amateur Radio Society
1150 S. Hickory St., P.O. Box 1004
Melbourne, FL 32902-1004
Meets: 2nd Monday/monthly at Melbourne Red Cross
Talk-in on 146.25/85 or 146.01/61 rptr.

Sarasota Amateur Radio Ass'n, Inc.
Meets: 3rd Tues./monthly — 8 p.m. on the 6th floor (board room) of the County Admin. Bldg. corner of 301 & Ringling Blvd. Club Rptr. W4IE, freq. 146.91/31, open to all. Phone patch *Up #Down. Welcome

South Brevard Amateur Radio Club
P.O. Box 2205 • Melbourne, FL 32902
Meets 1st Tuesday/monthly — 7 p.m.
Melbourne Library, 2275 S. Babcock St.
Melbourne, FL

HAWAII

Big Island Amateur Radio Club
P.O. Box 1938 • Hilo, HI 96721-1938
Meets: 2nd Tuesday/monthly — 7:00 p.m.
Helco Auditorium, 1200 Kilauea, Hilo
Call in: 146.88(-) or 146.76(-)

ILLINOIS

Bolingbrook Amateur Radio Society
P.O. Box 1429
Bolingbrook, IL 60439-7429
(312) 759-4747 • Call in 147.93/33
Meets: 3rd Monday/monthly — 7:30 p.m.

Chicago Suburban Radio Association (CSRA)
P.O. Box 88, Lyons, IL 60534
Meets 2nd Wed./monthly — 8 p.m. Community Rm.
Clyde Federal Savings & Loan Association
7222 W. Cermak Rd. • North Riverside, IL

Dupage Amateur Radio Club W9DUP
Mid-America Savings and Loan
55th & Holmes (55th St. near RT 83)
Clarendon Hills, IL • 4th Monday/monthly — 7:30 p.m.
Club repeater 145.250 — 600 KHZ

Elgin Amateur Radio Society
P.O. Box 1351, Elgin IL 60120
(WB9EEA President)
Meets in EOC Rm. of Elgin Municipal Bldg.
2nd Friday/monthly — 8:00 p.m.

Fox River Radio League
Valley National Bank, Lower Level
Northgate Shopping Ctr. & RT. 31, Aurora, IL
(312) 584-4925 for more information
Meets: 2nd Tuesday/monthly-7:30 p.m.

INDIANA

Fort Wayne Radio Club
James Wolf, KR9U
P.O. Box 15127 • Fort Wayne, IN 46885
The Salem Church
Meets: 3rd Friday/monthly — 7:30 p.m.

Northeastern Indiana Amateur Radio Club
P.O. Box 745, Auburn Indiana 46706
Meets: 2nd Tuesday/monthly — 7:00 p.m. at members homes
Daily traffic net at 2300Z
on 147.96/36 MHz, the WB9VDK repeater

MARYLAND

The Peninsula Radio Operators Society (PROS)
Family oriented activities — training and exams held throughout the year.
PROS Rptrs. 146.925 and 146.625
PROS, P.O. Box 2315, Salisbury, MD 21801

MICHIGAN

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

South Eastern Michigan A.R.C.
Meets: 1st Friday/monthly—7:30 p.m.
Grosse Pointe North High School, Bldg. C, Cafeteria
Commons. For info contact: AK8I (313) 372-1252
WB7WC Rptr. 146.740/146.140

MISSOURI

St. Charles Amateur Radio Club, Inc. (SCARC)
St. Peters Civic Center, St. Peters, MO
I-70 and Salt Lick Road
Meets: 4th Tuesday/monthly—7:30 p.m.
WB0HSI Repeater 07/67

Heart of America Radio Club
211 W. Armour
Kansas City, MO
Meets: 3rd Tuesday — 7:30 p.m.

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

NEVADA

Frontier Amateur Radio Society (FARS)
Meets: 1st Friday at the Fly-N-Chef at 7 p.m.
Scenic Airlines Terminal, McCarran Airport,
Las Vegas, NV • Net Mondays 7:30 p.m. 145.39
Info: Bob Herrell, WB5PTO, 641-6682

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG
P.O. Box 911, Dover NH 03820
(603) 742-0130/755-2600
2nd Sunday/monthly — 7:00 p.m.
Dover Dist. Court. Talk-in 147.57

NEW JERSEY

Gloucester County Amateur Radio Club (GCARC)
Woodbury V.F.W.
1st Wednesday/monthly—8:00 p.m.
Woodbury, N.J. • Talk-in 147.18/78
For info call K2JF (609) 589-2318

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

NEW YORK

Communications Club of New Rochelle, NY, Inc.
Harrison Street Firehouse
Bill McCarran, K2LV
(914) 738-0768
Meets: 1st Monday/monthly — 8 p.m.

Genesee Radio Amateurs (G.R.A.M.)
N.Y.S. Civil Defense Center
State St. • Batavia, NY 14020
Meets: 3rd Friday/monthly — 7:30 p.m.
147.255 + W2RCX

Hall of Science Amateur Radio Club, Inc.
P.O. Box 131, Jamaica, NY 11415 — HOSARC — 2nd Tuesday/
monthly — Hall of Science Building. 47-01 111 St., Flushing
Meadow Park at 7:30 p.m. The tristates' only 3-band linked
rptr. system 144.300 S/223.600 — 1445.225 —

Radio Club of Junior High School 22 N.Y.C., Inc.
111 Columbia St. • New York, NY 10002
"At The Core of The Big Apple," QSLs invited.
For info contact WB2JKJ and "The Crew" learning
English thru Ham Radio at (516) 674-4072, 24 hrs.

Westchester Amateur Radio Assoc. (WARA)
Scarsdale Village Hall
Scarsdale, New York
Meets: 1st Wednesday/monthly — 8:00 p.m.
For info call B. Dubbs, Pres. (WA2FSR)(914) 725-1191

NORTH CAROLINA

Raleigh Amateur Radio Society, Inc. (RARS)
P.O. Box 17124 • Raleigh, NC 27619
Meets: 1st Wed./monthly, 7:30 p.m. • First Presb. Church
Club net daily, 8 p.m. on RARS 04/64, W4WD
Annual Hamfest, 2nd Sunday in April

NORTH DAKOTA

Forx Amateur Radio Club
United Hospital, Grand Forks, N.D.
Call-in 34/94
Meets last Tuesday/monthly — 7:30 p.m.

OHIO

Amateur Radio Fellowship, Inc. (ARF)
N8HUN, Linda Delugach, Secretary
P.O. Box 2486 • Streetsboro, OH 44241
Meets: 1st Sat./monthly at Kent Wally Waffle
KA8PHO repeater 147.675/075

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

Northern Ohio Amateur Radio Society (NOARS)
K8KRG/WB8JBM • P.O. Box 354, Lorain, OH 44052
Meets 3rd Mondays/monthly—8 p.m. at Gargus Hall
Info: George—W8ANM • (216) 933-2841
Ohio's largest general interest club.

OREGON

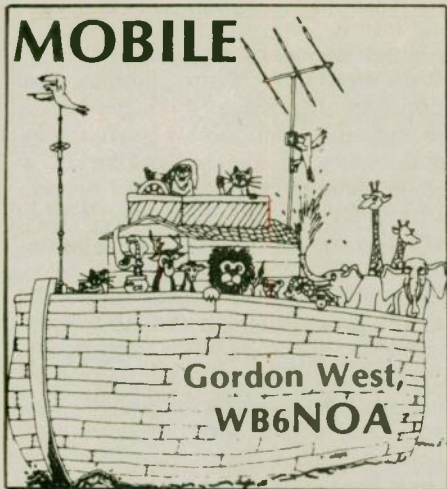
Salem Amateur Radio Club (SARC)
Northwest Natural Gas Auditorium
3123 Broadway N.E.
Salem, Oregon 97303 • Talk-in 146.86
Meets 4th Tuesday/monthly — 7:30 p.m.

PENNSYLVANIA

Mercer County Amateur Radio Club — W3LIF
P.O. Box 996 Sharon, PA 16146
Meets: 4th Tuesday/monthly at 7:30 p.m.
at Shenango Valley Medical Center — Farrell, PA
Net — Thursdays 8:45 p.m. on 147.75/15 W3LIF/R

Penn Wireless Assoc. Inc.
Falls Twp. Municipal Bldg.
Trenton Road
Fallsington, PA 19054
4th Monday/monthly — 8:00 p.m.

MOBILE



Straight talk on tested mobile antennas

This month we will review mobile antenna products. There is nothing more important for good worldwide SSB range than a good mobile antenna system. Same thing for temporary installations and mobile marine setups.

Maxcom deserves our first consideration. Designed specifically for marine and portable installations, Maxcom is an automatic antenna matcher that tunes from 100 kHz to 200 MHz. Over 4,000 units have been sold, and results are mixed.

I know several mariners who swear by them, and just as many Amateur Radio operators who claim they didn't perform as well as their manual antenna tuners.

I wouldn't think they would—Maxcom is a completely solid-state matching system composed of a potted transformer, resistance and inductance network that provides a constant low VSWR to your solid-state transceiver. This allows your solid-state mobile set to put out full power into Maxcom; a portion of that power

is then transferred to the wires you have attached to Maxcom. Running 40 feet and more wire on each side of Maxcom usually gives you enough signal to overcome skywave losses.

If you operate on bands where you have healthy signal levels, such as 40 and 80M, the Maxcom with plenty of wire on each terminal could be an adequate performer. However, if you operate on the 20M band where a cut-to-frequency dipole just barely gets you enough signal into the net control operator, it's doubtful that Maxcom may perform as strong as the tuned dipole.

Maxcom does not publish dB loss or gain performance specifications. This varies with the amount of wire you have on each terminal, and it varies by band, and it varies on how you run the wire. They do guarantee a VSWR of 1.5:1 or less, and this we can confirm. It's totally broad-banded without tuning. And yes, folks, it's more than just a fancy and expensive dummy load—it does radiate, but not like a cut-to-frequency dipole or a loaded mobile whip.

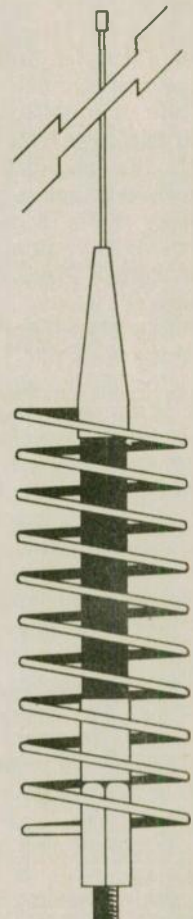
Maxcom deserves its place in the ham community if everyone understands its inherent losses with this type of broad-banded loading scheme. Let's face it, any time you load a mobile whip shorter than a natural 1/4-wavelength, you are going to encounter losses. Even the fully automatic \$1,000 relay switching tuners have losses, too—but not nearly as much as Maxcom.

Maxcom works very well if you are working with big, strong signals coming in. It also gives much better performance from your solid-state transceiver than a manual tuner that has not been pre-tuned properly. So let's give Maxcom its credit due, but don't expect that it's going to perform nearly as well as an actively tuned antenna, a manually tuned antenna or a dipole antenna cut to length.

For a detailed product report, plus some interesting testimonials, write Maxcom marketeer, Sonny Irons, P.O. Box 502, Fort Lauderdale, FL 33302. When it's tough to come up with a quick antenna system for emergency work, Maxcom will run your set at full output and dissipate those 100 watts as best it can on the amount of wire you put on each end of the matching network.

An impressive gold-plated antenna was tested recently from Antron, P.O. Box 2744, Youngstown, OH 44507. Their Model 3000 tunes in both 10M and 11M CB. The external gold-plated coil makes this base-loaded, broad-banded antenna a surprising performer on 10M. I operate at the bottom end for Novice, as well as at 29.6 for FM, and this antenna gives a shortened 10M whip the necessary band spread with room to spare!

I don't guarantee the gold-plating makes the radio waves go any further, but it certainly looks impressive. You can mag mount it, mirror mount it,



Antron Model 3000 10M/11M mobile whip

BLACK DACRON® POLYESTER ANTENNA ROPE

- UV-PROTECTED
- HIGH ABRASION RESISTANCE
- REQUIRES NO EXPENSIVE POTTING HEADS
- EASY TO TIE & UNTIE KNOTS
- EASY TO CUT WITH OUR HOT KNIFE
- SIZES: 3/32" 3/16" 5/16"
- SATISFIED CUSTOMERS DECLARE EXCELLENCE THROUGHOUT U.S.A.

LET US INTRODUCE OUR DACRON® ROPE TO YOU • SEND YOUR NAME AND ADDRESS AND WE'LL SEND YOU FREE SAMPLES OF EACH SIZE AND COMPLETE ORDERING INFORMATION.

In Australia contact
ATN Antennas, Birchip, Victoria



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2472 Eastman Ave. Bld. 21
Ventura, CA 93003
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The Kanawha Amateur Radio Club
P.O. Box 1694 • Charleston, WV 25326
Meets: 1st Friday/monthly-7 p.m.
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and even add an extension shaft in case you want to run it off your rear bumper.

