

Worldradio

Year 23, Issue 8

February 1994 • \$1.25

In Memory of

Lloyd Dayton Colvin

Born 24 April 1915
Spokane, Washington

Died 14 December 1993
Istanbul, Turkey

Lloyd led a full and interesting life. He became a ham operator at the age of 12 and continued this hobby until the end, holding the call of TA1/W6KG. He traveled in 223 countries, operating radio in over 100 of them. He served 30 years in the U.S. Army, retiring as Lt. Colonel. As general contractor and President of Drake Builders he built numerous houses, apartment buildings and hospitals in the Bay Area. He is survived by his wife Iris Colvin, his daughter Joy Gilcrease, and his granddaughters Justine and Vanessa Gilcrease. His remains will be scattered at sea and there will be no public ceremony.

Renowned DXer Lloyd Colvin, W6KG, is a silent key. More information next month.

Salvation Army and ham radio working together

ANN SHAVER, AH6KY

Salvation Army Team Emergency Radio Network (SATERN) volunteers recently spent a weekend at Camp Wonderland near Kenosha, Wisconsin, sharpening their emergency operating skills, running a special event station and generally enjoying good fellowship in a park-like setting. With more than 125 registered participants, Amateur Radio operators and other relief workers came from as far away as Ohio, Pennsylvania and Hawaii for the conference.

Organized by Pat McPherson, WW9E, Director of Emergency Services for the Chicago Metropolitan district of the Salvation Army, the conference featured discussions of recent relief activities regarding the extensive Mississippi River flooding as well as small-group sessions on emergency communications from disaster sites, emergency antenna systems and digital communications. Although

many of the speakers were members or employees of the Salvation Army, SATERN volunteers generally had no other connections with the Army than their willingness to help in time of need.

"This is the second time we've held a seminar like this," remarked Major McPherson. "Bringing together a variety of relief workers — canteen volunteers, equipment-maintenance workers, communicators, what have you — enhances our individual skills and better quips us to respond to God's call for service to those who need this vital ministry."

Developed about a decade ago, the purpose of SATERN is to train personnel skilled in emergency communications and message handling, who will support Salvation Army operations in local, regional and international disaster situations. "One of the additional benefits of SATERN," Major

(please turn to page 11)

FCC awaiting "vanity call" comments

Comments requested on adoption of vanity call sign system for amateur radio operators. (PR docket no. 93-305)

"The Commission today (13 December, 1993) proposed to allow amateur radio operators to choose their own call signs. In light of this decision, the Commission by separate action vacated the rule provisions that established private entity call sign administrators and reinstated the prior rules.

"Each amateur station licensed by the Commission is assigned a unique call sign with the purpose of providing over-the-air identification of the station while it is transmitting. Many amateur radio operators have expressed an interest in being able to choose their own call signs, which might be their initials, nickname or a personal statement.

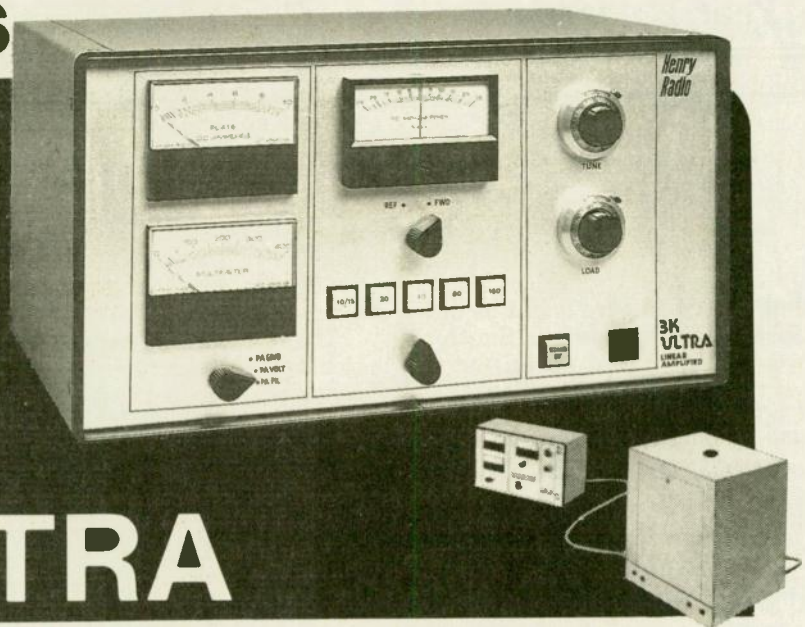
"The Commission's current automated processing system does not have the capability to assign call signs other than sequentially. However, the Private Radio Bureau is now installing a new automated licensing system which will permit vanity call signs to be selected. Thus, the Commission proposes that such call signs be available, provided that they have not been previously assigned. At the same time, the sequential call sign system would remain in place for those radio operators who do not want a vanity call sign.

"The Commission supports this proposal which will allow amateur radio operators and the Commission to benefit from a creative use of improved technology. Amateur radio operators will be able to personalize their call sign and express themselves using the airwaves. The Commission will be able to improve the efficiency of its licensing process and better serve its customers, amateur radio operators.

(please turn to page 13)

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Attention kids

I am looking to interview youngsters for the Dayton Hamvention Youth Forum in April, 1994.

Interested children should send a letter or resume, and be sure to include their phone number. As an alternative, they may leave a message at (718) 983-1416. Mail may be sent to me at the following address: Carole Perry, WB2MGP, P.O. Box 13146, Staten Island, NY, 10313-0006.

Genealogy by packet

HARRY V. WIANT, JR., N8TJE

Many of us are interested in our family history. Packet may provide a useful tool for such research. The method described here might be difficult if your family name is Smith or Brown, but it proved useful for my rather rare family name (Wiant).

Thanks to Mike Palmer, K8LG, a search of his data base SAM, containing all USA calls, revealed five hams with the last name, Wiant. I am attempting to contact them by packet to trace a bit of family history.

Another rather unique use can be made of these data. The population of the U.S. is about 270 million. K8LG's data base of U.S. hams has 586,298 names, or about 1 ham per 460 persons in the U.S. Therefore, I can predict the number of persons in the U.S. with my last name as $5 \times 460 = 2300$. I never dreamed there might be that many of us around (too many some might say).

A data base with names, addresses, and calls of all U.S. hams is a valuable resource. We are fortunate to have it so readily available. — *Solid Copy, The Monthly Newsletter of the Monongalia Wireless Association in Morgantown, WV.*

ZD8 calls

Ascension ARC records showing call-sign allocations over the years have been destroyed. We are holding large numbers of QSL cards for various ZD8 calls, mainly given to short-term visitors of whom we have no idea of names or current addresses. Grateful if anyone who has worked with a ZD8 call could provide details of same together with dates of operations, full name and current address.

The last batch of cards from a particular bureau contained three from contacts made in 1964! On receipt of this information any cards we can match to you will be dispatched direct.

— *Chris Salmon, ZD8X, CSO, P.O. Box 2, Ascension Island, South Atlantic Ocean.*

Hams had busy year

M. L. GIBSON, W7JIE

In the Seattle area hams have had a busy year. Busy? Doing what? Well, for one thing, the Puget Sound area hams had 71 listed public service events to provide communications during 1993. From parades, to visits with Santa the last scheduled event was on

21 December, just in time to take a break for Christmas.

All volunteer, but organized by hams for hams. As an example, the Seattle Sea-Fair is an annual event starting in May and running through the summer with parades, salmon derbys, dances, contests, exhibitions and many other public events. Many of these Sea-Fair events require good solid communications for public safety. Parades are the big users of ham communications.

Chuck, WA7EBH, is an official Sea-Fair Commodore and had the responsibility for all Sea-Fair communications. This year Chuck had more than 110 hams on his duty roster. During the Sea-Fair "Torch Light Parade" there were 75 hams used on this one four-hour parade. Using several 2-meter simplex and repeater frequencies, 224 and 450 MHz channels, Chuck and his crew, with handhelds and a couple of base stations, managed to handle the calls for first aid, fire truck movement, aid cars, and all the usual big parade emergencies. It went well as usual, and the parade officials often said, "We could not do this job without you hams. Thanks." And Chuck, who has been doing this for at least 15 years, will soon be starting to gather the basics for next year's Sea-Fair activities. WR

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

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

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

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

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PUBLISHER'S MICROPHONE

We now present a list of Amateur Radio operators whose signals are so clean, whose operating is so impeccable that the DX stations send their cards first.

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

- James Carroll, W1UYL, Lynn, MA
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- Ray Balch, K6VX, Macdoel, CA
- Ramon Gandia, AL7X, Nome, AK

During the Sweepstakes contest I heard one operator say, "I'm holding the mic with one hand and typing on the computer with my other hand."

I thought "holding the mic" during contests (and even regular operating) had gone the way of the Dodo.

The boom mic makes operating so

much nicer. First, there isn't the wear and tear on the elbow where it meets the table. There is "tennis elbow," is there also "ham elbow?"

The boom mic also allows one not to be constantly leaning where the mic is arm-supported on the table. One can lean back in the chair and be comfortable.

Some prefer the mic on a stand on the table. The boom mic usage clears away that space on the table where the mic stand sits. Again, one is not forced to be crouched over the table. You can turn your head and not be "off-mic".

There are those who have hung the mic upside down, suspended from the ceiling by a triangle of cord, like a broadcast station. While the desk is then cleared, the operator is still confined to having his face in one spot.

A solution to the push-to-talk button on the hand mic, and the push-down bar on the stand mic is of course VOX. That is smooth operating. Those who are uncomfortable with VOX may prefer a footswitch. You now have hands-free operating but must sit so your foot can reach the footswitch.

However almost any solution is better than blisters on the elbow and the thumb. And, two-hand typing is quicker, even for those who practice two-finger typing.

The bane of contesters and DXers is the station on the other end that just seems to go on endlessly (it seems "QRZed," without giving a call. Besides being aggravating it leads to a lot of "we've worked before" when the frustrated operator just goes ahead and calls without even knowing who it is he called.

What would be nice (and in this digital age probably quite inexpensive) is if every time the DX station transmitted, a burst went out that would, on a digital readout at the receiving station, spell out the transmitted call-sign.

Speaking of digital, now with a non-CW required license, the opportunity to partake in Amateur Radio is opened up to a great number of people who were frozen out. I'm speaking of the deaf. There are, in this country, about five million people who are hearing impaired.

They could take the theory test for the applicable privileges and just type away in various modes.

It would be good if a special effort could be made to reach them through their publications or local organizations because they might be very appreciative of being able to engage in what Amateur Radio has to offer.

The November issue of the magazine for members of the Radio Society of Great Britain contained the results of their National Field Day. It was the 60th anniversary of the event. Chris Burbanks, G3SJJ, reminisced about his first one, 30 years ago.

"In 1963, we had separate transmitters and receivers, keys were either 'straight' or mechanical 'bugs.' The technology may have changed but the teamwork, friendship, camaraderie, competitiveness and most of all, the fun and enjoyment still live on."

For those struggling to get to 5 wpm or higher, or much higher, some extra practice time can be obtained by taking a code tape and a small tape recorder in the car on the run to work or errands.