It's hard to beat the versatility of the Hustler mobile whip antenna system. If you're looking for a little bit more efficiency and a little bit more frequency excursion, go for the kW resonators. I've seen as much as a half S-unit increase in signal strength by going to the larger coils.

The Hustler antennas also have a variety of mounts to complement any mobile or mobile marine installation. You can even run the fold-over mast without a coil quite effectively as a 6M 1/4-wave radiator.

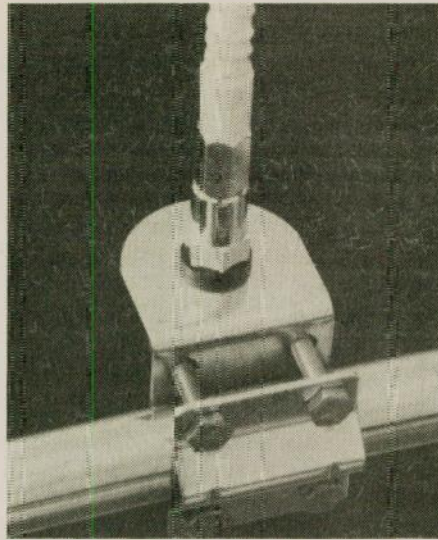
They have a new catalog; write Newtronics Antenna Corporation, 1 Newtronics Place, Mineral Wells, TX 76067.

While Hustler also produces a fitting for multiple loading coil installations on their single mast, I still like the stainless steel Spider antenna from Multi-Band Antenna Company, 7131 Owensmouth Ave., Ste. 163-C, Canoga Park, CA 91303.

The non-magnetic stainless steel mast and nickel-chrome-plated bronze fittings make it virtually corrosion-proof. Run four coils of your choice at any one time. They also have coils for marine SSB frequencies, too. The four-coil concept allows you to switch from 10 to 15 to 20 to 40M without ever having to go up on deck or up on the roof to change resonators.

You need a good, hefty mount to support this high-windage system. I'm not sure you would want to go down the road in your camper with everything hooked up and flapping in the breeze. That's a lot of weight up high, so remove all but one of the coils for mobile-in-motion use. SWR curves look good, and the coils run cool, so this tells me it's a relatively efficient 1/4-wave antenna system.

I love the all-fiberglass, helically wound whips from Mobile Mark. They are available from all Ham Radio Outlet Stores (1/800-854-6046) in both Amateur Radio as well as marine SSB frequencies. One fiberglass whip per band. Each whip is 6' tall except for 10 and 15M. They are shorter. You don't have the problem with someone accidentally touching the whip and get-



Mobile Mark antenna on a rail mount

ting zapped either, because the windings are encased in a tough white vinyl.

The folks at Valor have some nice center-loaded mobile whip antennas with stainless steel stingers. Electrically they're great, but mechanically their quality control is not so hot.

We've often found that we couldn't easily screw in the joining threads. After screwing in the resonators on their multi-band antennas, we could not get them out. If Valor cleans up on its mechanical quality, it will have a good performer.

The similar-looking Ten-Tec mobile antenna is a terrific performer. Not many folks realize that Ten-Tec has these individual band whips, and they work great. Their top-quality whips really pull a signal out of your mobile

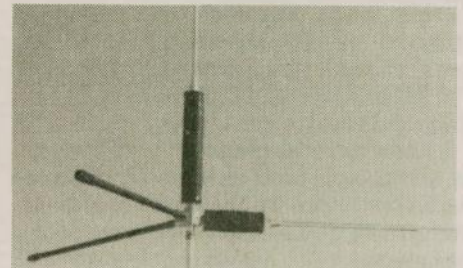
installation. They may be fine-tuned for exact frequency resonance.

With any mobile whip, you need the ground counterpoise directly below the antenna feedpoint. Hanging a mobile whip on the aft railing of a sailboat usually won't lead to proper loading. Everyone blames the whip, when the real problem is the ground-plane.

In mobile marine installations, it may be necessary to run 1/4-wave ground radials below deck to tune out individual band mobile whips. Same thing on fiberglass motorhomes—the whip just won't tune without the 1/4-wavelength radials.

On metallic structures such as your vehicle, your aluminum motorhome or on the side of a steel shed, the mobile whips will snap into resonance without any further grounding considerations.

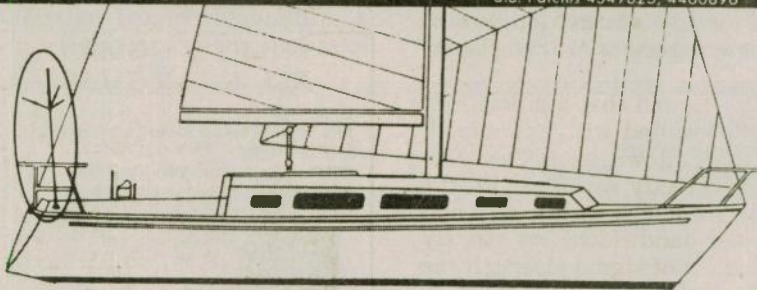
Just as long as the mobile whip sees some horizontal component of a good surface area groundplane no more than 3" away from the feedpoint, it will snap right in when you tune it up. A no-tune situation is usually traced to a sea water or metallic groundplane that is simply too far away from the



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base of the mobile antenna feedpoint.

I have seen many ball mounts affixed to the decks or rails of a sailboat and powerboat that simply won't tune up, and the reason is that the groundplane they have attached to at the waterline is some distance away. Lining the bottom side of the deck with aluminum foil many times will solve the problem. Running 1/4-wavelength radials will also tune in the whips quite nicely.

Remember that any antenna physically shorter than an electrical 1/4-wavelength will never perform as well as a true 1/4-wavelength whip. Remember that any mobile antenna will only tune up properly if the groundplane is directly below its base and within 3" of the feedpoint. Never mount a mobile whip beside the side of your vehicle, and always keep in mind that anyone touching the whip while you're transmitting may no longer be your friend.

Lastly, most mobile whip installations go bad at the coax feedpoint that you never covered up with commercially available Coax-Seal™. A good, clean, dry connection is necessary for you to have the most outstanding mobile signal around. □

Comments on Maxcom

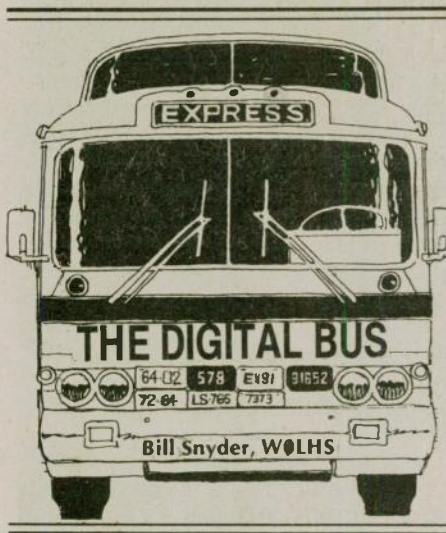
Dear Gordon:

I am writing again in regard to Maxcom's "high speed automatic antenna matchers," and by the way, thank you for sending me copies of your correspondence with Maxcom. I had the opportunity to test two of their units (200D and XLD-150) recently and thought you might be interested in some of my results. I don't have access to a formal antenna testing range, so I admit that my measurements are less than perfect, but Maxcom has yet to provide me any information on how their units compare with a resonant dipole.

Basically, I found that a dipole 128' long overall and fed with a Maxcom was 9 or 10dB down from the same antenna fed directly with coax on the 80M band. Of course, the Maxcom had a much wider bandwidth, but strictly from the aspect of signal strength the regular dipole was definitely superior.

As the frequency was progressively increased, the same 128' dipole with the Maxcom performed relatively better when compared to a dipole resonant on the frequency of interest, but when allowance was made for the gain of the longer antenna, the Maxcom antenna still generally gave a substandard performance.

It seems to me that Maxcom takes (please turn to page 59)



Dangerous hobby?

This morning, when I sat down to write this column, the local newspaper carried a story about a scientific study of Amateur Radio operators and cancer deaths. Naturally I read the report, because I have tinkered with Amateur Radio, electronics, electricity, computers and other devices featuring flying and colliding electrons for over 54 years. You probably all read the Associated Press report with interest. It set me to thinking about the old days and my hobby.

It's a wonder any of us survived the early years of Amateur Radio. The things we used to do with high voltage and our primitive rigs bordered on the ragged edge of committing suicide. To the modern ham who buys appliances and plugs them into the wall socket, perhaps a little review of what went on in the "good old days" would be in order.

Early-day adventures

In 1932 we had to build our own receivers, transmitters and monitors.

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My first receiver was a homebrew affair featuring a pair of 201-A tubes. It was constructed on an old chunk of drawing board, and it sported a bakelite panel holding the variable tuning capacitor, known in those days as the "condenser." The plate supply was a series of "B" batteries totaling 135V, and the filaments were lit by an auto battery.

The transmitter was a tuned-plate, tuned-grid, push-pull circuit. The self-excited rig consisted of a pair of 210 vacuum tubes with 500V applied to the plates. In order to get it to oscillate and put out its 50W of RF, I had to tune the plate tank circuit to the same frequency as the grid tank circuit and then let the feedback do its stuff. I keyed the filament return directly with an old telegraph key supplied by my telegrapher father. I should have been able to work Europe with the key clicks alone.

Like the RX, the TX was built on a chunk of the drawing board that I had sawed out in the high school wood shop. Every electrical component was in plain sight and available for inquisitive fingers to touch with ease. No interlocks, no cabinet, no safety devices at all! The tank circuit coils were soft-drawn copper tubing which had been wound using a dry cell battery as a form. If there was ever a lethal weapon rig, my old breadboard job was it.

The neon lamp had just been invented, and so most every amateur had a 2W neon lamp as a tuning indicator. Bob Pollock, W9SNP in those days, W6BBH today, put a neon lamp on the end of the 135' Zepp antenna I helped him string up between his house and a neighbor's. When Bob keyed the transmitter, the glow lamp would signal the outside world that he was on the air.

I had a somewhat similar signpost at my parents' house. The porch light would blink on and off with my keying on 40M. The old-style knob-and-tube house wiring was like a big antenna system in our turn-of-the-century dwelling.

The neon bulb made a handy tuning indicator, particularly for those self-excited rigs we all had in those days. Crystal-controlled transmitters were in the beginning stages, so most everyone had to tune by meters and

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neon indicator. You didn't have to touch the bulb to the tank coil to get an indication. You just held the glass part of the lamp close to the plate tank coil and tuned the condensers to get the rig to oscillate. Then you listened to a monitor which was a homebrew device that you used to set the frequency of the rig.

So, by sticking the neon lamp close to the tank coil, we came close to high voltage hundreds of times, and I might add, we all had a shock or two before the days of breadboard transmitters were over. We also had RF burns on our fingers. I can smell the flesh cooking now!

Another device used to determine if the rig was oscillating was the ordinary lead pencil. You could scratch the lead end of a pencil on the tank coil and draw sparks which would indicate RF activity. Another chance to wipe yourself out, but the rule was: only one hand in the breadboard apparatus; don't complete the circuit!

Some of the more affluent hams had big power supplies. The late Paul

Carufel, W0PQW, had a pole transformer, liberated from the power company, powering his breadboard kW loudenboomer. Paul would demonstrate high power RF in this manner: he would stand on a wooden kitchen chair to insulate himself from the basement floor, hold a bare copper tubing wand in one hand, touch the wand to tank coil and draw an arc that would stretch to at least a foot in distance! It was quite a show! You could smell the ozone (if you can smell ozone) afterwards, and Paul would chuckle at his accomplishment. Despite these antics, Paul lived to a ripe old age.

Of all my ham friends, Pollock came as near killing himself as anyone. He had a pair of earphones with binding posts sticking out of the back side to which the wires were hooked up. In experimenting with a new rig, Bob had the earphones on, but because of the loud sound, he removed the cans from his ears and turned them over so the binding posts were in contact with his temples. Then, he accidentally got across the high-voltage in the rig with one hand.

Now the earphones were grounded, so he had the ground contact on each temple, and the plus voltage on his hand. Bingo! It was the forerunner of the "shock treatment" used by modern medicine. Bob flew across the room and was knocked out by the jolt. Luckily his mother heard the noise, checked on him and found him in a heap. He survived, but it was tough and go. Like I said before, it is lucky we all survived those early days!

Packet traffic topics

The last month has been very poor for packet traffic from the outside world to me. It's due to poor propagation on 2M and some antenna work on one of the net/ROM relay stations in

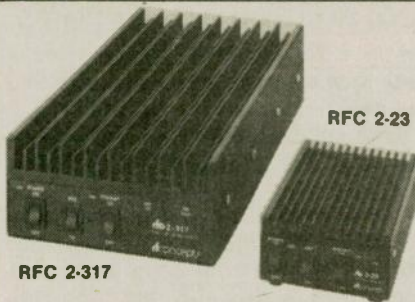
our network. But our area is finally getting populated with packet stations on 2M, so I'm again reachable via packet.