— Armond, N6WR

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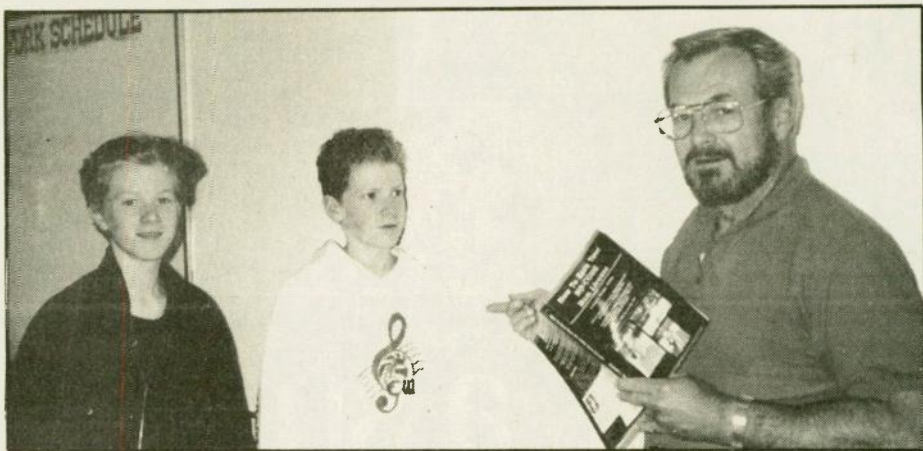
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Larry Luchi, W7KZE with brothers Joe and Bill Waldher.

Radio summer school

LARRY R. LUCHI, W7KZE

As a child I was introduced to Amateur Radio and have continued my studies in electronics with a ham ticket for over 40 years. Now, as the Electronics Technology teacher at Sno-Isle Skills Center, my time is spent teaching my hobby. When I was in the sixth grade, Del Avery, W7BGH, conducted my first Amateur Radio exam; twelve weeks later I was on the air. Del is now a silent key. I have dedicated my study guide to this most inspiring teacher.

Sno-Isle Skills Center is a vocational high school that serves 25 high schools with a student population of approximately 850 eleventh and twelfth graders. The school's name is derived from two counties, Snohomish and Island counties, and is located in Everett, Washington. One can see the pristine Olympic Mountains to the west and the majestic North Cascades to the east just 25 miles north of Seattle.

Students are bused to the skills center for two three-hour blocks of instruction each day; a morning class

and an afternoon class. The students receive six elective credits a year for their training. In the third quarter of this two year program, I teach Amateur Radio, (communications electronics), and all of my students have achieved a Novice/Technician or higher level license. Kenney Connerys, a senior, was acting as my teacher's aide.

At the completion of their first year we award each student with a handsome certificate of completion which the American Radio Relay League supplies. They also receive three continuing education units that the students can use for college credit.

Every school year, I teach a summer school course on Amateur Radio. Not only to help students gain their Amateur Radio license, but also to introduce them to electronics in a hands-on training environment as a technology that they may choose to pursue after high school.

Summer school in Washington state is fun. The Superintendent of Public Instruction allocates funds each year for a 90-hour, one credit course of instruction for ninth through twelfth graders. The only cost to the student is bus fare to school and their lunch.

For the past seven summers, I have taught an Amateur Radio class from 8:30 a.m. to 2:30 p.m. with great success. My seventh year was to prove to be the best, with more interest and the most students. I had just completed

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Where's the Fun?

The 10 meter test had started, and I expected the band to open about the time I arrived at the motel. Rig and gel cell were in the trunk. Maxi-J was right beside. rolled up inside the launcher pail. Room with a view. Maxi takes off from the balcony sloping down to a tree. His tail slips under the door. And I'm 59 in Japan.

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my book "No-Code Ham Radio License Guide" for use with this class. This was a prototype that I have not had in past summer school sessions.

This year summer school started 21 June at 8:30 a.m. with nineteen students, with our normal rain for the Puget Sound. After introductions, I explained the course of instruction and gave the students a view of ARRL's video "The New World of Amateur Radio." This video is twenty six minutes long. Then I issued each student a copy of "How To Earn Your No-Code Ham License," a text donated by the National Amateur Radio Association. Finally, they watched an eleven minute video of our "QSO with the Shuttle Columbia."

Soldering was the first skill that each student was to master, and then we moved on to Morse code. I teach twenty minutes of code in the morning and twenty minutes in the afternoon. In our "ham shack" we have an AEA PK-232 MBX, multi-mode data controller that I used as part of the code training. With our Kenwood TS-830S in the CW sidetone mode without plate power and the PK-232 in Morse code receive mode, every student sends CW and watches the letters and prosigns that appear on the EGA monitor. To the students this was almost the same as a video game. Joe Waldher, a ninth grader from Edmonds-Woodway High School and Doane Hopkins, a junior from Mariner High School, mastered this approach to learning the code quickly.

To add to the summer school fun, I gave the students two kits to build and take home at the end of school. One was a code practice oscillator kit found on page 11- 8 of ARRL's book "Now You're Talking." John Fluke Mfg Co. donates 200 kits each year to the program, complete with printed circuit board and a nine volt battery. The second project was an AM-FM kit that

the students built. This provided a break between CW practice, rules, regulations, and electronics theory lectures and gave the students more hands-on training.

To provide hands-on training, I formed the kids into work teams. One team does maintenance on our Cushcraft AOP Oscar antenna array while the other team relocated our AEA IsoPole 2M antenna and replaced the PL-259 coaxial connectors. The last team had the most difficult task, that of tightening all the supports on our 70 foot tower where our Cushcraft A-3 four band beam is mounted. Samuel Bray and Allen Wells made several trips to the top of our 70 foot tower, to repair the rotor. Every one of the students changed jobs to provide as broad an exposure as possible towards becoming good Amateur Radio operators.

Back to the classroom then, where the students studied from a fifteen-question open book quiz each day from my study guide. During the 20 minutes of CW practice, every student sent and received at least five words per minute. Our "ham shack" is a nine foot by twelve foot room at the back of the classroom. Joe Waldher called me into the ham shack to show me that he could send his name and mine (he is right-handed) using his left hand with our names displayed on the monitor. Soon all the kids wanted to try left-handed sending. Three weeks into summer school, Matt, N7YCK, upgraded to Advanced and passed his written element for Extra. Caleb, KB7OWO, passed elements 1B and 3B for his General class license.

As the students explored the Amateur Radio bands on the Kenwood TS-830, Doane Hopkins discovered a German net on 21.100 MHz. Doane's grandfather, Hans Kolby, DJ4MQ, was on the net and talked to his grandson. Doane spent the remainder of the sum-

mer with his grandfather.

The final day of summer school arrived and ARRL certificates of completion were passed out after our ARRL Volunteer Examiners administered the tests. Five students passed the Tech Plus; CW (five wpm) and elements 2 and 3A. Sixteen students passed elements 2 and 3A for their no-code Technician license. Summer school, 1993, was a very rewarding experience for both the instructor and the students.

In our regular classroom we have started a 2 meter net "Hands across the Border" with schools in British Columbia, Canada. Our plans are to expand to 10 meters.

Our "Radio Active Summer School" was a very successful program due to the involvement of members of the electronics industry and the "Elmers" from the community. Del Taft, W7EVI, was first licensed January 21, 1935. Carle Graffonder, WY7H, was first licensed in May of 1954. These Elmers, Boeing Amateur Radio Club, and John Fluke Mfg. radio Elmers, gave the kids the help and encouragement needed to become good Amateur Radio operators. We hope to work you next summer with our new bunch of "Radio Active Kids." Good DX and happy hamming. WR

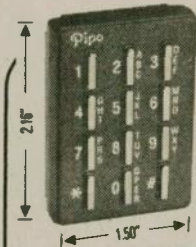
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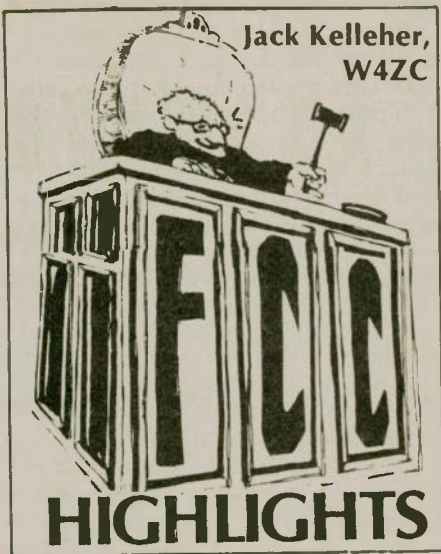
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Retransmission of Emergency Broadcasts

FCC has denied a Petition for Rulemaking (from Ray J. Vaughan, KD4BBM, Miami Lakes, FL) seeking permission for amateur stations to retransmit emergency or warning communications originated by government or broadcast service stations.

The petition requested that Section 97.113(e) of the Commission's Rules be amended to permit the automatic or manual transmission of emergency or warning communications originated by federal, state or local government or broadcast stations, and the operational testing of such emergency communication systems on amateur service frequencies above 30 MHz. Vaughan's proposal envisions that "...this change would permit Amateurs to connect their repeaters and packet stations above 30 MHz to the same type of equipment that will be used for the next generation of EBS (Emergency Broadcast System) or to today's equipment. In the event of an emergency or a test of the system, retransmission of

Government and broadcast stations will be permitted."

Robert H. McNamara, Chief of FCC Special Services Division, advised Vaughan that "...when normal communications systems are overloaded, damaged or disrupted because a disaster has occurred, or is likely to occur... an amateur station may make transmissions necessary to meet essential communications needs and facilitate relief actions. The rules also state that when a disaster disrupts normal communication systems in a particular area, the FCC Engineer-in-Charge in the area concerned may declare a temporary state of communication emergency and set forth any special conditions and special rules to be observed by stations during the communication emergency." (See Sec. 97.401-407).

Further, amateur stations are authorized to exchange emergency messages: (1) with a station in other FCC regulated Services (Sec.97.111(a)(2); (2) U.S. Government stations necessary to providing communications in RACES, the Radio Amateur Civil Emergency Service (Sec. 97.111(a)(3) and (3) a station in a service not regulated by the FCC but approved by the FCC to communicate with amateur stations (Sec.97.111(a)(4).

McNamara said the issue of retransmission of government broad-

casts was also considered in 1989, when the FCC declined to authorize such retransmissions (presumably the emergency or warning transmissions originated by government or broadcast service stations) can be widely received using very affordable receivers. This is still true today, and therefore we can see no reason to allow the use of amateur service frequencies for additional retransmissions.

Volunteer Examiner irregularities

Another case of irregularities in the Los Angeles area is reported in the November 29 issue of the *ARRL Letter* (A previous case is covered in this column for June 1992, and February and April 1993). The *ARRL Report* says that the FCC has invalidated the licenses and license upgrades of 21 people after an investigation of irregularities at four volunteer examiner test sessions in southern California in June and August 1993. The sessions involved both the ARRL and W5YI VECs, and a number of volunteer examiners have had their accreditations suspended as a result.

The FCC thanked the VECs for their help in the investigation and lauded volunteer examiners for their hard work and dedication.

John B. Johnston, chief of the FCC's Personal Radio Branch, said in part

Amateur Radio Call Signs

Amateur Radio operators often ask the FCC what call signs have been assigned lately. This list shows the last call sign in each group to be assigned for each district, as of the first of December 1993.