Eavesdroppings

YOUR GLOBE KING RIG AND THE QUALITY OF YOUR SIGNAL BROUGHT TEARS TO MY EYES ... I HAVE A JOHNSON VIKING THAT I BUILT AS A KIT BACK IN THE 1960'S ... YOU HAVE TWO FREQUENCIES, THIS ONE AND ONE ONE KILOHERTZ LOWER ... I SHOULD DO SOME WORK ON THIS KEYBOARD AND GET MY LUNCH OUT OF THE KEYS ... I KNOW ABOUT THE 930 AND THE 940 BUT I DIDN'T KNOW THAT KENWOOD HAD A 980 ... MAY THE DX BIRD OF PARADISE LAND ON YOUR LITTLE YAGI!!! ... WHEN I RETIRE I WANT MY LIFE TO RUN AT 45 BAUD AND NOT AT 1000 PLUS LIKE IT DOES NOW ... I THOUGHT YOUR SIGNAL WAS UPSIDE DOWN, BUT IT WAS MY TUNING UNIT ... MY XYL IS A HAM, TWO OF MY KIDS ARE HAMS, AND THE THIRD ONE IS TRYING TO STAY SANE ... THE STATION DESCRIPTION IS MUCH TOO LONG TO RUN FOR YOU NOW ... IS THAT TERM OLE MAN OR OLD MAN? ... BOY, YOUR SET-UP THERE MAKES MY CRYSTAL SET SEEM ANTIQUATED ... I'M NOT INTERESTED IN COMPUTERS, I HAD TROUBLE ENOUGH LEARNING TO RUN A SLIDE RULE ... I HAVE A 13 INCH TV SET RIGHT HERE IN THE SHACK SO I CAN SEE MY OWN TVI ... 15 METERS IS MORE OF A CHALLENGE ESPECIALLY WHEN THE SOLAR FLUX IS STUCK AT THE BOTTOM ... I DIDN'T GET MUCH OF YOUR LAST TRANSMISSION, BUT I DID GET YOUR 73'S OKAY ... I I I STUTTER W W WHEN I I I TYPE ... I ALWAYS GET A TOOTHACHE ON FRIDAY NIGHT AND I ALWAYS LOSE MY ANTENNA DURING THE FIRST SNOWSTORM OF THE WINTER ... I HAD TO RUN OUT IN THE KITCHEN AND PUT OUT A FIRE; YOU SEE, I HAVE A DIGITAL WATCH, A DIGITAL CALCULATOR, AND A DIGITAL TOASTER: YOU GET YOUR TOAST BLACK OR WHITE REGARDLESS OF THE SETTING ... 73 AND GLAD I PUMPED INTO YOU.

Thanks to everyone who helped me eavesdrop, and especially W0HAH, W7VFR and W0ML. 73, Bill Snyder, 1514 S. 12th St., Fargo, ND 58103, W0LHS @ W0LHS. RTTY DIT DIT.

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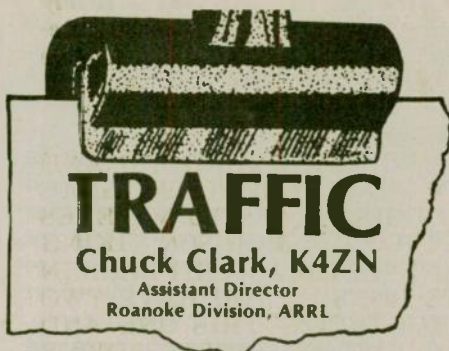
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Fast CW

Most of us know Thomas A. Edison as the inventor of the incandescent light bulb, and probably know he was a prolific inventor of other devices as well, having over a thousand patents to his credit. But perhaps what is not as well known is the fact that he was outstanding as a telegrapher.

It is said that he could copy 40 wpm with a pencil—printing the letters, not writing in longhand. It is also said that operators transmitting traffic to him sometimes wondered whether he was still copying them or had fallen asleep. They would transmit message after message to him without his ever once breaking for a fill.

That was in landline service where he didn't have to contend with static crashes, CQers, tuner-uppers and the like. Nevertheless, many of us could do better at copying CW. I know when I send traffic to some stations I'm sure to be asked for a fill, while some others roger the message almost every time.

There's nothing wrong with asking for fills, of course. The wrong thing is not to ask for a fill when you need one. The ideal, though, is not to need fills, to get it right the first time. Radio operators will never be able to attain that ideal, though; radio circuits are simply not reliable enough. But some operators come close, make solid copy at just about any speed that anyone can send manually, and often can keep up with most people using a keyboard keyer.

Their number is getting smaller, however. The old pros among our ranks—the people who pounded brass for a living—are becoming Silent Keys, and too many amateurs these days see CW as an unwelcome requirement for getting a license. Once they get their ticket they put their key away and plug in the microphone. CW then becomes desirable because it discourages other people from becoming hams and adding to the crowded band conditions. So they are up in arms whenever someone proposes a code-free license ("we'll have another citizens' band"), but they never touch a key themselves.

And that's a shame. CW remains hard work until you can operate about 20 or 25 wpm comfortably. Then it's more like conversation. While we speak much more rapidly than that while we're actually talking, pauses in normal conversation generally keep the overall speed down into that range, particularly when we use our customary abbreviations, Q signals and the like. The problem is how to get up to that speed.

Practice

The solution is simple—practice. The right kind of practice. Ordinary amateur QSO's help some and so do code tapes, but both tend to be repetitious. Ordinary amateur QSO's tend to get into ruts, signal reports, location, rig, antenna, weather, name, and often operators will repeat items in this list two or three times. Usually it will be at a speed you can copy easily, so it won't be much help in increasing your proficiency. As for code tapes, unless you have a big library of them there is the danger that you will be remembering the text instead of copying it after you have used the tapes very long.

Much better is copying straight text on the air, such as W1AW code prac-

tice and bulletin transmissions. W1AW gives five or 10 minutes practice at each speed, and concentrates mainly on the lower speeds needed by those preparing for a license, with a top speed of only 35 wpm.

Only 35 wpm? For many of us, copying 35 wpm seems as unattainable as running a four-minute mile. And without the right kind of practice, it probably is. But when you reach that level, you'll probably enjoy copying comfortably at that speed and will want to go higher. There are ways to get the needed practice material. One thing you can do if you have a reel-to-reel tape recorder is to copy W1AW at a slow speed and play it back at a higher speed. But how many of us still have reel-to-reel recorders?

There are the amateurs that congregate around 7030 kHz with their keyboard keyers and spit CW out at 50 wpm or so. They are hams conducting QSO's, but provide better practice material simply because they have to chew the rag; the usual content of an amateur QSO could be covered in a few seconds at that speed.

If you want W1AW-style practice material at higher speeds, look in THE MART in this or any issue of Worldradio for the announcement of practice material 20 to 60 wpm transmitted by

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Typewriter copy

Most of us can manage to copy up to 20 or 25 wpm in longhand, but find it difficult to write much faster than that. Edison was exceptional in this. The rest of us need to use the typewriter for the faster stuff.

Learning to copy on a typewriter involves a new learning process, even for one who is an accomplished touch typist that can read code by ear and copy it longhand. But it's a skill that comes quickly to such a person.

As in copying longhand, copying on a typewriter requires developing coordination, that we combine the two separate actions of reading the code and putting it on paper into a single action. Copying on a typewriter does require that you can type, however, so it's best to begin by learning to be a good typist. It's important to be proficient in the individual actions before attempting to combine them.

Many find it helpful to wear earphones, at least in the beginning, to shut out some of the noise from the

typewriter. If the cord gets in your way, run it behind your back. If you have a communications typewriter (a "mill," all capital letters), shifting is no problem. If you're using the standard kind of typewriter, don't bother to shift; just type everything in small letters.

Here are a few miscellaneous tips for improving your speed and accuracy. Teach yourself to copy behind. Listen to the entire word before you begin to write it. Then write it while you are listening to the next word. Again, this is a new kind of coordination you need to acquire by practice. Good operators often copy several words behind, so that when the end of the message comes you have to wait until they finish writing it down before they acknowledge receipt, and if they break you for a fill, they will ask you for something a few words back, not the last word you sent. They set up a mental buffer that holds the material that is received until it can be put on paper, and processes it also, often helping the operator avoid errors in copying.

Copying words instead of letters speeds up the process too, and there is a point somewhere around 30 wpm where most of us find it necessary to do so if we want to increase our speed.

To increase your speed you have to work at a higher speed than you can copy accurately. But progress does not follow a smooth curve, rather our speed increases in jumps, followed by plateaus at the higher speed. Two such plateaus are especially noteworthy, the one just mentioned around 30 wpm where we recognize entire words as units, and an earlier one around 10 where we recognize letters as units, not the individual dits and dahs.

So when your progress seems to come to a halt, don't be discouraged. Your mind is setting up new pathways that will eventually speed up processing of code.

Copying is important. You may be able to follow the drift of a CW speed merchant, but the real test is whether you can put it down on paper. And yet listening without copying has its use too. You'll never be able to put it on paper unless you can first read it.

W1AW announces the source of the material being transmitted in code practice transmission, usually something from a previous issue of *QST*. Follow the text as you listen to the transmission, then occasionally stop looking at the text and just listen and try to read the code as you hear it. Look back at the text if you get lost. Do this a little, then try to copy without the text, and you may find you're doing better.

Traffic nets

This is the *TRAFFIC* column, so I must not omit mention of one of the best means for improving your code proficiency: participation in CW traffic nets.

In casual amateur operation you need only get the general drift of the conversation to participate intelligently, or at least to seem to do so. When handling traffic you have to get it right. One hundred percent accuracy is not the ideal here; it's the minimum acceptable standard of performance. It will help you improve your code speed to some extent too, but only up to a point.

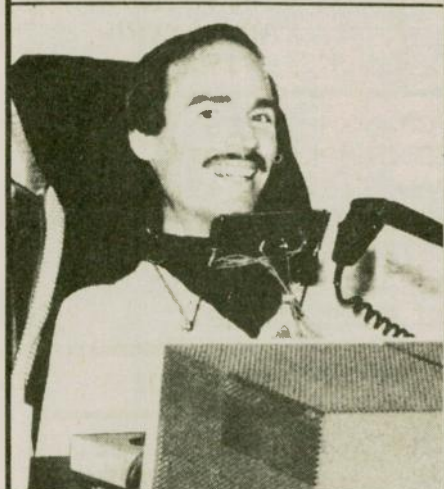
With the thinning out of the ranks of the old pros, you seldom hear people batting along at 30 wpm or so handling traffic. It's mainly in the matter of accuracy that traffic handling helps, but that does serve to improve your speed as a by-product. Learning to copy accurately at 20 wpm will also improve your performance at 25. Speed is valuable only when it's accompanied by accuracy.

Frequently, slower sending moves the traffic faster. When the sending station makes a lot of errors and then has to correct them, or when the receiving operator needs a lot of fills, more time is often consumed than would have been had the transmission speed been lower and everybody got it right the first time.

Slow down, I'm in a hurry! It's best, however, when you can copy the higher speed accurately.

Enthusiasm is the greatest asset in the world. It beats money, power and influence. — Henry Chester

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10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ
10-10 19636

The highest 10-10 number

As of December 31, 1987, the last report received by Treasurer Gerry Gross, WA6POZ, the highest 10-10 number issued was 46502. This number was issued to Henry Rylant of Paragould, Arkansas.

Due to the lead time in getting the records through the system and to Gerry, numbers are always a couple of months behind the actual numbers being issued today. It is quite possible that numbers being issued today are in the 47000 series. At the rate we are growing, we should hit the big 50000 number before too much longer. Is it possible in 1988?

Logging of city for contests

At a recent 10-10 Brunch and Business Meeting, it was proposed and approved by the membership present that logging of the city name for contests was no longer required. There has been some confusion regarding this requirement. A check of the rules for the latest contest published by Harry Syring, WB1FTQ, 10-10 #23934, states that it is only necessary to exchange call sign, name, state and 10-10 number.

For Bars, the rule states that it is necessary to submit your list of 10-10 numbers in serial order, showing call, handle and location. This would imply that the state or country is sufficient. It is hoped that this will clarify the point of requiring the city name for award purposes.

Our youngest 10-10 member

Debbie Moyer, KB5DWQ, 10-10 #43685, is 10 years old and has taken over the spot reserved for our youngest 10-10 member. Debbie lives in Euless, Texas. Can anyone displace Debbie from the youngest member spotlight?

Meet one of the 10-10 directors

A member of 10-10 since 1972, Morrie Goldman, W6EHM, 10-10 #4189, began serving 10-10 just one year after he joined the organization and has been serving in one position or

another ever since. His first volunteer job was the Call Area Manager for the 6th, 7th and 8th districts. After serving in this position for a little over a year, he was elected president in 1974 and served as president through 1977. In 1978 he became a director and has served in that capacity ever since.

In addition to his director duties, Morrie is the trustee of 10-10's club station license, W6OI. He recently was instrumental in establishing the new 10-10 Scholarship Program, coordinating the program with the Foundation For Amateur Radio (the organization that will administer the Scholarship Award Program for 10-10).

Morrie was born in New York and received his first Amateur Radio license in 1937 as W2JNJ. He, like all other hams in those days, built his own receiver and transmitter and was a regular on the 40 and 80M CW bands.

How did Morrie become interested in Amateur Radio? He says he loved the Morse code when he was a Boy Scout and "it just took off from there." Morrie also says he "enjoys the friendly confines of 10M and the hams who operate there."

The station at W6EHM consists of a Kenwood TS-830 and a Mini-Quad.



10-10 Director Morrie Goldman, W6EHM, 10-10 #4189

Morrie can always be found operating in the 10-10 contests and checks into many of the chapter nets.

The Mont-Ventoux Chapter

Located in the south of France, the Mont-Ventoux Chapter of 10-10 is one of the chapters in France. The name Mont-Ventoux comes from the mountain of the same name and is the highest mountain of the Vaucluse, about 6,262'. The Mont-Ventoux Chapter is located in the city of Avignon, "The Pope City."

This chapter is an active chapter that has three nets each week plus a Daily Information net. Now that band conditions are improving, listen for the Mont-Ventoux Chapter at one of the following times: CW - 1300Z on 28.150 MHz, Saturdays. SSB -

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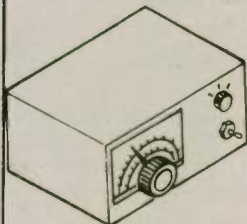
Finally

If any of you Chapter Heads would like to have your chapter written up in this column, send me information about your chapter, net time and frequency, location, and any other pertinent information about your chapter.

For those interested in 10-10 who would like an Information Package, including an application and the latest copy of the 10-10 International News — the 10-10 Official Magazine, send me your name and address along with a "green stamp" (\$1). My address is 18130 Bromley St., Tarzana, CA 91356-1701.

If you want to renew your dues and have lost your number or your call sign manager's address, an SASE to me will get you the necessary information. Best 73 and looking forward to meeting you on 10M real soon. □

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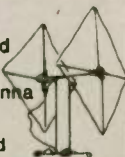
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Moonbounce contacts

Not long after I put last month's column to bed, I received a telephone call from Ray Rector, WA4NJP, with additional information concerning the ongoing 6M EME (Moonbounce) efforts. Before I get into that, I want to detail the previous five 6M EME contacts.

Contact #1 — Joe Muscanere, WA5HNC, and Dick Allen, W5SXD (Texas), to Connie Marshall, K5WVX (now K5CM), and Sam Whitley, K5WAX (now K5SW), in Oklahoma, on August 30, 1972, with both stations using eight 6-element Yagis.

Contact #2 — Joe Muscanere, WA5HNC, to Louis Anciaux, WB6NMT (California), set a new distance record on September 5, 1972. WA5HNC used eight 6-element Yagis and WB6NMT used a 27dBd rhombic antenna. I visited Joe, WA5HNC, shortly after the contacts and before a mini tornado tore his EME antennas to shreds!

Contact #3 — Louis Anciaux,

WB6NMT (California), to Don Roberts, W7FN (Washington), on April 12, 1973. WB6NMT used the 27dBd rhombic and W7FN eight 4-element Yagis.

Contact #4 — Mike Staal, K6MYC (California), to Tom Baker, K8MMM (Ohio) set a new distance record, on June 24, 1984. K6MYC used four 10-element Yagis and K8MMM four 6-element Yagis.

Contact #5 — Ray Rector, WA4NJP (Georgia), to Ken Holladay, K6HCP (California), on September 17, 1986. Both used four 7-element Yagis.

Now for the 1987 efforts. **Contact #6** — Ray Rector, WA4NJP (Georgia), to Jimmy Treybig, W6JKV (California — the answer to my teaser several months ago: Jimmy used to be W5GBH in Houston in the '50's), set a new distance record on November 14, 1987. WA4NJP used four 8-element Yagis and W6JKV two 10-element Yagis.

Contact #7 — Ray Rector, WA4NJP, to Mike Staal, K6MYC, on November 15, 1987. WA4NJP used four 8-element Yagis and K6MYC was only using one 10-element Yagi!

Contact #8 — Ray, WA4NJP, to Jimmy Treybig, W6JKV, set the current continental U.S. distance record on November 30, 1987. It is also of significant historical importance since it is said to have been the first 6M EME contact to be made with both antenna systems pointed high in the sky, therefore not using horizon gain.

During these recent tests, Shel Rasmusson, SM7BAE (Sweden), has recently heard the signals of Ray, WA4NJP. Also during the 1987 tests, it was hoped that the Hal Lund, ZS6WB, EME group would be involved in some of the contacts, but apparently their system was not working properly.

The latest contact, #9, provided a new milestone in the history of 6M EME activity. It is the first trans-oceanic contact. **Contact #9** — Ray, WA4NJP, to Mike Staal, K6MYC/KH6! This occurred on January 5, 1988, at 0940 UTC, to establish a new distance record for 6M EME! Both stations were using elevation. Well done!

Winter Es contacts

Now to bring you back to earth! It seems that we, in this area, experienced one of the best winter Es seasons to Mexico and Central America in particular, since 1977. We had days of Es activity into those areas, with contacts being made along the Gulf Coast states into Mexico, with Art Cohen, XE1LL, for many nights in a row; Geoff Hilbert, XE1GE, and Toby, XE1FE. Also

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represented were Carlos Fonseca, TI2CF, and Eric Roy, TI2NA.

Word passed on to me about El Salvador had Edgardo, YS1ECB, and a new operator, YS1OD, being worked. Here, we had an opening to KP4 in the winter for the first time I can remember. There were hours and days on end of Es activity into Belize, Costa Rica, El Salvador, Guatemala, Mexico and Nicaragua that went unanswered because the operators there were not aware of the openings. The TV and radio stations were often in here, well into the 90 MHz range. On top of that, there was the normal U.S. Es activity taking place.

... one scientist has predicted this will be the biggest solar cycle yet recorded.

Alfonso Rabaneda, EA9ID, is said to be getting on 6M soon. Bill Sawyer, 9J2WS, is listening on the band. A. Polsbroek, PZ1AP, is reported to be active on 6M now. OA8ABT is active with a 5 over 5 Yagi, and 50W. He hears the FY7 and PY2AA beacons nightly, and works FM, KP2, LU and PY's on a regular basis. He will be in place for four years. Patrick de Verteuil, HH7PV, worked TI2CF during the middle of November.

Herb Spoons, W3IWU (Pennsylvania), reports hearing the HC8SIX Galapagos Island beacon on 50.081 on December 18, 1987. On January 6, 1988, here in San Antonio, Texas, Craig Kennedy, N5TX, worked Ted, HC5K at 2155 UTC, and was hearing HC5T. Tex, N5TX; Pat Paterson, W5VY; and Wayne Wyatt, WB5QBV, worked Ted, HC5K, and also Guido, HC8GR, Galapagos Islands, all apparently on F2.

Wayne also worked Sporadic Es to Virginia, Maryland, and South Carolina from 0300 UTC later last night. As I finish this off the morning of January 7, 1988, the band is open to WB5JAR/0, Colorado and others and into the central United States, with the Boulder and N0LL beacons in.

In his January column in *CQ Magazine*, George Jacobs, W3ASK, comments on Solar Cycle 22. He lists the predictions summed up by the Space Environmental Services Center, NOAA, in Boulder, Colorado in their report #PRF 626 dated September 1, 1987. The predictions of Kane, Sargent, Schatten & Sofia, McNish & Lincoln, and Marshall seem to agree that Solar Cycle 22 will peak during 1990 or by 1991, and that this will be a relatively high cycle. The lowest Peak

Smoothed Sunspot Number predicted was 118 by Sargent, followed by 136 by McNish & Lincoln, 170 by Schatten & Sofia, 172 by Marshall, topped by 185 by Kane. Let us hope that Kane's prediction is the more accurate of the group.

A point to be made here is that these are *smoothed* sunspot number predictions, which means that on many days we should see sunspot numbers far above these. I have heard a third-hand report that one scientist has predicted this will be *the* biggest solar cycle yet recorded. I hope he is right, for it will be a historic time on the 6M band.

If you have been thinking of getting back on 6 or on for the first time, you should be on *now*. As I have been reporting over the past number of months, the activity is already starting to come back under minimal conditions. Don't be one of those who told me after the peak of the last cycle that they meant to get back on, but just did not do it, and missed one of the best periods in the history of 6M.

See you on The Magic Band all of a sudden!

Chelsea radio classes

Chelsea Civil Defense, in cooperation with QRA Radio Club, will sponsor Amateur Radio communications classes evenings at Chelsea High School starting March 8, for those interested in obtaining a Novice or a Technician/General license.

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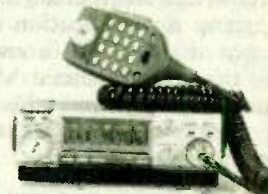


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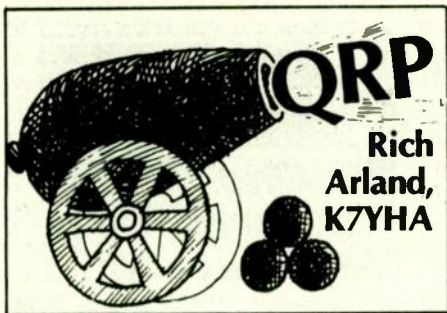
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Happy 91st birthday to George Comstock, W7CJ ... hope you have many more!

Contesting

We are going to slip the "Pine Cone Portable" column promised last month, to the April QRP Column for a couple of reasons. First, March is the start of the QRP Contesting season, so it's a great time to shed some light on QRP contesting. Second, I need to collect some additional data and secure permission to reprint some information about the antenna I used during my "Pine Cone Portable" operation from Newport News Park.

This month, we are going to take a long, hard look at QRP contesting. The phrase "QRP contesting" can easily become a contradiction of terms unless you are prepared to enter the contest arena running 5W or less.

Several months ago, this column had a chart equating power levels and receive S-units. The idea was to show that there was *really* little difference between a QRO and QRP signal using identical antennas over an identical radio path. Unfortunately, all this changes during the chaos of the dreaded Contest Weekend.

Band conditions aside, the amount of QRM generated during a major contest is unbelievable. This doesn't mean you cannot compete successfully; it just means you have some homework to do prior to jumping into the melee.

Luckily for us QRPers, the majority of contesters (especially CW contesters) are *very* good listeners. That makes up about 10 to 15dB right

... do not try and use a new "Killer Antenna" for the first time in a contest.

there! Even though the QRM is very bad, a good CW operator can dig 'em out with amazing ease. Rarely have I had to call more than three or four times using QRP output levels before the Big Gun contest station comes back with a "599 05" report.

Getting ready

A little prior planning will insure that you not only have fun in a major contest, but pick up quite a few new countries, states or prefixes, too. The first thing to look at is the contest itself. Normally, all of the major Amateur Radio publications have a section devoted to contesting. Become familiar with the rules, operating times, classes of entries, multiplier points, bands, and (as dumb as this sounds) the dates and times of the contest. If you don't read the small print carefully, I guarantee that you won't be the first contesteer to show up on the band on the wrong weekend.

Since you are going into this madness with a 20 to 30dB handicap, it might be nice to know if this particular contest has a QRP section included in the rules. The CQ DX World Wide and WPX contests do, but many of the other major contests apparently don't think QRP is a worthwhile pur-

suit. Therefore, they neglect to offer a QRP section.

When there is a QRP section in a contest, you will *only* be competing with your fellow QRP Crazies. However, if there is *not* a QRP section, you and "Bob-the-Big-Gun" will be duking it out toe-to-toe. While the former can be great fun, the latter is *really* dumb.

If the upcoming contest does not have a QRP section, it is better to participate with the idea of "giving away a few points" or picking up some needed states, countries, prefixes, or sharpening your contesting/DXing skills than trying to win against long odds. The latter leads to frustration and can spell the end of a promising QRP contesting career.

The only contests where I really feel competitive are the QRP contests sponsored by the various QRP groups throughout the world. The QRP ARCI sponsors a whole range of contests, from weekend events to three and four-hour "sprints." The G-QRP-Club in the UK also sponsors many contests throughout the year. The "lads down under" sponsor the VK versus The World QRP contest each year. There are no shortage of QRP contests, believe me.

As for the major contests like the CQ DX World Wide, WPX, ARRL DX Contest and others ... well, I use these contests to pick up my country and state totals for QRP DXCC and QRP WAS awards. They also make for great practice and insure that my contesting skills remain at a peak throughout the year. That way I am ready for the QRP contests.

Get plenty of sleep prior to the contest. High protein food (eggs, meat, cheese, etc.) will give you energy and keep you feeling less hungry over long periods of time. Don't take a break and suck down a beer or three. Alcohol of any kind has no place in the diet of an active contest operator, especially in the middle of a contest. It will make you tired, sleepy and dull your senses very quickly.