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

Radio District	Group A Am. Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	AA0PO	KG0KD	N0ZLM	KB0LMX
1	AA1IB	KD1SQ	N1QWR	KB1BEQ
2	AA2QQ	KF2SX	N2XFU	KB2QQJ
3	AA3GP	KE3LH	N3QZL	KB3AZK
4	AD4NS	KR4IY		KE4HYT
5	AB5RK	KJ5TG		KC5EIK
6	AB6YW	KN6VX		KE6DOF
7	AB7AI	KI7TW		KB7ZRB
8	AA8NJ	KG8FM		KB8QOW
9	AA9JM	KF9SP	N9VPC	KB9IWA
North Mariana Is.	AH0W	AH0AO	KH0CG	WH0AAY
Guam	NH2Z	AH2CU	KH2IL	WH2ANI
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii		AH6NE	WH6QL	WH6CRB
Kure Is.			KH7AA	
American Samoa	AH8H	AH8AF	KH8BA	WH8ABB
Wake Wilkes Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska		AL7PL	WL7OW	WL7CHJ
Virgin Is.	WP2D	KP2CC	NP2GU	WP2AHU
Puerto Rico		KP4VZ		WP4MLZ

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"I'd like to commend ARRL-VEC for working together with W5YI-VEC to uncover irregularities at several recent sessions in the Los Angeles area and suspend the VEs involved. Your action will prevent future occurrences and assure that amateur licenses are granted only to those who are truly qualified. You've also sent a strong signal that ARRL-VEC is vigilant in its oversight to keep the volunteer testing system at the highest level of integrity.

Rules amended concerning 222-225 and 1240-1300 MHz band

On 30 November, 1992 the FCC adopted a Notice of Proposed Rule Making proposing (1) to create a subband in the 222-225 MHz band where repeaters would be prohibited; (2) to authorize frequency privileges for Novice Class operators in the entire 222-225 MHz band, and (3) to allow Novice Class operators to be licensees and control operators of repeaters in the 222-225 MHz band as well as in the 1270-1295 segment of the 1240-1300 MHz band. On 19 November, 1993 the Commission adopted the proposed rules on establishment of subband and authorization of privileges for Novices in the entire 222-225 MHz band, but declined to adopt the proposal relating to Novices as control operators and licensees of repeaters in either band.

The Commission considered carefully the comments for and against establishing a protected subband. They agreed with the ARRL that it is desirable that there be a uniform, nationwide subband where experimental operations can take place unaffected by repeater use. They concluded that the public interest would be served by establishing a protected subband at 222.00-222.15 MHz

The proposal to expand the privileges of Novice Class operations by authorizing them the entire 222-225 MHz band met with a very favorable response from the commentators. There is general agreement that authorizing Novice Class operators additional frequency privileges will provide an opportunity for them to become proficient in a wider variety of amateur service operations. In addition, Novice Class operators will have more flexibility in selecting the mode of transmission that they want to use.

There was significant opposition to the Commission's proposal to permit Novice Class operators to serve as licensees and control operators of repeaters in the 222-225 and 1240-1300 MHz bands. In view of the lack of substantial support by the amateur community

for granting Novice Class operators these additional privileges, the Commission decide not to amend the Rules in this respect. It was noted, in this connection, that the distinction between the Novice and Technician Classes would be diminished by granting Novices the proposed repeater privileges.

Testing fee to be raised in 1994

The FCC announced in October that effective 1 January 1994 the maximum allowable reimbursement fee for an amateur license examination will be \$5.75. This amount is based upon a 2.7% increase in the Department of Labor Consumer Price Index between September 1992 and September 1993.

Volunteer Examiners (VEs) and volunteer examiner coordinators (VECs) may charge examinees for out-of-pocket expenses incurred during preparing, processing, administering or coordinating examinations for amateur operator licenses. The amount of such reimbursement fee from any examinee for any one examination session, regardless of the number of elements administered, must not exceed the maximum allowable fee. Where the VEs and the VEC both desire reimbursement they jointly decide upon a fair distribution of the fee.

Petition for packet on 6 meters

Dr. John S. Burningham, WB8PUF, of Mahopac, NY, has filed a Petition for Rule Making seeking a rule change which will allow digital packet radio networking to operate on the 6 meter band. He contends that this will allow the further expansion of developing technologies to the benefit of the Amateur Radio Service.

EPA critical of FCC RF hazards proposal

In previous columns we have summarized progress on FCC actions to update its guidelines on effects of non-ionizing RF radiation to bring them into line with Standards issued in 1992 by ANSI (The American National Standards Institute) and IEEE (The Institute of Electrical and Electronics Engineers).

In comments filed with the FCC, the Director of the EPA Office of Radiation and Indoor Air said there are "serious

flaws" in the new standard and that it contains unsupported claims. EPA is concerned as to whether the proposed standard is sufficiently protective of public health and safety. EPA recommended that radio amateurs to be considered to be "members of the public," and thus apparently subject to more stringent RF exposure limits than persons who are exposed to RF as part of their jobs.

EPA's objections apparently stem from long-standing differences among investigators in this field, concerning thermal effects versus low-level, long-term non-thermal effects, and concerning the distinction between "controlled environments" and "non-controlled environments."

The EPA cites RF exposure recommendations from a different source; the National Council on Radiation Protection and Measurements, which recognizes that RF biological response may come from heating effects, non-heating effects, or a combination of the two.

It is this author's view that the effect of this new input will undoubtedly complicate the matter of issuing new guidelines; but differences of opinion in this field have existed for a least the past twenty years without a complete meeting of minds. The foreword of the current IEEE standard in this area (IEEE C95.1-1991) gives a bit of history, viz:

"In 1960, the American Standards Association approved the initiation of the Radiation Hazards Standards project under the co-sponsorship of the Department of the Navy and the Institute of Electrical and Electronics Engineers.

"Prior to 1988, C95 standards were developed by an accredited standards committee C95, and submitted to ANSI (the American National Standards Institute) for approval and issuance as ANSI C95 standards. Between 1988 and 1990, the committee was converted to Standards Coordinating Committee 28 under the sponsorship of the IEEE Standards Board. In accordance with policies of the IEEE, C95 standards will be issued and developed as IEEE standards, as well as being submitted to ANSI for recognition.

"The present scope of IEEE SCC28 is development of standards for the safe use of electromagnetic energy in the range of 0 Hz to 300 GHz relative to the potential hazards of exposure of man, volatile materials, and explosive devices to such energy. It is not intended to include infrared, visible, ultraviolet, or ionizing radiation. The committee will coordinate with other committees whose scopes are contiguous with SCC28."

WR

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Salvation Army

(continued from page 1)

McPherson observed, "is that it helps us identify volunteers who have other skills to offer beyond those typically associated with amateur radio."

Workshop topics

Planned as a three-day workshop, the Disaster Services seminar began with a general introductory session Friday evening. Salvation Army officers and personnel discussed relief efforts in recent months resulting from the extensive flooding in the Midwest. Both speakers emphasized the role amateurs played in coordinating activities at the actual disaster sites. Canteen operations to provide hot meals and beverages to both victims and relief workers, for instance, require communications assistance to have the necessary supplies on hand at the proper times. Donated food, water and clothing, similarly, must be stored and released as needed. Amateur Radio operators facilitate these activities, and — as speaker repeatedly mentioned — are greatly appreciated.

Saturday and Sunday featured a mixture of general sessions for all participants and special-interest workshops focused on more specific interests of amateurs or other relief workers. Lt. Jack Pickup, of the Palatine, Illinois Fire Department, explained the concept of "Critical Incident Stress Debriefing." Hams involved in all types of emergencies are recognizing the need to discuss their own emotional reactions to traumatic and disastrous events. Saturday evening Lt. Colonel Gale Carter held the audience spellbound as he told — and showed pictures — of Air Force reconnaissance flights into hurricanes. Following a strictly optional chapel service on Sunday morning, Robert Myers discussed the Salvation Army's mission in disasters, explaining that "the Army has become one of the principal agencies involved in disaster relief because of its desire to alleviate human suffering wherever it is found. To better augment this service, it has entered into agreements with governmental and private agencies so that through cooperation each may better serve in time of disaster."

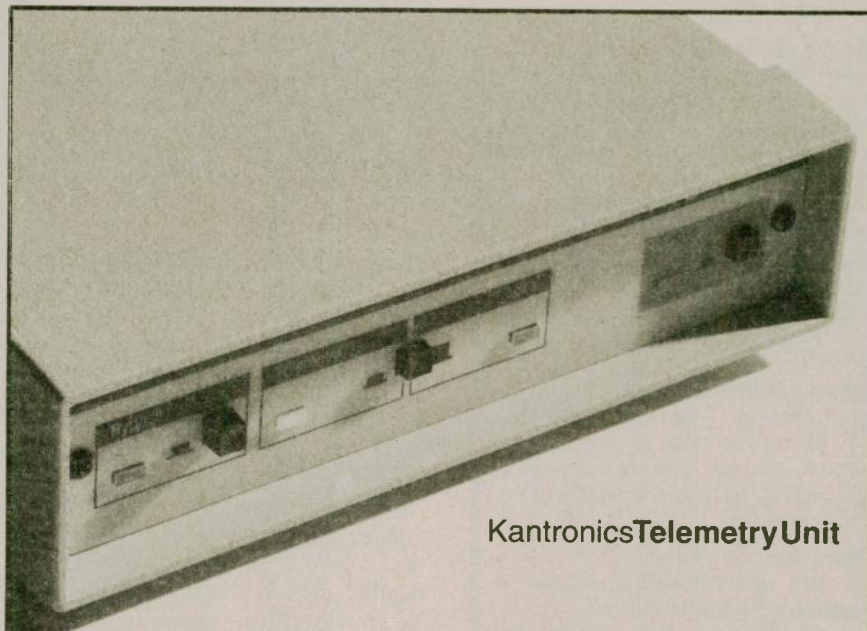
Four small group sessions were of particular interest to amateurs. Rich Jurgaitis, KA9GQF and Art Evans, KA9KLZ, presented information on emergency antenna systems. Concentrating on practical pointers, Jurgaitis mentioned factors to consider in de-

ploying different types of resonators in the field. "Remember your friend, the trees," he admonished. "They're great for stringing dipoles, but their foliage can trap your signal, particularly if you're using a rubber duck."

Among other things, Jurgaitis emphasized the importance of physical as well as electrical and RF safety in antenna positioning. "If a structure has been weakened by a fire or storm, it might be quite dangerous to climb on the roof. Don't let your enthusiasm to get the greatest height possible lead you to take foolish chances."

Bill Davidson, KA9SWW and Bob Kubiak, KD1PE, discussed the usefulness of digital communications in emergency disaster services. Written packet instructions and information can be crucial in certain circumstances. With laptop computers becoming more affordable, mobile and portable packet stations will become more common in relief work.

Bill Shillington, W9ZCL, explained areas of concern for emergency generator certification. The greatest antennas and stations, obviously, are useless if there is no power source. As



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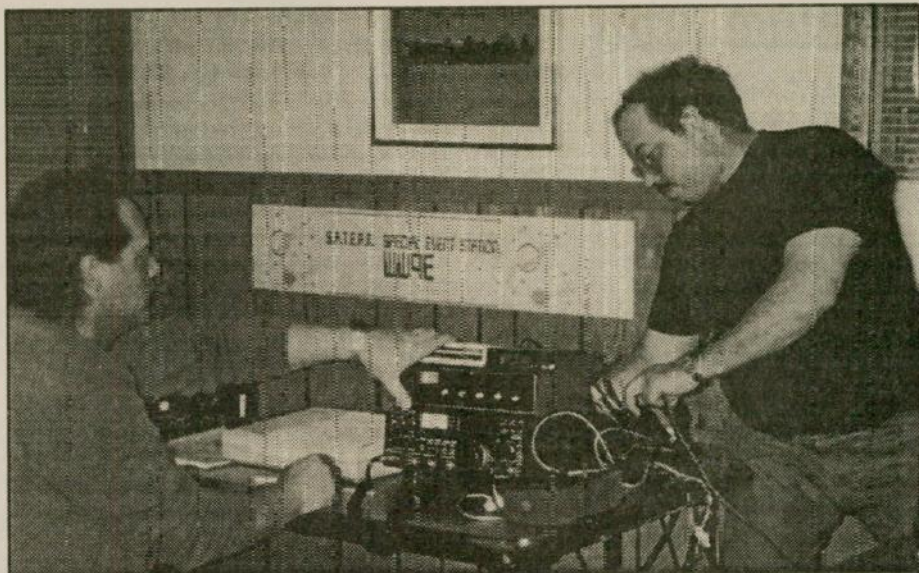
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Mike Duce, N9IWZ, and Bill Davidson, KA9SWW, make some adjustments to keep special station WW9E on the air.

all field-day participants know, the generator that was humming beautifully the last time it was used may not fire up right away after a period of inactivity. Serious disaster volunteers realize the importance of routine and preventive generator maintenance.

"In a disaster, nothing goes as planned," remarked Mike Duce, N9IWZ, in the session devoted to emergency communications from the disaster scene. "Equipment is always needed, so if you're in doubt, bring it! You never know — you might need it."

"As communicators, our function is just that. We must never, never make command decisions for the served agency. I remember once a trucker arrived at a food distribution site. The first person he found was the ham operator and he asked him where to unload the spaghetti sauce he was carrying. The volunteer didn't know anything about it and sent the trucker

on. It turns out our helpful ham just added to the level of confusion. Instead of ad libbing, he should have radioed headquarters for instructions!"

Special Event station, WW9E

The seminar included ample time for recreation. What, you may ask, do amateurs do for amusement at a Salvation Army conference? Why they eat and play radios, of course! Canteen volunteers took a "busman's holiday" and provided coffee, cocoa and doughnuts from before breakfast to late in the evening. In addition to three large, tasty meals daily, a taco bar and a sundae party amplified the caloric intake.

Special Event station, WW9E, was set up in the living room of one cottage housing participants. The SES consisted of two operating positions — an HF station running barefoot and feeding a G5RV and a VHF packet station. Contact across the nation and Caribbean Islands were made on sideband, CW, RTTY and packet. Band conditions were fair and a dozen operators took turns with the station over the weekend when not participating in workshops, eating or getting acquainted with other volunteers.

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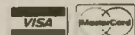
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"Special Events are always a lot of fun," said Al Shaver, AH6KX, "they also are a good way to publicize an event or concept. Most hams have never heard of SATERN and the station promoted general awareness of this important avenue of service."

"The Salvation Army has a splendid reputation for serving all in need. People my age particularly have fond

memories of the Army serving GIs on the front lines. I didn't know about SATERN until I saw the listing for this conference on a packet BBS in Honolulu. Now I'm enthusiastic about the organization. The Special Event gives us another way to let hams know about SATERN."

SATERN is a national program. A desire to help rather than any particu-

lar religious affiliations is the most important criterion for involvement. SATERN volunteers are concentrated most heavily in the Midwest, but members are located throughout the US and Canada. For further information or to volunteer your services, contact Major McPherson, WW9E @ N9HSI. #IL. USA. NA via your local packet BBS or at 312/725-1100. WR

Vanity calls

(continued from page 1)

"In the future, this new automated processing system might allow amateur radio operators to check for call sign availability on their own, through an on-line system and ultimately, amateur license applications might be received electronically. This would further ease the process for both the operators and the Commission.

"The proposed rule would allow the licensee of an existing primary station to request a new, vanity call sign. The Commission also proposes to extend this privilege to the license trustee of an existing club station. The Commission would also administer a club and military recreation station sequential call sign system under the new automated licensing process. Applicants for a vanity call sign would use a new application form.

Background

"On May 11, 1993, the Commission adopted an Order which amended the amateur service rules to establish call sign administrators for club and military recreation stations. At that time, the Commission believed that such a system in the private sector would make club call signs widely available and benefit the amateur community without an undue burden on FCC staff.

"On June 15, 1993, David B. Popkin filed a petition for reconsideration of

that action contending that the rules adopted should have been proposed in a notice and comment rulemaking proceeding and asked that they not be implemented. Popkin argued that the establishment of club call sign administrators is not minor and non-controversial in the amateur radio community.

"Because the proposal adopted by the Commission today also will meet the needs of persons interested in ob-

taining a club station license, the Commission said there appeared to be merit in Popkin's argument and granted his petition. Accordingly, the Commission vacated the rule provisions that established private entity call sign administrators.

"Action by the Commission December 13, 1993, by Notice of Proposed Rulemaking (FCC 93-545) and Memorandum Opinion and Order (FCC 93-546)." WR

Novice repeater privileges

FCC amends the amateur service rules concerning the 222-225 MHz frequency band. (PR docket 92-289)

"The Commission has amended the amateur service rules to create a small new subband at 222.00-222.15 MHz (please turn to page 16)

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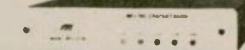
Versatile 8 position antenna switch lets you *pre-tune* MFJ-949E into dummy load to minimize QRM.

Custom inductor switch was carefully engineered to withstand extreme voltages and currents.

Cabinet is chemically etched to MFJ's bond tough *baked-on* paint.

VHF/HF Packet TNCs

MFJ-1270B **'119'**



MFJ-1270B super TAPR TNC clone has a world wide reputation as the *most reliable packet TNC in the world* -- many work 24 hours a day for years without a single failure!

Fully TAPR TNC-2 compatible, VHF and HF operation, *free* AC power supply, new *enchanced* mailbox expandable to 512K with auto/reverse mail forwarding, WeFAX mode lets you print weather maps, optional plug-in 2400/9600 baud modems, KISS interface, MFJ Host mode.

MFJ TNC/Mic Switch

MFJ-1272B **'34'**



Switch between your TNC or microphone by pushing a button!

Just plug pre-wired cables into your rig's mic connector and TNC.

Plug-in jumpers let you use nearly any rig with 8 pin mic connector. MFJ-1272B, \$34.95/MFJ/TAPR TNC2 clones; MFJ-1272BX/PK-232; MFJ-1272BYV/KAM VHF/KPC3; MFJ-1272BYH/KAM HF Port; MFJ-1272BZ/PK-88, \$39.95 each. For 8 pin RJ45 modular phone jack replace B with M in model number above.

Regenerative RCVR Kit

MFJ-8100K **'59'** kit



MFJ-8100W **'79'** wired



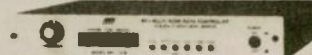
Build this *regenerative* shortwave receiver kit and listen to shortwave signals from all over the world with just a 10 foot wire antenna.

Has RF stage, vernier reduction drive, smooth regeneration, five bands.

MFJ-1278B Multi-Mode Data Controller

Use this **MFJ-1278B**, your **'299'** transceiver and

MFJ-1278B **'299'**



computer to transmit and receive digital communications! You'll discover a whole new world of ham radio and communicate in ways you never knew existed on our ham bands.

The *world class* MFJ-1278B Multi-Mode and MultiCom™ software is packed with features *no other* multi-mode gives you.

You get *10 digital modes* ... Packet, AMTOR, PACTOR (at no extra cost), RTTY, ASCII, Navtex, Color SSTV, 16 Gray Level FAX, CW and Memory Keyer plus an *enchanced* 32K Mailbox.

You'll have fun joining worldwide *packet* networks and exchanging *color SSTV* pictures with your buddies around the world. You'll marvel at *full color FAX* news photos as they come to life on your screen. You'll see weather changes on highly detailed *weather maps* in all 16 gray levels. You'll eavesdrop on late breaking news as it happens on *RTTY*. You'll enjoy error free HF QSOs on *PACTOR* and *AMTOR* and receiving packet mail in an *enchanced 32K mailbox*. Want to copy some *CW*? Just watch your screen.

MFJ-1289, \$59.95, MultiCom™ software and cables.

MFJ halfwave vertical Antenna

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

Operate 6 bands -- 40, 20, 15, 10, 6 MFJ-1796 and 2 Meters --with this MFJ-1796 **'199'**

ground independent halfwave vertical antenna! No radials or ground ever needed!

It's only 12 feet high and has a *tiny* 24 inch footprint! You can mount it anywhere from ground level to the top of a tower -- on apartments, condos, small lots, even on motorhomes. Perfect for vacations, field day, DX-pedition, camping.

Frequency selection is fully automatic -- all you do is transmit. Its *low angle of radiation* really reaches out and brings in DX. Omni-directional. 1500 watts PEP.

Efficient end loading, no lossy traps. *Entire length* is always radiating. *Full size* halfwave on 2 and 6 Meters. High power *air-wound* choke balun eliminates feedline radiation. Adjusting one band has minimum effect on other bands. Add \$20 s/h.

Easy to assemble -- you'll have it on the air in an afternoon.

MFJ's world famous 3 KW Versa Tuner V

Here's why the MFJ-989C is the finest 3 KW antenna tuner money can buy ...

MFJ-989C **'349'**

Two massive 250 pf transmitting variable capacitors can handle *amps* of RF current and 6000 RF volts. Logging scales.

Precision ball bearing roller inductor, three digit turns counter and spinner knob give you exact inductance control for minimum SWR.

Lighted *peak/average* Cross-Needle SWR/Wattmeter has 200/2000 watt ranges. Super heavy duty *current* balun has two giant 2 1/2 inch powder iron toroid cores wound with *Teflon®* wire.

Six position *ceramic* antenna switch has extra large contacts. Flip stand, dummy load, one year *unconditional* guarantee, aluminum cabinet, tough *baked-on* paint, locking compound on nuts/bolts, handles 3 KW PEP, 10 1/2x4 1/2x15 in. Meter lamp needs 12 volts. Add \$13 s/h.



MFJ No Matter What™ Guarantee

MFJ's famous one year *No Matter What™* unconditional guarantee means we will repair or replace (at our option) your MFJ product sold in this ad *no matter what* for a full year.

Super Hi-Q Loop Antenna

MFJ-1786 **'299'**

Tiny 36 inch diameter high efficiency loop antenna covers 10-30 MHz *continuously* with low SWR. Handles 150 watts.

Ideal for home installations where space is limited-- apartments, condos, small lots. Take on trips.

All welded construction.

Remote control has *Automatic Band Selection™*, Cross-Needle SWR/Wattmeter. No control cable needed. Use batteries or 110 VAC. Add \$20 s/h. No ground or tuner needed.

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

Dual Band Mobile Ant.

Mobile Antenna for 144/440 MHz

MFJ dual band magnet mount mobile antenna for 144/440 MHz

has 19 inch stainless steel radiator, low SWR. For mobile rigs with SO-239 UHF connector and handie-talkies with included BNC adapter.

5/8 Wave Mobile Ant.

Maximum Gain™ 5/8 Wave 2 Meter magnet mount mobile antenna has stainless steel radiator, 12 ft coax, low SWR.