Work only as long as you are productive. If the QSO/minute count is down, the bands are worked out or prop is the pits, take a break. Get up, stretch, walk around a bit, watch a little of the boob-tube ... break up the routine. If you do some stretching exercises for about two minutes per hour, *every hour*, you will be surprised how refreshed you will be and how much energy you'll have throughout the contest. Nothing beats the feeling you get when you get up from the equipment and take the time to wash your hands and face. It will almost take the place of four to five hours of sleep!

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The aforementioned tips will serve to keep you alert and operating at peak efficiency. This equates to more QSO's/hour and a higher contest score.

Increasing scores

The QRP ARCI spring and fall contests have a number of interesting ways to dramatically increase your scores. First is the power output bonus multiplier. If you elect to run less than 5W, you get a bonus

If you don't read the small print carefully, I guarantee that you won't be the first contester to show up on the band on the wrong weekend.

multiplier. As a matter of fact, if you elect to run less than 1W (that's right . . . we're talking mW here), you receive a bonus multiplier of 10. In other words, once you calculate your score based on QSO's/band, states, countries, provinces worked, you can multiply that score by 10! Not a bad way to get some extra points.

If you are using battery power to run the radios, you can claim an additional bonus multiplier of 1.5. For you solar/wind/natural power fanatics out there, you get a multiplier of 2 instead of 1.5. The combination of running 100% natural power and less than 1W output really tends to make up the difference between the milliwatts and the QRPers running 5W output.

Now I know what you're saying. "Anybody who uses milliwatts in a contest is not playing with a full deck!" Wrongo, Ace. Matter of fact, milliwattling is quite addictive. Once you get over the initial disbelief that you are actually making QSO's running less than 1W, you become quickly intoxicated with the feeling of mW QSO's. As G3RJV would say: "Heady stuff, that!!"

The QRP ARCI also offers bonus points for using homebrew receivers, transmitters and transceivers in various contests. No, Leroy, a Heathkit does not constitute a homebrew rig. Actually, I asked Red Reynolds about the criteria for homebrew and the answer was that if the rig started life as a Heathkit and was extensively modified (i.e., new front end for the HW-7, 30M modification to the HW-8, etc.), that would count as a homebrew receiver or transmitter. Just adding an SWR meter, keyer or dial lights to an HW-7 or 8 won't make it.

If you buy one of the QRP ARCI "Two-Fer" kits, that will count as a homebrew rig. Likewise, if you design your own rig or build up the OXO transmitter in the January 'QRP' col-

umn, obviously that counts as a homebrew rig.

For more info about the QRP ARCI contests, write Red Reynolds, K5VOL, 835 Surrise Rd., Lake Zurich, IL 60047 for details, sample log sheets, cover/summary sheets, etc. Don't forget to include an SASE or a Green Stamp to help with the postage.

QRP ARCI membership

Another idea worth mentioning: why not join the QRP ARC, Interna-

tional? This is the oldest and largest QRP club in the world. Their *QRP Quarterly (QQ)* is a very professional newsletter, chock full of interesting articles by the members on all aspects of QRP operation, homebrewing, antenna projects and modifying equipment.

For the last several years at Dayton Hamvention, the QRP ARCI has had a QRP forum and a large booth. This speaks quite highly of the professionalism of the QRPers involved with the Hamvention. I urge you to support your QRP club.

Membership information is available from the membership chairman, Bill Harding, K4AHK, 10923 Carters Oak Way, Burke, VA 22015. As stated previously, please include an SASE or a Green Stamp to offset postage of the information requested.

QRP contesting can be a lot of fun. It is a real challenge when you run less than 1W. Obviously, your antenna farm must be up to the challenge. The time to do the antenna work is early fall, when the temperatures are tolerable and prior to the harsh weather of winter. Perform the usual inspections of connections, feedline, soldered joints, etc. Replace anything that is suspect.

One thing: do not try and use a new "Killer Antenna" for the first time in a contest. Try it out first for a few weeks prior to the contest, just to be sure it is working up to your expectations. If it doesn't, then you have time to improve it or re-erect your old antenna for the contest weekend.

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There is nothing magic about running low power for a contest, be it QRP contest or a major DX event. All it takes is planning, homework and a set of realistic goals. Search and pounce techniques work the best for the QRPer 'cause it's kinda hard to hold down a frequency with only 5W output.

Don't be intimidated by the QRO operators. Once you find out how easy it is to work DX stations with 5W output or less, you'll wonder why it took you so long to try QRP. Patience and tenacity are the two biggest personality traits a QRPer can possess.

Developing good QRP operating habits is not an overnight process. A lot of trial and error goes on before one ends up with a polished set of operating tactics. The best advice I can give is to hang in there, keep trying and DO NOT give up, even in the face of overwhelming odds. After all, the challenge of QRP contesting is what makes the victory so sweet!

We won't have a book review this month as we are out of space. So let me wish you all "Good Luck" in the upcoming contest season, and I'll be looking forward to working some of you in the contests.

73 es Gud DXing, Rich Arland, K7YHA, 9 Vine St., Shavertown, PA 18708. □

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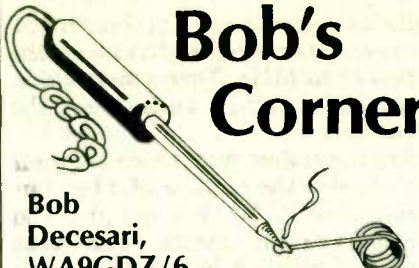
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Bob's Corner



Bob Decesari, WA9GDZ/6

The Windom, a simple forgotten antenna

It seems that whenever I write a column discussing either antennas or radio receivers, I get the most response from our readers. So... here is another antenna project!

In 1976, when I first moved into my W6-land QTH and had just purchased the house, there wasn't much money available to invest into Amateur Radio. The first repair I had to make to the new house was to replace the garbage disposer motor. However, instead of throwing the old motor into the junk can, I took it apart and salvaged all of the copper wire (about #16 AWG) from the motor windings.

I realized that I had more than enough wire for a good antenna. All I

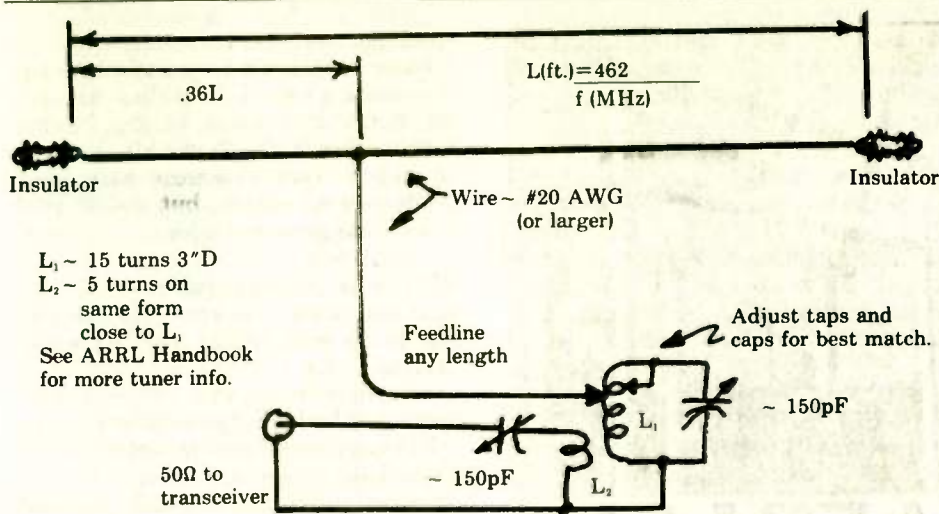


Figure 1 — Basic "Windom" antenna

needed was to stumble across some feedline. Unfortunately, they don't wind motors with coax! However, I remembered that my dad had used a "Windom" antenna for a shortwave receiving antenna many years back and that there was no coax involved with that.

A little searching through radio handbooks brought some data on the "off-center-fed" dipole, more commonly called Windom antenna. Sure enough, it was constructed all with wire, including the feedline. A little more investigating revealed that the antenna was first designed in 1929 by John Byrne and Ed Brooke, two hams employed at the Bell Telephone Labs and originally described in the September 1929 *QST*.

Next to its simplicity, the beauty of the antenna was that it would operate on all even harmonic frequencies. Therefore, a Windom cut for 80M

should work fine on 40, 20 and 10M. Using my garbage disposer wire, I made up a 40M Windom, as I didn't have enough room to swing a full 80M version. The results were pretty much as predicted. The antenna gave a very good account of itself, particularly as it didn't cost a cent!

Figure 1 shows the basic design information required to make a Windom. The feedline length is not critical, or at least doesn't appear to be critical. The off-center tap position is, however, somewhat critical and should be positioned to within a couple of inches (or better) of the calculated position. Unfortunately, as there is no perfect antenna in this world, the antenna is of the high impedance variety — about 600Ω at the feedpoint; some form of tuner or impedance matching unit is necessary to couple it to standard 50Ω output devices.

I have included a schematic of a suitable tuner which will accomplish the job but will not get into the design of the tuner. Check the ARRL Handbooks for additional tuner information.

I intend to cut one of these simple gems for the new 10 MHz band as my present antenna system will not work satisfactorily at that frequency. Once again, it should be an inexpensive way of getting my signal on that new band.

I would be interested in hearing from people who try this antenna. Simply write to me care of **Worldradio**. Incidentally, I am still working on that 160M system and maybe someday will find enough time to finish it off! 73.

One of the most difficult things to give away is kindness — it is usually returned. — *Cort R. Flint.*

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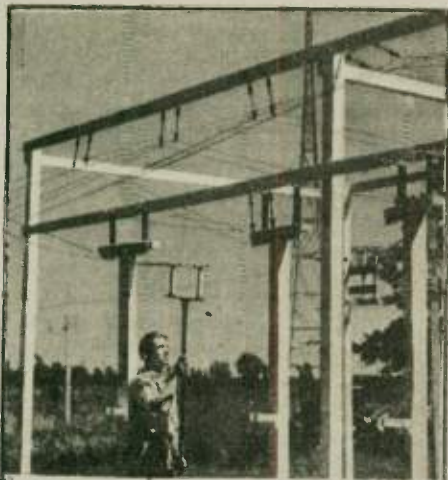
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AERIALS

Kurt N. Sterba

I was taken back. Disbelief overwhelmed me. It was probably the most stunning letter ever received. I thought maybe it was a real tongue-in-cheek joke, but it was not.

A reader, quite irate, took me to task for saying that verticals without radials were a disaster. To prove I was wrong he pointed out that he put a vertical on a big tanker and could (without radials) talk back to the United States from the Pacific.

Now I have, intentionally, over the years, stayed away from Fresnel and Brewster zones and all that. But I must tell you that an ocean of salt water will give one a 10-12dB advantage over a vertical in the old backyard.

Plus, old friend, the whole blasted SHIP was the radial!

Do *NOT* write in and tell me that you've been a ham for XX years and a this for XX years and you know more than I do and all that bilge. I've thrown a signal further than you have with *NO* antenna.

Next month in this space I'll tell you how I worked both coasts, north and south, Canada and DX over 5,000 miles away with two shopping carts and a tuner. Yes, shopping carts. I call it the Piggly-Wiggly. Yep, over 30 sections in Sweepstakes with supermarket steel in the backyard.

The editor of this fine journal received a letter chastising him for having an "unsigned" writer in the newspaper. The person writing in felt that "anonymous" authors were not very credible and all that. I'd be the first to agree. However, I'm too old to accept the agitation from argumentative telephone calls and I'd like to walk around Dayton in peace.

If you think being a columnist is a big bowl of cherries, you're wrong. For

example, one other columnist was sent a letter in which a very foul comment was made about "Lil Paddle." The letter writer mentioned having been a radio officer in the Navy. All I can say to him is that Congress may have made you an officer, but you missed out on the gentleman part.

Now to some nice letters. One from a W2 had questions about a phased vertical system on his roof. The queries had to do with adding another set of verticals. As the letters have been answered in detail, this will be a summary and hopefully of help to others.

First, a phased vertical set will only have about 3dB gain over one vertical, or about half an "S" unit. Adding another pair will only pick up another 3dB over the first pair. A lot of work for not much. The fly in the ointment is — without a good radial system, the vertical will not perform to expectations.

There may be a better answer. If you are willing to put a lot of 16' poles (the verticals) on your roof, go to a configuration of inverted V's in Yagi fashion. Actually, just a 2-element job will give you nearly as much gain as the four verticals, and you've used up a lot less wire and coax.

A Yagi built of wire is still a Yagi. Possibly one of the mini-beams which cover 20-15-10 could be an answer.

For those fighting real problems with neighbors over roof-mounted antennas, don't forget the configuration of the horizontal loop. That is like a quad turned sideways. You may find that a ground screen underneath it may help.

Another letter from a WB3 showed the amateurs he had called on for help could have used a little help themselves. Unfortunately, it seems this one aspect of the game is the most misunderstood. If your antenna is a dipole fed with coax, and use of a tuner results in zero reflected power, according to the SWR indicating device, your power is indeed being radiated.

If saying this really grinds some readers, don't challenge me to a duel at dawn. Instead, spend some time with a good engineering book.