UHF mobile (MFJ-1728) or BNC handie-talkie (MFJ-1728B) connector.

MFJ-1728/B **'24'**

MFJ-1728B

5/8 Wave Ground Plane

\$19.95 gets you a 2 Meter 5/8 wave ground plane home station antenna! You get the highest gain of any single element antenna, shunt fed matching, ceramic insulators.

MFJ-1752, \$19.95, for 220 MHz.

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First-rate electret mic element and full size speaker gives superb audio on transmit and receive. Earphone jack, PTT, lightweight retractable cord. Gray. 1 1/4x2x3 in.

MFJ-284 fits Icom and Yaesu.
MFJ-286 fits Kenwood.



MFJ-284 or MFJ-286
\$24⁹⁵

Mini Speaker/Mics

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

Excellent audio from electret mic element and speaker. Has swiveling lapel/pocket clip, PTT button with transmit LED, earphone jack, lightweight retractable cord. Available with L or regular connector. Tiny 2x1 1/4x1/4 in.

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



MFJ-283, MFJ-285, MFJ-285L, MFJ-285W, MFJ-287 or MFJ-287L
\$24⁹⁵

L Connector also available - order L model.

MFJ Artificial RF Ground

MFJ-931
\$79⁰⁰

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

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

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

20 Meter CW Transceiver

MFJ-9020
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Throw this tiny MFJ 20 Meter CW Transceiver in a corner of your briefcase and enjoy DXing and ragchewing wherever you go. You get a high performance superhet receiver, crystal filter, RIT, AGC, vernier tuning, sidetone, speaker, up to 5 watts output, semi/full break-in, much more. Free manual. See free MFJ catalog for 40, 30, 17, 15 Meter versions, keyer, audio filter, power pack, tuner, antennas.

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

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

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

MFJ-1024
\$129⁰⁰

Cross-Needle SWR Meter

MFJ-815B
\$69⁰⁰

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

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

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MFJ Coax Antenna Switches



\$34⁰⁰ MFJ-1701



\$21⁰⁰ MFJ-1702B



\$59⁰⁰ MFJ-1704

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

MFJ-1701, \$34.95. 6 position antenna switch. SO-239 connectors. 50-75 ohm loads. 2 KW PEP, 1 KW CW. 10x3x1 1/2 in. DC-60 MHz.

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

MFJ-1704, \$59.95. 4 position cavity switch with lightning/surge protection. Center ground. 2.5 KW PEP, 1 KW CW. 50 dB isolation at 500 MHz. 50 ohm. 6 1/4x4 1/4x1 1/4 in. MFJ-1704N, \$69.95, N connectors.

Dry Dummy Loads for HF/VHF/UHF

MFJ has a full line of dummy loads to suit your needs. Use for tuning to reduce needless (and illegal) QRM and save your finals.

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

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

MFJ-704
\$39⁰⁰



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MFJ Deluxe Iambic

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MFJ-564
\$49⁰⁰

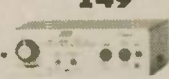


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\$149⁰⁰



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MFJ-422BX, \$79.95, keyer only for mounting on your Bencher paddle.

MFJ-422B
\$134⁰⁰



12/24 Hour LCD Clocks



\$19⁰⁰ MFJ-108B



\$24⁰⁰ MFJ-112

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

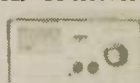
MFJ-112 shows hour/minute/second, day, month, date, year at any QTH on world map. 12 or 24 hour display. Daylight saving time feature.

VHF SWR/Wattmeter

MFJ-812B

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Covers 2 Meters and 220 MHz. 30 and 300 Watt scales. Relative field strength 1-250 MHz, SWR above 14 MHz. 4 1/2x2 1/4x3 in.



Code Practice Oscillator



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

Earphone jack for private practice, tone and volume controls for a wide range of sound. Speaker. Adjustable key. Can be hooked to transmitter. Sturdy. 8 1/2x2 1/4x3 3/4 in.

MFJ Multiple DC Outlet

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Repeater privileges extended

(continued from page 13)

where repeaters are prohibited, and has authorized frequency privileges for Novice Class operators in the entire 1.25 m band.

"In November of 1992, the FCC proposed three changes in the operational rules for the amateur service: 1) the creation of a subband in the 222-225 MHz (1.25 m) band where repeaters would be prohibited; 2) the authorization of frequency privileges for Novice Class operators in the entire 1.25 m band; and 3) the eligibility of Novice Class operators to be licensees and control operators of repeaters in the 1.25 m band, as well as in the 1270-1295 MHz segment of the 1240-1300 MHz (23 cm) band.

The Commission found that the establishment of a subband in the 1.25 band for non-repeater operations would facilitate experimentation which is one of the fundamental purposes of the amateur service. The Commission further concluded that the authorization of Novice Class operators to use the entire 1.25 m band would provide them with the opportunity to become proficient in a wider variety of amateur

service operations and give them greater flexibility in selecting the mode of transmission to use. However, the Commission determined that Novice Class operators should not be authorized as control operators and licens-

ees of repeaters in the 1.25 m band and 23 cm band because they lack knowledge about repeater operation. Further, it would diminish the distinction between the Novice and Technician Classes.

"Action by the Commission November 19, 1993, by Report and Order (FCC 93-507)." WR

This is ham radio

ARNOLD SAMUELS, KH6COY

Ham Radio does not exist merely for a quick DX contact, nor the exchange of a QSL card or RST report. It exists for the much more profound purpose of building international friendships.

In October, 1987 my wife and I visited my hometown of Hammelburg in Bavaria Germany. This is a small wine producing town nestled in the foothills of the Rhön Mountains in Bavaria. Today it has a population of about 15,000. As we were strolling through some of the new areas, I saw what appeared to be a beam. I stopped and looked at my wife and a friend who was accompanying us, he explained to her in German that this must be a "funker." I said I would knock on the door and find out. Our friend looked at us and

said "No, one does not do that in Germany" and I retorted that among hams, we do. I then rang the bell. The owner answered the door. Fortunately, I speak German, so I asked him about the antenna and he verified that he was a "funker." I pulled out a QSL card and a friendship was immediately cemented. His handle was Fritz, DJ2MW. His wife is Renate. We talked about two hours and he showed me his very neatly arranged ham shack.

After returning to the USA, we remained in contact and made several 10 meter contacts. In July 1990, Fritz and his wife visited us. In our Volkswagen camper, we showed him the Pacific Northwest; took him to the California Redwoods, Crater Lake in Oregon and many other places. In July 1993, he visited us again, equipped with a reciprocal license and accompanied by his wife. We traveled in our Volkswagen pop-top camper to places for which there are no equals in Europe. Yellowstone, Glacier National Park, Grand Tetons, Salt Lake City, Bryce Canyon, Zion National Park, Grand Canyon, the Petrified Forest. My wife and I slept "downstairs" and Fritz and his wife slept "upstairs." As a topper, we met in Las Vegas, where about 15 German hams from Canada and the USA held this year's annual reunion. 5,000 miles and 5 weeks later he returned to Germany with 400 photographic slides. On several occasions, I introduced him to the local ham club where he met many of the local hams of this area who treated him like royalty. Of course, he wants to come again.

A grand time was had by all. Next year we will visit him and tour Europe with him in his Volkswagen. Can you top this? WR

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100 mile horse race

SHEILA DEVITTE, VE6NOW

Calgary Amateur Radio Operators would like to share with readers a very enjoyable and unique radio exercise in which we took part in on 31 July - 1 August, 1993.

As the operators from the Calgary Amateur Radio Association are involved in numerous public service radio exercises including relay races, bicycle tours, civic elections, stampede parades, walk-a-thons, car rallies, etc., this exercise was entirely different for us to participate in.

This exercise was "The 100 Mile North American 24 Hour Horse Endurance Championships" which are held every two years somewhere in North America. The last one was held in Carson City, NV. The Calgary section of the Albert Endurance Riders were awarded these championships in 1991 by the Federation Equestre Internationale, the governing body for major amateur equine sports in international competition, their home base being Berne, Switzerland.

At this point, three Calgary radio operators became involved with the Calgary organizing committee for the

ride. This was a two year commitment for us which proved to be a wonderful union and a learning experience beyond belief.

The actual day of the ride was fast approaching and due to Mother Nature's bad temper this summer, the planned route for the ride had to be drastically changed three times in one week due to mud bogs, high swollen rivers and generally unsafe conditions.

The radio operators, approximately 30 in total, took this in stride as usual, except for me. I was a basket case until everything was once again under control.

The ride got underway at 5:30 a.m. Saturday morning, with net control and with our mobile operators up, bright eyed and bushy tailed, cheery, ready to travel our beautiful Rocky Mountain roads. Our mobile operators were not only radio operators (mind you, this was their first and foremost concern) they were also chauffeurs to the international officials, these wonderful people, being from Australia, United States of America, Switzerland, Sweden and our very own Canadian officials.

We used the Club repeater VE6RYC, which is located in Calgary, AB, and as the base camp for the ride was 60 miles west of Calgary towards Banff, in the heart of the Rocky Mountains, and extending numerous miles in each direction, the coverage was superb.

As the morning progressed, other operators came on duty at the vet checks. This continued throughout the afternoon, and evening, as vet checks, pit crew areas, and safety areas opened up.

As time passed the radio operators got busier and busier, passing times to the next station and to net control, being PR people, fielding questions and requests, finding officials so that other officials at different vet checks could have a conference when needed. Operators were also kept busy filling out progress boards so everyone would know where each horse and rider were and how they were running.

At one point in the race, in fact on three separate occasions the use of Amateur Radio was shown exactly how useful it can be when communication is needed immediately. We had three extremely sick horses and as soon as the vets looked at them, radio was used for communications to arrange transportation back to the base camp for the horses. I am glad to say all

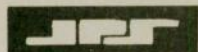
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three horses are fine. In this type of race there are vets every twenty miles and the horses have a complete check-up at each vet check. If everything isn't exactly the way it should be, the horse and rider are not allowed to continue.

The interest in the riders and horses was high as we had 48 competitors from Denmark, Sweden, Switzerland, U.S.A. East, U.S.A. Mountain, U.S.A. Pacific North, U.S.A. Central, U.S.A. Pacific South, Canada East, Canada West. Also riders and horses from Australia and Brazil, due to injuries, dropped out before the competition started.

As the sun set on the Rockies and night fell on the mountains, the operators got extremely busy again keeping track of people, horses, officials, etc., etc. in the black of night.

During the night, about a mile out from the finish line, a black bear was spotted on the trail which caused some excitement among the people in that area. The bear must have decided what ever we were doing wasn't of any interest to him because he up and left.

About 15 hours into the ride, Rio Grand Sultan came across the finish line. His clocked time from the last vet

check to the finish line was 22 miles per hour. Usual speeds are 10 miles per hour and down. Rio is famous for this last 4-10 mile sprint to the finish line. This made his fourth time as World and North American Champion.

Twenty two hours into the race the last two riders and horses crossed the finish line. At this point the mobile operators, control operators, and the last vet check operators could close their stations and stagger off to bed!

Thanks to all the operators who worked on this exercise for a fine job well done. WR

Chaverim International

MARTIN SHAPIRO, KA7GKN

Chaverim is a Hebrew word meaning "friendship." The organization, Chaverim International, is a brotherhood of Jewish Amateur Radio operators and their friends (we have many non-Jewish members also). There are over 24 chapters worldwide.

The current organizational structure is an evolution of the Chaverim Net of the late 60s and early 70s. The Western USA and Mexico Chapter of Chaverim is starting its fourth year. Jim Liebman, W7AQQ, was instrumental in the chapter's inception and rapid growth.

Today, the Western USA and Mexico Chapter of Chaverim has a roster of over 175 active members. We have a 20

meter daily net at 2200 UTC on 14.326 MHz. Our net control is Norman Katz, W3TXV; look towards San Antonio, TX.

We have a Sunday net on 40 meters at 1645 UTC on 7.228 MHz. Our net control is Marty Shapiro, KA7GKN; look towards Glendale, AZ. The Sunday net is our main chapter information net. We also have a local Los Angeles area 2 meter net Mondays at 2000 local time on the 144.505 repeater. Maurice Rotheiser, K6AIZ, is net control.

The 1993 chapter convention was at the Sahara Hotel in Las Vegas, NV, December 12-14 and we had over 120 attending. We provided VE testing for our members and the local Las Vegas

folk. This function was coordinated by Louis Parker, KA6BJO.

At the banquet we had Leo Meyerson, WØGFQ, who is very well known in QCWA, entertain us at the piano. We also had Dr. Harry Bezman, KF6QT, and his lovely wife Doris treat us to a translation of an old Jewish story.

The 1994-1996 slate of new officers are:

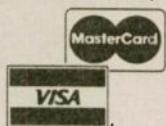
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For those of you interested in more information about Chaverim, or joining our chapter, stop by one of our nets and we will be able to answer any of your questions. WR

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Mirror images

W3HNK is a QSL manager on the east coast.

W6KNH is a QSL manager on the west coast. — submitted by Ted Chernin, KH6GI

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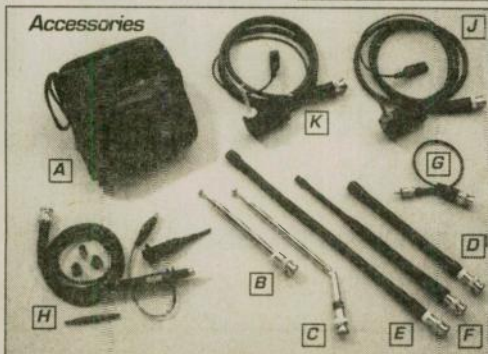
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Product Review

The updated JPS NIR-10 digital signal processor

TOM TORGERSON, NØMOP

The NIR-10 has been updated since last reviewed in *Worldradio* (October 1993). The software used in the unit has been changed to revision 3.0. According to the maker this now makes the NIR-10 even better than before. I had to find out just how good.

My only experience with the NIR-10, to start with, was what I had read. I didn't have a chance to use the older unit for direct comparison either. However, I had reviewed another company's signal processor giving me some good background.

Function

The function of the NIR-10 is that of an audio processor designed to improve the readability of SSB (and most

other modes). The audio from the receiver is connected to the NIR-10 and processed, then sent out to an external speaker or headphones. The processing uses a Digital Signal Processor (DSP) for both filtering and noise reduction. It helps cut down on white noise, eliminate up to four unwanted CW heterodynes, bandpass settings for depths of greater than 60 dB and has a two watt internal amplifier.

What the operator wants

Ask the normal ham operator on the airwaves what they would like a black box like this to do. The main answers are to knock out an offending CW carrier while using SSB without distorting the SSB stations they are working, cut down white noise, and notch out

other close SSB stations.

What the NIR-10 gives

Four basic operating modes are available by two three-position front panel switches. Combinations can also be used to set the unit for desired response output. The four modes are NIR (Noise Interference Reduction), PEAK, NF (Notch Filter) and BW (Bandpass Width). Switch one (labeled mode) can be set to NR BandPass, or Bypass. Switch two (Labeled BW) can be set to Wide/NF, Med/Peak, or Narrow.

Mode NIR is for removing noise and heterodynes that are not part of the target signal. Mode "peak" is used in reducing white noise while peaking up the target signal, especially SSB and CW. Mode NF provides cancellation of one to four tones (at the same time!) from CW, heterodynes, RTTY, or other similar signals that interfere with voice signals. Mode BW is used to enhance CW and RTTY reception operating as a digital audio filter with three selectable bandwidth ranges (250Hz, 600Hz and 1800Hz). The "mode" switch selection of "bypass" allows you to remove all processing and delay from the unit allowing for 'straight through' reception. Bypass still will use the units two watt volume control.

Getting used to DSP

Though I have heard and read of some people just hooking up the unit and starting to use it, I think many who do this will miss out on some of the unit's capabilities. Even worse, after 10-15 minutes of fiddling with switches, will conclude it is not doing what was expected and trade it off.

In my opinion, a person needs two or three days of using the NIR-10 in different band conditions, combining switches, weak versus strong signals and using it in different modes such as SSB and CW, before a decision can be

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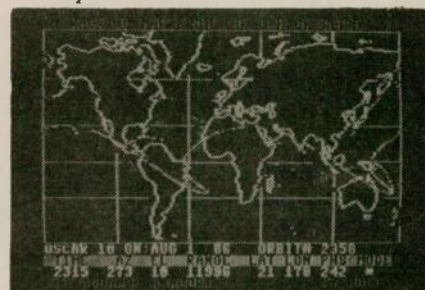
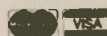
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made. Why? Because there are so many combinations of the two switches one can use, the drive setting from your rig requires experimentation. The desired processing level has to be found (for your particular ears and radio) by experimenting with the NIR level\BP Level control. You have nine combinations alone with the two toggle switches! Of these nine, only one may give you the optimum performance desired. You may find only one you especially like for SSB local work, one for SSB DX work, and two others for CW operations. These can not be found by using the unit for 15 minutes. They take some time to discover. Once you have worked with the unit for awhile then you can quickly switch to the desired settings and processing levels for the conditions and mode desired with optimum receiver performance assured.

A chart is given with all the toggle switch settings. I found it to be a 'guide' not an absolute, however. Experimentation still initially had to be done to find the settings I wanted for each type of condition I wanted to operate. The 31 page manual also helps, but gets a bit confusing at times since more than one set of switches can be used to accomplish an end result. It is hard to write absolute settings in a manual when there is so much interaction with settings. There is no "for best noise reduction" always use setting X and Y. The NIR-10 is too versatile for that. Start with the guidelines, get used to the terminology, experiment and you will be well rewarded with audio you never thought possible from an external audio unit.

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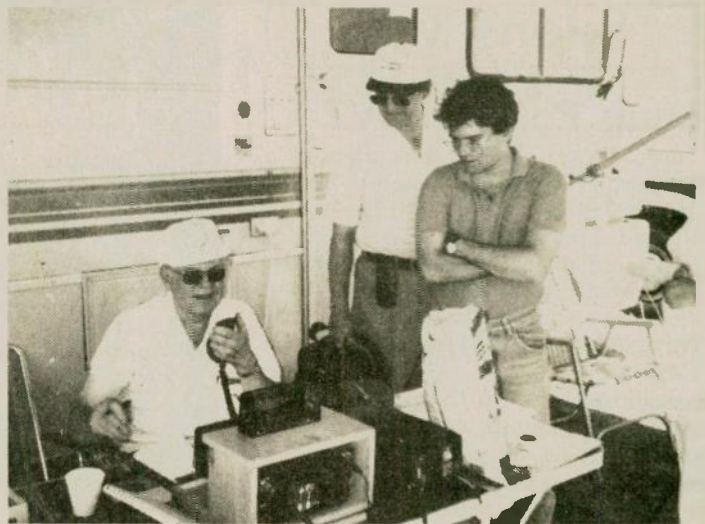
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Ken Henke, KE6AR, is observed operating W6LS at the Blackbird Airpark.



Blackbird anniversary

BILL WELSH, W6DDB

Here is Ken Henke, KE6AR, operating W6LS from the Blackbird Airpark during an open cockpit anniversary celebration of the first flight of a YF-12A Blackbird. A free Blackbird Airpark data sheet is available from Bill Welsh, W6DDB, 45527 3rd Street East, Lancaster, CA 93535-1802.

As usual, your SASE would be appreciated; single, first class postage suffices. SR-17A and A-12 Blackbirds are on permanent display at the site of the Blackbird Airpark Radio Club, W6LS, in Palmdale, CA.

Visitors are welcome 10 to 5 Fridays, Saturdays and Sundays. Don't forget to bring your camera. WR

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Silent Keys

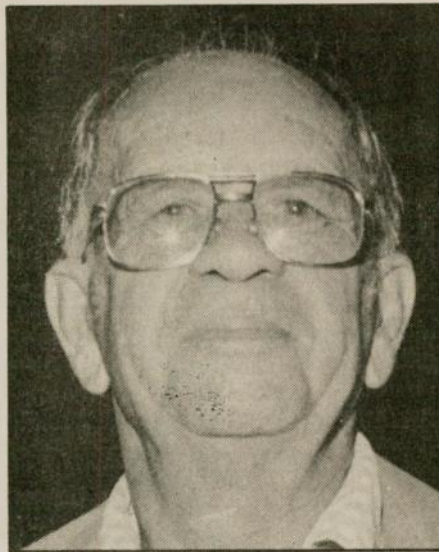
Louis Potter, K6VT

Lou Potter, K6VT, has died in a Concord, California, hospital at the age of 87. As a boy in the Midwest, Lou started experimenting with electricity and radio at age 10. He served in the U.S. Army from 1928 to 1932, then went to work for the Bureau of Air Navigation, which later became the FAA.

Looking back on those early days, K6VT once reminisced that "...one man did just about everything. . . I worked the pilots over the radio, was teletype operator, electrical technician and maintenance man." To supplement his income, he served as chief electrical technician at two nearby coal mines — and was paid with nearly thirty tons of coal per month, which he then sold to his neighbors.

During the second World War, Lou had crated up the entire FAA installation from the Aberdeen, SD, airport and shipped it to Africa. "When they unpacked it on the beach, it worked perfectly. Of course, I used about enough wood to make a seven room house for the crates, and it took four box cars to carry it."

All of the above experiences led up to another "career," that of auctioneer at the annual North Hills Radio Club hamswap. Lifetime member Lou could sell a boat anchor back to the person who brought it and get the fellow to take it back home, too.



Louis Potter, K6VT

K6VT is survived by his wife of 62 years, Edith, daughter and son-in-law Elizabeth and Keith Spooner, of Concord CA, three grandsons and one great-grand child. — *Information supplied by Betty Spooner and KB6HP*

Roy Closs, W8CSO

I regret to report that Roy Closs, W8CSO, has become a Silent Key.

Roy was first licensed at age 15 in 1923, with the call 9BEJ. Subsequently, he possessed the calls W9BEJ, W9FZM, and finally W8CSO.

Roy was a professional radio operator and assistant engineer on the Great Lakes. His first ship was the *SS Thomas Britt* in 1924. The last ship he served on was the *SS Favorite*.

Roy was an excellent CW man, of course, known as "Sparky" in the early days, as most shipboard operators were. Roy obtained his Extra class at age 80. He spent his last years volunteering for international aid.

His son and grandson are both hams. Roy will be missed by his many friends. — *Information submitted by Roy Closs II, WB8QIS and Bob Japenga, N8IKU.*

On Soldering PL-259s

WALTER P. SUPINA, N3WS

The latest issue of Larsen's "Antenna News," a newsletter to Larsen dealers, has a nice tip on soldering PL-259s to RG-58 coax. When you use this small diameter coax with a PL-259 it is necessary to use a UG-175 adapter.