One letter we received bemoaning poor results gave the antenna dimensions. They were off a great deal. Here is a way to check your math calculations; or possibly, your calculator got

a glitch or something. The length of a 1/2-wave antenna is 468 divided by the frequency in MHz. Then you cut that dimension in half for each side of the antenna.

Here's another way to check your work. Divide the number 300 by your frequency in MHz. That will give you the full-wave in meters. Take that figure and divide it in half. There you have a 1/2-wave in meters. Multiply that by .95 (NOTE: that is *point 95*.) Multiply what you have now by 39.37. (NOTE: that is *39 point 37*.) Take your answer and divide by 12. There you

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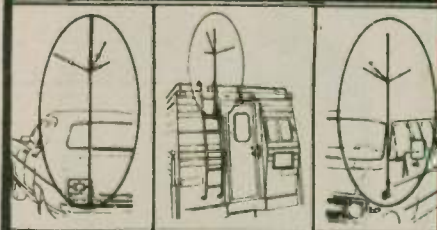
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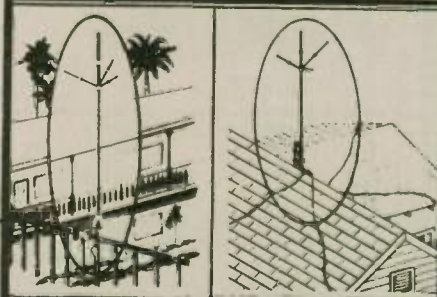
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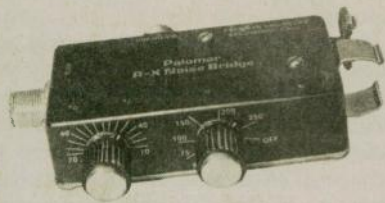
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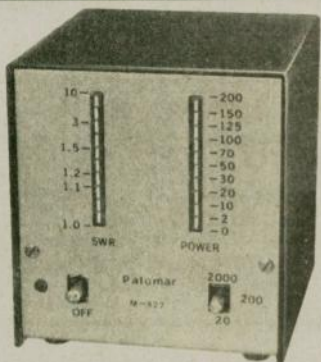


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Remember: If the answer is 32.95, that is not 9½" but rather 11" plus 6/16.

Here's a little tip that doesn't seem to get much notice lately. If you have a dipole up on 40M, just go ahead and use it on 15 as is, and forget whatever SWR you get. It will work out just fine.

Also, if you resurrect the Windom, remember that a good ground connection is an absolute must; do your math work from both sides to insure accuracy. For example, if the connection is supposed to be .36 from one end, do your math and then to check your work, do it .64 from the other end. Then check to see if you are .14 from the center. It is better to be safe than sorry.

DX World

(continued from page 35)

shall be sent via P.O. Box 88, Moscow, USSR, unless otherwise indicated.

2. Cards for V31A made during WPX Contest in May 1987 shall go via K5RX; contacts made during the WW Contest in November 1987 shall go to KB0U.

3. A QSL route via XE1BEF has been reported.

4. Contacts made with 4U1TU February 15-17, 1985, January 30 to February 2, 1987, and December 11-13, 1987, go to AA4V. Contacts made December 12-14, 1987, go to K8GG. Yes, there is a conflict in December, but that is the way it was reported.

5. Applies to contacts made since December 1, 1987.

6. Expect a long delay on the return for these contacts due to their remoteness.

7. This station requests four 22¢ U.S. stamps in lieu of IRC's.

Thanks to contributors KZ3H, W7LR, W5PWG, KA8WOT, W9LNQ, NN7A, K2CL, WK6T, WA4WIP, KD8IW, WA5FIT, KC3EK, Northern California DX Foundation, Western Washington DX Club (K7ZR), Southern California DX Club (NK6A), Carolina DX Association (K2SD), Salt City DX Association

On Field Day, many groups will run to the highest mountain. They will wonder why groups down in the valley beat them out. Easy answer. Mountaintops are terrible for HF. Chairman Kurt gives you this bit of reasoning. If mountaintops were so good for HF, the Voice of America would be on the top of Mt. Whitney. Instead, look where they are.

One on the East Coast is located where tobacco is grown; another on the West Coast is where they grow grapes. Those antennas are on nice rich, moist agricultural soil — not up on some rocky, dry, lossy ground. Take heed.

If you should have any questions, comments, etc., consider yourself invited.

— Another "golden oldie" —

(KB2G), Western New York DX Association (WB2ABD), Greater Milwaukee DX Association (NK9G), Northern Arizona DX Association, *Amateur Radio Action*, *Long Skip* (VE3IPR), *The DX Bulletin* (VP2ML), *QRZ DX* (W5KNE), *DX News Sheet* (G4DYO), *The Long Island DX Bulletin* (W2IYX), and *Inside DX* (N2AU).

February and March are DX contest months, with both ARRL DX tests and the World-Wide WPX bash the end of March. This should help you add some new ones to your country totals. And don't forget K4LTA and company to Grenada, where they will be using the J34 prefix.

To top off the contests is the annual DX gathering in Visalia in April. Be sure to get your reservation to Don Bostrom, N6IC, before the end of February. See last month's column for details. Good DXing de John, N6JM.

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W2ZK nostalgia

Here is an item about a famous ham (now a Silent Key) who several of our readers may remember — Amory “Bud” Waite, W2ZK (*Worldradio*, August 1980, page 19, and October 1980, page 20). The piece was sent as a letter to *Knight Templar Magazine*, and was written by Earl F. Monath, W3QER.

Amory Waite follow-up

I was surprised but pleased to see a picture of and read the tribute to Sir Knight Amory “Bud” Waite and his accomplishments in radio and in polar expedition service and research, especially in the rescue of Brother and Admiral Byrd at the advance base near the South Pole, Antarctica. He deserves having Cape Waite and the Waite Islands named for him.

I had known Bud for many years through another media — *Amateur Radio* — and had talked with him via the same: he was well-known in the “ham” fraternity with the radio call letters W2ZK. He also operated from Little America as KC4USA.

There are approximately 375,000 licensed radio amateurs in the United States, plus about 290,000 in about 250 other countries worldwide. I believe that hams have done much for international public relations and good will. However, we do need to justify our existence; many commercial interests have their eye on our frequencies in the much crowded spectrum. The primary reason the government allows us this privilege is that we perform a service.

Much has been written and recorded of the emergency achievements performed by thousands of hams in establishing communications during floods and earthquakes, and to ships in distress. The Red Cross, the civil defense, blood and eye banks, and others have given testimonial to our services. But, to maintain our status, we must perpetuate. Unfortunately,

the average age of radio amateurs has increased from about 25 to 50. I personally believe that the prime reason for this shrinkage is lack of information being presented to the general public.

Only a few non-technical individuals read *Amateur Radio* periodicals or any telecommunications magazines; however, youth today should become familiarized with this worthwhile hobby which has no age limitations and provides, besides being interesting and fun, a stimulating assist to those who are planning a career in electronics.

I had Sir Knight Waite aboard an international organization of old-time

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!

G.R. “Scott” Cundiff, N5ASD, of Vivian, Louisiana wins our February AMATEUR “HI” with this submission.

A few years ago, our family toured Australia. Being a self-respecting Amateur Radio operator, one of the first orders of business was a visit to the proper governmental office to obtain a “VK” call. After producing my American ticket and a few dollars, I was allowed to choose a call from those available. Since VK4ASD was already issued I reluctantly accepted VK4BSD.

A few weeks later, I was working 2M in Brisbane when a local ham broke into my QSO with, “VK4BSD this is VK4BSD; that’s my call, mate.”

A call to the authorities confirmed that we had both been accidentally given the same call sign! I was asked to stay close to a phone for a few hours and a new call would be issued.

While sitting around the ham shack of our host — VK4AAJ — and awaiting the phone call, we turned on the HF rig to listen around. I was pleasantly surprised to hear an acquaintance of mine in Texas calling CQ. Deciding not to muddy the waters

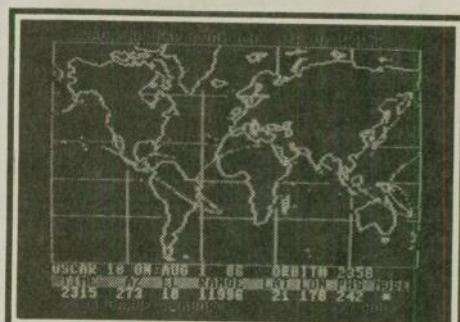
radio operators of which I was secretary. Although I have been a licensed radio operator for approximately 50 years — many years as both an amateur and commercial radio operator — Sir Knight was truly a pioneer “sparks.” I had hoped, some day, to meet him Masonically.

Initially this was written as a living tribute to Bud but due to delays, is now a memorial. The February 1985 issue of *Spark Gap Times* — the magazine of the wireless pioneers — reports that Sir Knight is now a “Silent Key.” He died January 3, 1985. — Submitted by Domenic A. Pallotto, W9BOX

any more than they already were, I responded, using the call VK4AAJ and, in the conversation, informed him that I was actually N5ASD, but also had the Australian call VK4BSD.

You guessed it, right in the middle of the QSO the phone rang. While the Texas station stood by I was told that my new call would be VK4ASY, and I was to begin using it immediately.

In that one QSO, VK4AAJ — who was in reality VK4BSD, or N5ASD — became VK4ASY! And it was all legal, folks!



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— See page 9



Zero District Contest

The Davenport (Iowa) Radio Amateur Club is sponsoring a Zero District QSO Party. This event will run from 1800Z to 2400Z, March 13.

Operation: Zero District stations may work anyone; all others work Zero District stations only. Work each station once per band and mode. Work Zero mobiles again as they change county.

Exchange: Signal report and state. Zero District stations also send county.

Suggested frequencies: CW—60 kHz up from lower band edges; Phone—3.900, 7.270, 14.300 MHz; Novice—3.730, 7.130, 28.360 MHz; VHF—146.52 MHz (no repeater QSO's).

Scoring: Count 1 pt. for phone QSO and 2 pts. for CW QSO. Zero District stations multiply QSO pts. by total of states, Zero District counties, provinces and DXCC countries. Others multiply QSO pts. by number of Zero District counties worked. Any station with over 100 QSO's must include dupe sheet.

There is a special competition feature for Zero District clubs, providing a minimum of three logs are submitted by members of the club. Each log is scored individually; however, the total of all logs will determine the score in this category. Each log must contain the name of the club in order to be considered.

Certificates will be awarded in a variety of categories, depending upon number of entries received. Each club participating in the special Zero District club competition will receive a certificate.

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Mail logs by April 30 to W0BXR, 5305 White Post Rd., Bettendorf, IA 52722. Include SASE for results. □

East Meets West SSB

The Young Ladies' Radio League announces its "East Meets West SSB Contest," to be held 1800-2200 UTC, March 19. All licensed women operators throughout the world are invited to participate.

Procedure: Call "CQ YL East" or "CQ YL West." Those considered "East" are: 1st, 2nd, 3rd, 4th, 8th and 9th call districts, VE1-3, Europe, Africa, South America, Caribbean and Central America (except Mexico). Those considered "West" are: 5th, 6th, 7th, 10th, KL7 and KH6 call districts, VE4-0, Asia, Oceania, Australia, New Zealand and Mexico. Those classified "East" may count only those classified "West" and vice versa.

Operation: All HF bands may be used. No crossband operation. Net contacts, repeater contacts and contacts with OM's don't count. Stations may be worked and counted once on each band. The maximum power output that may be used at any time during the contest is 1500W PEP on SSB.

Exchange: Station worked, RS, QSO number, name and state/province/country.

Suggested frequencies: 80M—3.940-3.970, 40M—7.240-7.270, 20M—14.250-14.280, 15M—21.380-21.410, 10M—28.380-28.410 MHz.

Scoring: Score 1 pt. for each different YL worked. "Western" YL's may count only "Eastern" YL's and "Eastern" YL's may count only "Western" YL's.

Awards: Winner will receive YLRL post-cards.

Logs: Please print or type logs. For each QSO, logs must show the station worked, QSO number given and received, RS(T) given and received, country/state/province of station worked, time, band and date. Logs must also state the power output used and the operating breaks taken. Do not send a carbon copy of your log. All logs must be signed by the operator. No logs will be returned. Indicate claimed score in the log.

Logs must be received by April 18, 1988 by YLRL Vice President Carol Shrader, 4744 Thoroughgood Dr., Virginia Beach, VA 23455, USA. □

YL-ISSB QSO Party

The Phone portion of the 1988 YL-ISSB QSO Party will be held from 0001Z, March 19

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to 2359Z, March 20. The contest is open to all, but the primary focus is on member-to-member contacts.

Categories: Single Op., DX/US Partners and YL/OM Teams.

Frequencies: U.S. General Class portions of 80, 40, 20, 15, 10 and VHF/UHF simplex.

Exchange: Call, report, QTH, name, ISSB# (if member), and YL/OM Teammate and/or DX/U.S. Partner.

Times-out: Logs shall indicate two 6-hour rest periods.

Awards: Certificates for category and QTH winners

Scoring: 1 pt. for member-to-non-member QSO regardless of QTH; 3 pts. for member-to-member QSO within same continent; 6 pts. for member-to-member intercontinental QSO.

Multipliers (member-to-member QSO's only): A) 1 for each DXCC country, U.S. state, VE province, VK and ZL call district, full team worked and pair of partners worked. Also for QSO's with 15+ members on a second band. B) 2 for QSO with one's DX partner and for QSO's with 15+ members on a third band. C) 5 for maintaining an input of 250W or less throughout the party.

Logs: Information is same as exchange information, plus date, time and band. Log times shall indicate at least two six-hour rest periods. Logs must be submitted before April 30, 1988, to Bill Early, WA9AEA (see address below).

Awards: Certificates to category winners and QTH area winners. Results to be announced during the first weekend in June and at the annual convention.

For more information and/or forms, send SASE to Bill Early, WA9AEA, Box 401, McHenry, IL 60050-0401. □

Spring RTTY Contest

The British Amateur Radio Teleprinter Group will sponsor a Spring RTTY Contest from 0200 GMT, Saturday, March 19 to 0200 GMT, Monday, March 21. The total contest period is 48 hours, but not more than 30 hours of operation is permitted. Time spent as listening periods count as operating time. The 18 hours of non-operating time can be taken at any time during the contest period, but off periods may not be less than three hours at a time. Times on the air must be summarized on the summary sheet.

Who: There will be separate categories for single operator, multi-operator and short-wave listener stations.

Bands: 3.5, 7.0, 14.0, 21.0 and 28.0 MHz.

Stations: Stations may not be contacted more than once on any one band, but additional contacts may be made with the same station if a different band is used.

Countries: The ARRL DX Countries list will be used, and in addition, each W/K, VE/VO and VK call area will be counted as a separate country. NOTE: W/K, VE/VO and VK count once each only for QCA purposes.

Messages: Messages will consist of A) *Time GMT*. This must consist of a full four-figure group and the use of the expression "same" or "same as yours" are not permitted. B) *RST and message number*. The number must consist of a three-figure group and start with 001 for the first contact made.

Points: A) All two-way RTTY contacts with other stations within one's own country will score 2 pts. B) All two-way contacts with

other stations outside one's own country will score 10 pts. C) All stations can claim a bonus of 200 pts. for each country worked, including their own. Note that any one country may be counted again if worked on a different band, but continents are counted once only.

NOTE: Proof of contact will be required in cases where the station worked does not appear in any other contest log received or the station worked does not submit a check log.

Scoring: A) Two-way contact pts. \times the total of countries worked. B) Total country pts. \times 200 \times the number of continents worked (max 6). C) Add (A) and (B) together to obtain the final score.

Log and score sheets: Use a separate sheet for each band and indicate all times on the air. Logs must show date, time (GMT), call sign of each station worked, RST and message number sent, time, RST and message number received, and the points claimed.

NOTE: Logs received from shortwave listeners must contain call sign of station heard, report sent by that station and call sign of the station being worked; also date and time (GMT) that the QSO was logged. Incomplete loggings are not eligible for scoring and will be classified as check logs.

The summary sheet should show the full scoring, times on the air, address for correspondence, and in the case of multi-operator stations, the names and call signs of all operators involved with operation of the station during the contest. All logs must be received by May 28, 1988 in order to qualify.

Summary and log sheets: These are available from the contest manager at the address shown below, in the United Kingdom, on receipt of a large (A4) SAE. All other countries outside the U.K. require no envelope but will need 6 IRC's to cover the cost of postage. Send contest and check log to: Peter Adams, G6LZB, 464 Whippendell Rd., Watford, Herts, ENGLAND WD1 7PT.

The judge's decision will be final; no correspondence can be entered into in respect of incorrect or late entries. All logs submitted shall remain the property of the British Amateur Radio Teleprinter Group.

Awards: Certificates will be awarded to the leading stations in each of the three groups, the top station in each continent and to the top station in each W/K, VE/VO and VK call area.

Additional notes: If a contestant manages to contact 25 or more different countries on two-way RTTY during the contest, a claim may be made for the Quarter Century Award (QCA) issued by BARTG and for which a charge of \$4 U.S. or 18 IRC's is made. Holders of existing QCA awards should indicate and list new countries to be added to their existing records. Make your claim at the same time you send in your log.

However, in view of the high volume of work which the contest manager will have to deal with, it will not be possible to prepare and dispatch any new awards or to update any existing records until the final results of the contest have been evaluated and published.

Also, if any contestant contacts stations on two-way RTTY within each of the six continents and the BARTG contest manager receives either a contest log or a check log from each of the six stations concerned, a

Praise does wonders for the sense of hearing. — *Bits & Pieces*

claim may be made for the WAC Award issued by the *American RTTY Journal*. The necessary information will be sent to the *Journal* after the contest results have been evaluated and dispatched. The *Journal* will issue the WAC Award. (A charge is now made for this award.)

Wisconsin QSO Party

The West Allis Radio Amateur Club is again sponsoring the Wisconsin QSO Party for 1988. Operation will last from 1800Z, March 20 to 0100Z, March 21.

Modes: CW and Phone. All stations may be worked once per mode on each band. In addition, mobiles may be worked once per mode per county that they operate from. *No repeater QSO's allowed.*

Entry classes: Single Operator, Fixed; Single Operator, Mobile; Single Operator, Novice; Single Operator, Technician; Multi Operator, Fixed; Multi Operator, Mobile; Multi Operator, Novice; and Multi Operator, Technician.

Exchange: Wisconsin stations send county. Non-Wisconsin stations send state/province.

Frequencies (suggested): CW — 3550, 3725, 7050, 7125, 14050, 21150 (other bands may be used). Phone — 3890, 7290, 14290, 28400.

Scoring: Phone contacts count 1 QSO pt.; CW contacts count 2 QSO pts. *Wisconsin stations* — Multiply the sum of QSO points by the sum of Wisconsin counties (max. 72), plus states (max. 50) plus provinces (max. 13). (NOTE: DX countries count for QSO points but not as multipliers.) *Non-Wisconsin stations* — Multiply the sum of QSO pts. by the number of Wisconsin counties (max. 72).

Bonus: *Wisconsin mobiles/portables* — Add 500 bonus pts. for each county that you operate from, outside your home county, with a minimum of 15 QSO's per county to qualify.

Logs: Anyone planning to operate in this contest should request rules and entry sheet — send SASE. See address below. Entries must contain a log consisting of time (GMT), call, band, state/province, Wisconsin county, mode and a complete score summary (including your name, address and call). Circle new multipliers as worked. Logs containing more than 100 QSO's must be accompanied by a dupe sheet (separate dupe sheet for each mode). Mobile entries must indicate county changes in log and submit a separate dupe sheet for each county.

Entries must be postmarked by April 15, 1988 and sent to: Wisconsin QSO Party, West Allis RAC, P.O. Box 1072, Milwaukee, WI 53201.

Awards: *Non-Wisconsin* — Awards will be presented to the highest single operator score in each single operator category in each state/province. *Wisconsin* — Awards will be presented to the following: a) 10 highest single operator scores in each entry class; b) Highest multi-operator score in each entry class; and c) Highest aggregate club score (club member stations to be located within 50 miles of the club except for mobiles).

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Connecticut

The 2nd Annual RADIO AMATEUR SOCIETY OF NORWICH (RASON) Auction will be held March 26 at the Uncasville VFW Hall, Raymond Hill Road (in back of Wonder Bread on Rt. 32 south of Norwich).

Set-up at 9 a.m.; auction from 10 a.m. until sold out. Admission is free. Food available. Bring your equipment to be auctioned.

Talk-in on 146.13/73.

Call Dan Brochu, KY1F, at (203) 536-0187 for more information.

Florida

The PLAYGROUND ARC will hold their 18th Annual North Florida Ham Swapfest on March 19-20 at the Shrine Fairgrounds in north Ft. Walton Beach. Doors open at 8 a.m. both days.

FCC exams Saturday only. ARRL, MARS and QCWA meetings. Banquet Saturday night. RV parking.

Talk-in on 146.19/79 and 52.

For information, write PARC, P.O. Box 873, Ft. Walton Beach, FL 32548.

Georgia

The DALTON ARC will hold its annual hamfest at the North Georgia Fairgrounds, Saturday, February 27, 9 a.m. to 3 p.m. VE exams will be provided through WCARS VEC at the Western Sizzling Family Steak House at 9:30 a.m.

Talk-in on 145.23; Novices 224.74.

Further information will be available on local 2M and HF nets in the weeks before the hamfest. Table and exam reservations may be made by writing to Dalton ARC, P.O. Box 143, Dalton, GA 30722-0143.

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Illinois

The LIBERTYVILLE and MUNDELEIN ARS (LAMARS) will present LAMARS-FEST 1988 on March 27, at the Lake County Fairgrounds in Grayslake. From northbound I-294, exit right Rt. 120 West, turn right on Rt. 45; fairgrounds is two blocks on left. From southbound I-294, exit Rt. 120 West also. Doors open from 8 a.m. to 2 p.m.

Large indoor electronic and radio swapfest, commercial exhibitors, code speed testing and prize drawings. Rest area, free parking, public cafeteria. Admission \$2 in advance, \$3 at the door. Commercial space by reservation only; set-up 6 a.m.

Talk-in 147.63-.03 and 146.52.

For more information, contact Chairman Marc Abramson, KC9VW, 1312 Mill Creek Dr., Buffalo Grove, IL 60089; (312) 255-0642 8-10 p.m. CST, or (312) 455-8890. □

Indiana

The RANDOLPH ARA will hold a hamfest on March 6, at the Winchester National Guard Armory, from 8 a.m. to 3 p.m. Activities include electronics and Amateur Radio exams. Food and drinks available; free parking.

Admission \$3 advance, \$4 at the door; children 12 and under free with an adult. Tables (3' x 6') and space \$5; space only \$3. Set-up March 5, 6-8 p.m. EST and March 6, 6-8 a.m.

Talk-in on 147.30/90 and 224.04/44.

More information from RARA, c/o Ken-

drick Robbins, W9QUH, RR 1, Box 389, Parker City, IN 47368; (317) 468-6568. □

Iowa

The DAVENPORT RADIO AMATEUR CLUB will host its annual hamfest Sunday, February 28, from 8 a.m. to 3 p.m. at the Davenport Masonic Temple. The event will feature a large indoor flea market, walk-in VE testing, food and prizes.

For flea market tables and advance tickets: Davenport RAC, 2131 Myrtle, Davenport, IA 52804. □

Kentucky

The LINCOLN TRAIL ARC's Hamfest Committee announces the Kentucky ARRL State Convention, to be held at Pritchard Community Center, Elizabethtown, on Saturday, March 26.

Activities include ARRL VE walk-in testing and numerous forums. Free parking, flea market and new dealers. Nearby motels at reasonable rates. Tickets are \$4 in advance, \$5 at the door. Vendor spaces are \$5 each, including table and chair. (Each vendor must buy regular admission ticket.)

Talk-in on 146.38/98 and 146.52.

For advance tickets and set-up reservations, and information on exams, contact Chuck Strain, AA4ZD, P.O. Box 342, Vine Grove, KY 40175; (502) 351-1715. □

Minnesota

The RED RIVER RADIO AMATEURS are sponsoring Hobbie Hi-Tech 1988 at the Ramada Inn in Moorhead, March 26.

There will be a large indoor flea market and several commercial exhibits. Seminars and a special recognition lunch for those involved with the Barnsville digipeater/repeater. In the evening the annual kick-off banquet for the Skywarn Season will be held, with speakers from the NWS and Red Cross. Regular VE test in the morning.

Talk-in on 146.76.

For more information, contact Tim Gooding, KDØYX, 1006 Sheyenne St., West Fargo, ND 58078; (701) 282-6630. □

New Jersey

The SHORE POINTS ARC invites everyone to its "Springfest '88" on Saturday, March 12, at the Atlantic County 4-H Center, Rt. 50, Egg Harbor City (between Rt. 30 and Atlantic City Expressway exit 17). Doors open at 9 a.m.; set-up at 7 a.m.

Featured will be 8,000 sq. ft. of heated indoor selling space, with additional space for outdoor tailgating, weather permitting. Limited AC available indoors. Sellers: \$5 per space (tables limited—request if needed); buyers: \$3. Food and drinks.

Talk-in on 146.385/985 and 146.52.

For more information, write to SPARC, P.O. Box 142, Absecon, NJ 08201. □

The 1988 North Jersey Hamfest, sponsored by the SPLIT ROCK ARA, will be held Saturday, March 19, at the Dover Armory in Dover, a half-mile south of I-80 Exit 34 on Rt. 15. Open to the public at 8 a.m., to vendors at 6 a.m.

Admission is \$3; XYL's and children under 12 free. Tables \$7 in advance, \$8 at the door (subject to availability). Tailgating \$5. VE exams by West Morris Wireless Club. Free parking and refreshments.

Talk-in on 146.985 and .52.