The problem is that these parts are usually chrome plated, and are difficult to solder. (Silver plated ones are worth the money). Larsen recommends filing the end of the UG-175 to remove the chrome, and then tinning it with solder. Then "slip the coupling ring and adapter on the coax and strip the coax one inch back from the end, exposing the shield. Fan out the shield.

"Slide the adapter up to the shield and solder the shield to the end of the adapter. Cut the excess shield from around the adapter. File the shield around the side of the adapter so that the side of the adapter is smooth. Strip one-half inch of the center dielectric back from the end of the coax.

"Place a dab of Super Glue on the threads of the adapter and insert the coax-adapter assembly into the body of the plug. Tighten with pliers and then solder the center conductor of the coax to the center pin of the coax connector." Here's hoping that you remembered to slide the shell of the PL-259 onto the coax before you did all this. I thought that the bit about the Super Glue was interesting. Also, the filing would make the soldering much easier. WR

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Within 60 days after starting with CW Lite, I was able to copy 15 WPM in my head. I took my CW test and passed on the first try—N3KRE



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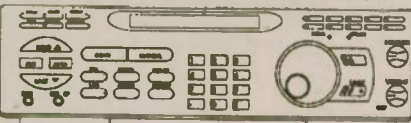
On April 19, 1993, the FCC amended Parts 2 and 15 of its rules to prohibit the manufacture and importation of scanning radios capable of intercepting the 800 MHz cellular telephone service. Supplies of full coverage 800 MHz scanners are in very short supply. If you need technical assistance or recommendations to locate a special scanner or solve a communications problem, call the Communications Electronics Inc. technical support hotline for \$2.00 per minute at 1-900-555-SCAN.

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OFF THE AIR

Please get all the facts

It would appear that in no other hobby, are people so opinionated as those of us in the Amateur Radio hobby. In all modes and frequencies, we see or hear messages that cover a wide range of subjects with a low percentage actually dealing with Amateur Radio, packet radio probably being the worst of all modes.

The subjects that are amateur related seem to draw a lot of cross-fire, pro and con. Who is right, and who is wrong, may never be decided, however, some comments leave deep scars that last longer than the original subject matter.

There is nothing wrong about having a good, clean discussion about a particular subject so long as it is done in a constructive manner, and conducted at a level which is representative of the level of intelligence that we amateurs are alleged to possess. Derogatory comments, name calling, stereotyping, along with a general lack of

first hand information are not the qualities of an educated individual.

To the case in point: I recently petitioned the FCC to eliminate the 20 wpm requirement (element 1c). Within a 2 month period, several publications have extracted quotes from that petition, but none have given the complete story, and therefore, have not presented enough information for another individual to base his/her comments. As a result of this I have received letters from amateurs calling me all sorts of names, derogatory comments and stereotyping me into a category where I don't belong. One amateur was convinced that I was too lazy to get off my backside to learn the 20 wpm. But you see, he was not privileged to see the letter of transmittal sent along with the petition which indicated that I am a former railroad telegrapher and Western Union agent who sent in excess of 20 wpm, so to him and others, please get off my back about CW. Even if the petition were enacted, I am not really positive that I care to join the ranks of the Extra Class operator for several reasons: I don't believe that a gain of 75 kHz is worth the extra study; my vanity left years ago; I don't need the prestige; and I'm not sure I care to be associated with some Extra Class operators who still want to know the correct length of a half-wave dipole for 20 meters.

In closing, I would highly recommend that everyone save the wear and tear on your typewriters and word processing equipment by writing me letters pro or con. It would also keep the blood pressure in check. It may be well to also point out the fact that this petition has not been assigned a No-

tice of Proposed Rule Making (NPRM), and it may never get that far, so why get excited at this point? You should understand that your comments to me are premature and misdirected. Your comments, when appropriate, should be forwarded to the FCC, not to me, I don't count the votes. Thank you for hearing my side.

EDWIN R. DAHL, KI7FB
Spokane, WA

Contests interfere

FB John Wilson, KM6BF's letter in "Off The Air" Dec '93 airing grievances regarding contesting.

JW is NOT alone. I consider contesting tantamount to willful interference. I hold the ARRL and their ilk responsible for the reinforcement of this particularly bad lemming-like behavior and the ruination of many a would be fine hamming weekend with strident CQing and brusque QSOing.

I suggest we use and redefine "QRC" with apologies to the maritime mobile service to indicate "Your transmission is being interfered with by contesting."

JIM OSS, KG0AN,
Hiawatha, KS

JZO clock

In the Spacecom article (Dec. '93, pg. 46) Mr. Arland describes a clock from JZO Research. He gave it a very glowing review concerning the accuracy and the 12 or 24 hour format. All in all, it sounded so great I ordered one for the stated price of \$29.95 + \$4.50 S&H.

One month later the clock arrived and much to my dismay found it had been greatly overrated. The quartz movement is identical to all other battery operated clocks whether from K-Mart, Radio Shack, etc. with the same accuracy, i.e. no better or no worse. The 12 or 24 hour format was no format at all but the words "Zero — Thirteen through Twenty-three" printed between the numerals.

I will admit the face was multi-colored in one-minute graduations about the WWV schedule but that alone was certainly not worth the additional \$15 to \$20 for just another wall clock.

ERNIE HISER, AB6PP
Roseville, CA



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Contests sell gear

What is Amateur Radio? I thought it was a means for a person, with an average income, and average intelligence, to enjoy the fun of communicating with others, in a personal way, and exchanging information about things of common interest to both.

I read the FCC Rules and Regulations and it re-stated that personal communications is a part of part 97, but said that any emergency situation, is also a part of Amateur Radio.

I found no mention of any contesting being forbidden, nor allowed, as it does not fit into rules stated above. It is

neither personal communications, nor is it emergency communications.

I listened to the DX Sweepstakes, (I think that is what they call it), and found the great majority of participants violating all of the FCC rules, which state: No operator may operate within the band pass of another QSO in progress in such a manner that interferes with said QSO! I understood the average separation to be at least two to three kHzs apart.

Those who sponsor such contests, without setting down conditions for obeying all the rules we all agreed to when we secured our license, are also violating those same rules, on two

counts: 1) for giving awards to the worst offender (usually) and 2) for allowing their influence to condone violations.

The ARRL who brags about how they have helped hams, better take another look! By your actions here, you do not do a service to Amateur Radio. . . It does sell a lot of gear! It does nothing to improve Amateur Radio for any except contesters!

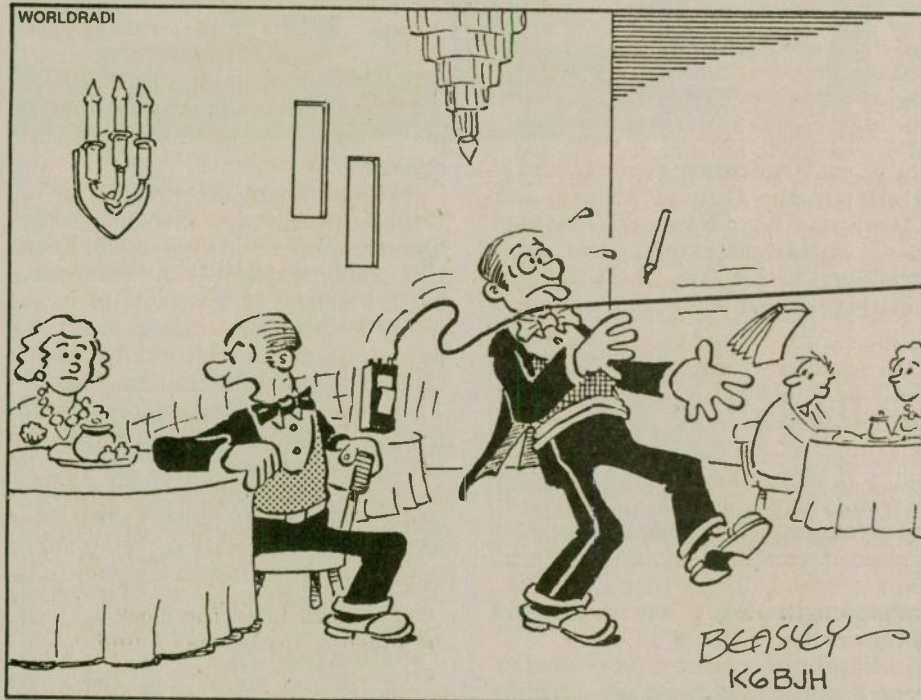
I thought all the FCC rules were intended for all Amateurs, not just for us, who keep the bands alive, only to be taken over by any contest that comes along.

What goes on? Do contesters have the right to disrupt all other QSOs with disregard for the rules the rest of us agreed to abide by? We promised to follow the rules, so all could use the bands. Were we wrong?

I think those who contest should ask themselves; what do I get out of this new gear I bought? An award to boost the ego, maybe? What is a piece of paper worth? It causes everyone, even other contesters, to dislike you.

You are being cheated, contesters! Wake up to the real world of Amateur Radio!

ROY E. McFALL, WA6GGB
Arcadia, CA



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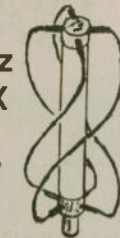
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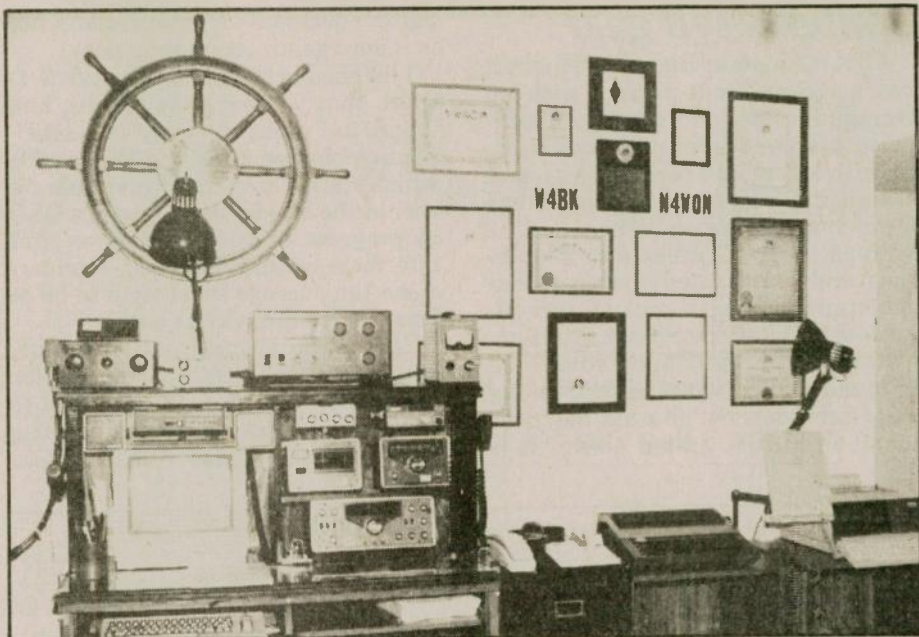


Art and Ruth
Monsees,
W4BK and
W4WQN

STATION APPEARANCE

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

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



This month's station appearance winner is a joint adventure.