For more information, write SARA Hamfest, P.O. Box 610, Rockaway, NJ 07866. Vendor pre-sales only, call (201) 790-8787. □

The DELAWARE VALLEY RADIO ASSOCIATION will sponsor HAMCOMP '88, their 16th annual flea market of Amateur Radio and computer equipment on Sunday, March 27, from 8 a.m. to 2 p.m. Location is the New Jersey National Guard 112th Field Artillery Armory, Eggerts Crossing Road, Lawrence Township, about 2 miles south of the I-95, Rt. 206 interchange.

Admission is \$3 in advance, \$4 at the door. Indoor selling spaces are \$10 (wall space) or \$7; outdoor spaces are \$6. Sellers provide own tables. Doors open at 6 a.m. for vendors, 8 a.m. for the public. Refreshments and plenty of free parking. The facility has handicap parking and is wheelchair accessible.

Talk-in on 146.07-.67.

For information and space reservations, write to HAMCOMP '88, c/o KB2ZY, Box 441B, R.D. #1, Stockton, NJ 80559 (SASE please). □

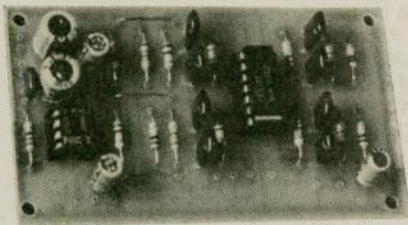
North Carolina

The MECKLENBURG AMATEUR RADIO SOCIETY will sponsor the Charlotte Hamfest and Computerfair, an ARRL-sanctioned hamfest, on March 19-20 at the Charlotte Convention Center, 4th and College Streets in uptown Charlotte. Open Saturday, 9 a.m. to 5 p.m., and Sunday, 9 a.m. to 3 p.m.

Indoors (87,000 sq. ft.) will be 150 commercial exhibit booths and over 500 flea market tables. Major manufacturers and dealers. Convenient nearby parking, restaurants and food concessions inside the convention center.

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One of the largest hamfests in the Southeast, with a full slate of programs and forums, and license exams by the Charlotte VEC on March 20. Hourly gifts and major awards both days.

Tickets \$5 in advance, \$6 at the door; tables \$10 in advance, \$12 at the door. Children under 12 free. Tickets and tables are good for both days.

Talk-in on W4BFB/r on 145.29 (-600).

Reservations and inquiries: Charlotte Hamfest, P.O. Box 221136, Charlotte, NC 28222-1136. □

Wisconsin

The FOX CITIES ARC will sponsor "SWAPFEST 88" at Appleton East H.S., 2121 Emmers Lane, Appleton, on March 12.

Tables \$5, by reservation only. Testing pre-registration by February 12 to Larry Siebers, KD9IA. Doors open for sellers at 6 a.m., for others at 8 a.m.

For table reservations or other information, contact: Don Baker, NB9J, 621 W. 7th St., Kaukauna, WI 54130; (414) 766-3886. □

Wyoming

The UNIVERSITY ARC will be sponsoring the Wyoming State Hamfest on Saturday, July 9, at the Holiday Inn in Laramie. Formerly the Chutes Inn, Holiday Inn is located just southeast of the intersection of I-80 and U.S. 287.

The main events are scheduled for Saturday, but there will be a wrap-up Sunday the 10th. Events include volunteer exams, swap tables, code contest, door prizes, banquet with speaker, and Saturday night entertainment and dancing.

Talk-in on 146.01/.61.

For more information or reservations, write to University ARC, P.O. Box 3625, Laramie, WY 82071. □



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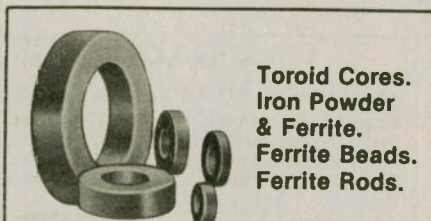
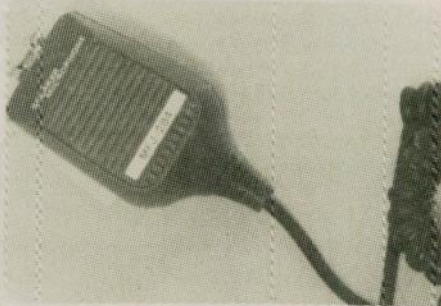
Information in "New Products" is supplied by the manufacturers to acquaint *Worldradio* readers with new products on the market.

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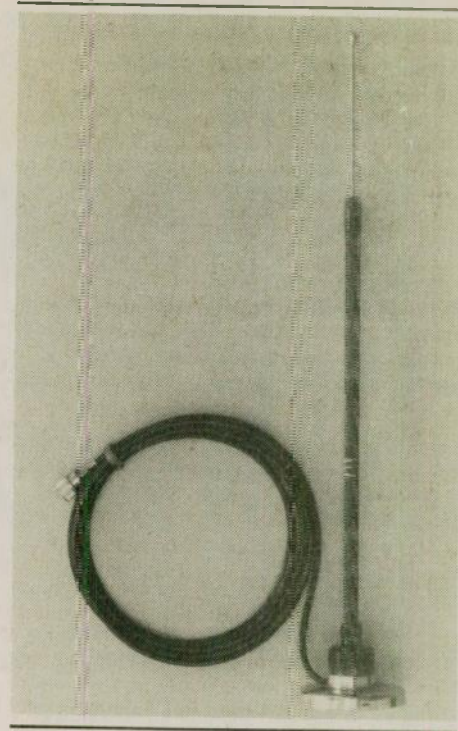


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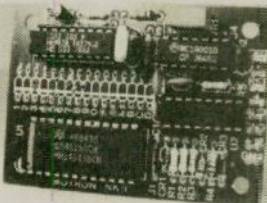
Triband mobile antenna

The Austin Metro Antenna puts you on the three most active repeater bands with a single 15" antenna on your car roof and a single cable to your set(s). The antenna functions as a low SWR patent-applied-for 1/4-wave vertical on 2M and 1.25M and a 3/4-wave on 70cm.

This is the mobile companion to the respected Austin Triband Fixed Suburban Antenna (see *Worldradio*, January 1988, page 58) and uses a Motorola-type screw connector at its base.

Mobile Metro Antenna is priced a modest \$39.95 and provides three-band operation. Matching magnet mount is \$22.50. Ed Noll, W3FQJ, Books and Antennas, P.O. Box 75, Chalfont, PA 18914. □

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Novice welcome

Thirty prominent Amateur Radio equipment manufacturers and accessory suppliers, plus five Amateur Radio dealers, are taking part in the Gordon West Radio School Novice welcome package. Their literature sheets, rebate coupons and in-store discount offers are included with every 21-day Novice course sent out to home study mail order students.

"Many of our home radio students are not located in a city with an Amateur Radio store. The industry literature package now brings the store's literature rack to them!" comments Gordon West, president of Radio School, instructor and writer.

"ICOM, Kenwood and Yaesu include gift certificates worth as much as \$25 apiece toward the purchase of new radio gear. Several magazines include free issue certificates plus subscription discounts. Amateur Radio accessory manufacturers send along their full-line color catalogs, and several manufacturers also include 'tip sheets' on how to set up a beginner Novice voice-class station. There are over 50 individual literature sheets sent out with every one of our beginner courses," adds West.

The Gordon West 21-day Novice course includes two stereo code-learning cassettes plus the West-written 112-page Novice book. Also included is the FCC Form 610, a frequency reference chart, laminated world map, and a sample Novice exam package. Everything is included for the Novice applicant to pass the test as well as learn more about all of the exciting Amateur Radio equipment and accessories available for their new hobby.

For more information, write Gordon West

Radio School, 2414 College Dr., Costa Mesa, CA 92626. The 21-day Novice course with all the literature and rebates is just \$19.95 plus \$2.50 postage and handling. □

Computer newsletter

QZX, a national Sinclair computer newsletter, has just published a 60-page index book.

QZX publishes articles, news and programs on the use of all the Sinclair computers for communications. Most of the subscribers, who come from all states and over 20 countries, are radio amateurs who use their Sinclair computers in their radio stations.

The index book is a bound Xerox copy of the covers of all the monthly issues since December 1982. The covers list all the articles and programs which have appeared along with the authors and, in most cases, some indication of the specific computer for which the program was written.

The index book can be obtained by sending \$5 (plus \$1 shipping and handling) to: QZX, 2025 O'Donnell, Las Cruces, NM 88001. □

•••••

Contact Worldradio for hamfest prizes

1988 wall calendar

Here is a unique opportunity to obtain a large Amateur Radio wall calendar. This 13.5" X 19.5" red-white-and-blue calendar features the words "Amateur Radio" in very large lettering in its top half. There is plenty of space where personalized information (name, address and/or telephone number) can be added. There is adequate space in each date block to note operating events and appointments. Good wall calendars like this are scarce.

We have these calendars available for purchase and pickup at the present time. Calendar price is \$4 each when picked up at W6LS, 2814 Empire Ave., Burbank, CA 91504. The price is \$5 each for calendars being mailed to American, Canadian and Mexican addresses. Each calendar comes in a mailing wrapper. Quantities are limited, so get your order in early.

These calendars make excellent gifts to friends who are amateurs. They provide much-needed exposure for Amateur Radio when they are posted in barber shops, business offices, public libraries, recreation buildings, schools and stores where they can be seen by the general public. If you are sending a calendar to a friend as a gift, show your own name, call sign, and return address on the mailing label you supply.

If mailing is desired, include a separate address label for each calendar. Checks and money orders should be made payable to the Lockheed ARC or W6LS. Send mailing labels and full payment to: Lockheed ARC - W6LS, 2814 Empire Ave., Burbank, CA 91504.

If you want to pick up a calendar, you can do so at any club meeting. If you do not want to wait until a meeting to get a calendar, call (818) 842-1863 to ascertain that someone will be at W6LS before you go there to pick up a calendar. Someone is usually at the club Monday and Thursday evenings. □

New from Engineering Consulting

Engineering Consulting announces several new features for the Super Com Shack 64 remote base and repeater controller. The advanced beam rotator control option (model HM-1) is now available. This new option allows your system to control the Ham "M"; Ham 4 or similar (CDR) rotators, complete with voice announced bearing.

The rotor option works in conjunction with

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the CS-8 relay card and the new HM-1 voltage to frequency converter which plugs into the cassette port. The HM-1 samples a voltage from the rotor control box meter, which provides beam heading accurate to 1°.

A simple and easy-to-install, interconnect cable is used to parallel the control switches of the rotor control box. This allows both manual and remote control of the rotor. A voltage sampled from the rotor control box is converted into digital pulses which are interpreted by the computer. This results in very accurate bearing resolution. The pulse width is sampled and measured as a digital input at the C64/128 cassette port. The Model HM-1 rotor control interface supports zero or 360° North as the center of the range, with 180° as the stopping point or reference. A simple calibrate program is provided, which can be used to display and calibrate the beam heading with the control box. Once installed, the beam may be controlled from the control box as before or via touchtones entered from a mobile or HT.

The HM-1 option (\$49.95) is available for use with the Super Com Shack 64 and functions in conjunction with the Model CS-8 relay control board and CS64S version 3.0 software.

Version 3.0 software provides many additional features to all Super Comshack 64 users who have purchased the Model CS64S system since May 1, 1987 as part of the free upgrade policy. The Super Com Shack 64 control system (\$349.95) is available from Engineering Consulting, 583 Candlewood St., Brea, CA 92621; (714) 671-2009. □

Comments on Maxcom

(continued from page 41)

the wrong direction in promoting their product. As you probably know, Barker and Williamson sells several models of wideband folded dipoles (similar to the T2FD antenna described in *QST* and *CQ* in the late '40s and early '50s, I believe), and while they stress the wideband characteristics of those products, they are also up front about the fact that the radiated signal on the lower bands will typically be 2 S-units down from a resonant dipole on the same frequency. Also, the prices for their antennas are a small fraction of Maxcom's prices.

Maxcom is expensive for what you get, in my opinion, but I figure you are allowed to charge what someone is willing to pay, provided the buyer understands what it is he or she is purchasing. I think that is Maxcom's major shortcoming — too many exclamation marks in their information and not enough substance. Their attitude made it tough to say many positive things in my review of their product.

Thanks again for your assistance. If you come up with more information on the Maxcom, I would like to hear about it.

Sincerely,

ARLISS N. THOMPSON, W7XU
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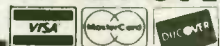


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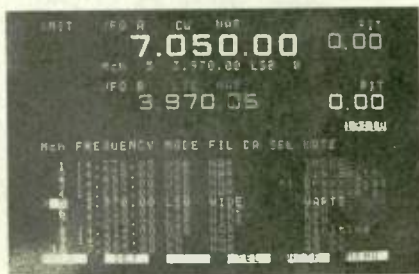
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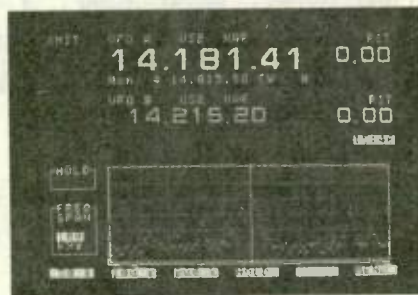
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