Living on the top floor of a 15-story retirement complex directly on the Florida Intracoastal waterway seems like a good way to spend those "reclin-

ing years." Our corner apartment also overlooks the Gulf of Mexico and Clearwater Bay. Now add Amateur Radio with antennas on the roof and it gets even better. Yes, these are the best years of our life. Let us tell you

about it.

Our equipment includes a Ten Tec Omni transceiver, a Kenwood 922-A linear amplifier and a two-meter Yaesu CPU 2500 transceiver. An emergency battery source is available to power either HF or VHF units in event of a power outage. In addition, we have a Commodore 64 computer, an AEA CP-1 interface and a Commodore monitor for CW operation. A Cushcraft R-5 vertical antenna for 10, 15, and 20 meters, a Ringo Ranger for two meters and a dipole for 40 meters are located on the rooftop, directly above our apartment. A dummy load is used for tune-up and test purposes. All of the equipment can be controlled from the operating position.

We run no more than 750 watts input from the 120-volt outlet and find that the electric lights do not show any noticeable blinking (a 240-volt line is not available). All equipment is grounded to the building ground system. As a result, we have experienced no TVI whatsoever, even with 250 elderly residents in close proximity. We can operate at any time without fear of disturbing our neighbors.

We have worked over 200 countries, on both CW and SSB. Certificates on the wall include WAS, WAC, DXCC, 35 WPM code certificate, a QCWA Meritorious Award, as well as the QCWA Distinguished Service Award. This is a two-member family operation. The OM has an Extra class license and the XYL has an Advanced class license.

Living in a retirement complex with friendly neighbors, prepared meals, bus transportation, maid service and even Amateur Radio — life is beautiful and just can't be beat!

WR



Amateur "Hi"



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

This amusing tale comes from Jay Carr, W6FAY.

During many decades of sailing the Seven Seas as a ships "sparky." I met many hams. One memory stands out.

I was in Syracuse, Sicily when I noticed a large Yagi on the roof of a six story apartment. I went to the entrance, but it was barred and locked. I

cupped my hands to my mouth and loudly called "CQ, CQ, CQ."

A bald head appeared at the window where the cox entered and told me how to get in.

Minutes later, I met IT9QDS and his family and was sitting enjoying friendship and a glass of wine.

Hams sure are great!

WR

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Nominations are requested for Amateur of the Year, Special Achievement and Technical Excellence awards. Refer to the Hamvention Program for nomination form or contact Hamvention Awards Chairman, Box 964 Dayton, OH 45401-0964.

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Award Nominations: March 1
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USA - April 8 Canada - April 1
Flea Market Space: February 1

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Notification of Flea Market space assignment will be mailed by March 15, 1994. Checks will not be deposited until after the selection process is complete.

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Novice thru Extra exams scheduled Saturday and Sunday only. Send FCC form 610 (Aug 1985 or later) - with requested elements shown at top of form, copy of present license and check for prevailing rates (payable to ARRL/VEC) to Exam Registration, 708 Mapleside Dr. Trotwood, OH 45426

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DX WORLD

John F.W. Minke III, N6JM
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W-100-N

The following DXers were awarded *Worldradio's* Worked 100 Nations certificates for the period 4 November through 8 December:

- 466. KN6ER Bill Langton 04 Nov 93
- 467. GM4XLU Edward Wallace 18 Nov 93
- 468. K4GHJ Donn L. Dieter 08 Dec 93

Ray Wormley, WN5MBS, responded to the comment regarding modification of the Nations Lists and has offered recommendations the United Nations. Armond, N6WR, has been working on this and no doubt an entirely new certificate will be designed. Most likely, the new award will be even more difficult to complete.

Fiji Islands (3D2)

Paolo Mauro, IV3UHL, is presently operating from several islands in the Pacific including Fiji. He should be there through the end of March. He operates both SSB and CW. On SSB check 3.760, 7.095, 14.260 and 21.260 MHz. On CW he works 5 kHz up from the lower edge.

3D2MQ was reported in November operating from Malolo Island (OC-121). We are not sure but we think this may have been Paolo.

The Yamato Amateur Radio Club of Japan was to have been there the end of November signing with various calls assigned to the team members. The calls included 3D2HI, 3D2HK, 3D2ID, 3D2KZ, 3D2MU, 3D2SG and 3D2SH. We have no reports for their activity. They were to have visited the Solomon Islands prior to the Fiji operation and we saw no reports for that either.

We also have a report of a 3D2YA worked from the mid-west the latter part of October in the 12 meter band around 2230 UTC on 24.899 MHz.

Rotuma Island (3D2)

Antoine, 3D2AG, was active from Rotuma Island (OC-060) during the month of November and should be active until sometime in 1994. He was reported signing 3D2AG/P on 7.007 MHz at 1100 UTC early November.

Tonga (A35)

During his Pacific tour, Paolo, IV3UHL, will also visit Tonga and is scheduled to be there for two months through the end of January. His call is not known at this time but might be A35MQ.

Active on 40 and 80 meters has been A35EA. Look for this one between 3.504 and 3.510 MHz from 1130 UTC and between 7.003 and 7.007 MHz from 0600 UTC.

Other calls reported from Tonga include the following:

A35HE	7.006 MHz	1130 UTC
A35KB	14.222 MHz	0600 UTC
A35SC	14.265 MHz	0615 UTC
A35UE	14.260 MHz	0900 UTC
A35UZ	14.256 MHz	0430 UTC

Tunisia (3V8)

Mahmat Rajjaz, 3V8AS, continues to be active from Nabeul in Tunisia and has been very active on the 17 meter band. Look for him near 18.070 MHz between 1200 and 1630 UTC.

3V8AS can also be found on the lower end of 15 meters. Check 21.014 to 21.021 MHz after 1300 UTC.

Unfortunately, contacts with 3V8AS are still not being accepted for DXCC credit at this time. QSL cards are handled by his manager, IK5GQM, (just in case contacts with 3V8AS do become valid for DXCC credit).

Jim Smith, VK9NS, in his DX column in *Amateur Radio Action* reports that Karl, DF2WV, signed as 3V8W from Tunisia July 23 through August 15. Karl works for Deutsche Aerospace and was installing equipment at a military base there. Karl made some 6500 contacts and only a couple on SSB. Karl, and the possibility of Baldur, DJ6SI, may be returning. However, as

no documentation has been received at the DXCC Desk this operation is not valid either.

Pakistan (AP)

Not much activity from Pakistan! AP2AL shows now and then on 20 meters SSB from about 1230 UTC. Listen for this one between 14.195 and 14.200 MHz.

We also have a report of an AP2JZB on 15 meters at 1445 UTC on October 26th, where a deserving DXer in the state of Maine worked him on 21.335 MHz.

Cuba (CO)

Several Cuban stations have been reported recently according to the DX news bulletins. Check the following:

CM2NE	1.824 MHz	1130 UTC
CM7JD	7.021 MHz	0130 UTC
CO1EE	3.798 MHz	1100 UTC
CO1RG	3.793 MHz	0200 UTC
CO2CI	3.799 MHz	0200 UTC
CO2JD	14.012 MHz	2215 UTC
CO2PX	28.474 MHz	2000 UTC
CO2VG	7.003 MHz	0615 UTC
CO3PX	3.799 MHz	1130 UTC
CO6CG	3.800 MHz	0230 UTC

If you need Cuba on RTTY look for a station signing with T46RR. He has been reported between 14.082 and 14.089 MHz around 0100 UTC and again at 1700 UTC.

Djibouti (J2)

Jean, J28JJ, expects to be active from Djibouti for the next three to four years. He has been reported operating RTTY on 21.087 MHz around 1830 UTC.

Other activity from Djibouti has been supported by several stations. On 20 meters we have the following reports:

J28BQ	14.127 MHz	1800 UTC
J28DE	14.022 MHz	1730 UTC
J28FX	14.016 MHz	2045 UTC
J28RD	14.226 MHz	1830 UTC

Now if you have worked everything there is to work on that band, try 15 meters for these:

J28BF	21.029 MHz	1245 UTC
J28DE	21.038 MHz	1300 UTC
J28JJ	21.083 MHz	1330 UTC

On our newer bands we have J28RD on 17 meters near 18.080 MHz at 1830 UTC working into the mid-west on October 20th.

We also have a report of another call, J28RP, who was worked on 40 meters SSB on 7.082 MHz at 2200 UTC and on 10 meters SSB near 28.443 MHz at 1400 UTC. However, these were European reports.

Montserrat (VP2M)

Stu Stephens, K8SJ, will be vacationing in Montserrat 14-27 January 1994, on most bands. His operations

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MS-084	80-40M W-SLOPER	41' LONG	\$45.00
SS-006	160M SINGLE-BAND W-SLOPER	60 or 65' LONG	\$52.00
MHC-068-80	160-80-40M BROAD BANDER	105' LONG	\$65.00
MS-064-832	160-80-40-30-15-12M DUAL-BAND SLOPER	60' LONG	\$67.00

Send 2-stamp SASE for details of these and other antennas. (SASE = \$5 PER ANT.)

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EUROPE: JONIT Dept. W, Box 2063, S-831 02 Östersund, Sweden
JAPAN: J.L.D.R.K. 1933-26 Hirata, Takanezawa, Shinya, Tochigi 329-12

appear to be a CW affair and Stu has submitted the following daily schedule:

1.835 MHz	0400 UTC
3.502 to 3.512 MHz	0300 to 0600 UTC
7.002 to 7.012 MHz	0200 to 0300 UTC
	1100 to 1200 UTC
14.002 to 14.027 MHz	1900 to 2100 UTC
18.077 MHz	1600 to 1700 UTC
21.025 MHz	1600 to 1700 UTC
28.025 MHz	1600 to 1700 UTC

Stu will be signing with VP2MFA running 100 watts to an all-band Zepp antenna up 37 feet. Stu will answer all QSL requests and those sent without SASE will be sent back through the bureau system. Please QSL to Stu direct as there is no bureau in Montserrat.

Bermuda (VP9)

The Western New York DX Association claims that they collected some 3 million points during the November Worldwide DX Contest signing with VP9MZ. They made over 1000 contacts on 40 meters with a simple dipole lying on the roof. We hope that this could have been a new one for you on that band.

Pitcairn Island (VR6)

Norman Payes, W2SZJ, inquires about the recent VR6FLY activity from Pitcairn Island and could find no further information regarding the special event station. The call VR6FLY appended with the operator's suffix was active the last three days in November to commemorate the 155th year of Woman's Suffrage on Pitcairn. To obtain a special QSL you must state the operator's call and QSL via VR6FLY, Private Bag, Pitcairn Island, via New Zealand. The operators participating were to have been VR6BX, VR6CB, VR6DB, VR6DR, VR6ID, VR6KY, VR6ME, VR6MW, VR6SC, VR6TA, VR6TC and VR6YL.

Zimbabwe (Z2)

Very active from Zimbabwe is Z21HS. He prefers the 40 meter band and is usually found between 7.002 and 7.026 MHz between 0330 and 0445 UTC and later between 1500 UTC and 1600 UTC.

On 15 meters Z21BA has been active between 21.295 and 21.370 MHz after 1800 UTC. WARC band activity includes Z21AV who has been reported on 18.157 MHz at 1945 UTC and 24.951 MHz at 1530 UTC, Z21CS on 18.123 MHz at 2100 UTC and 24.967 MHz at 1700 UTC, and Z21HJ on 24.940 MHz at 1530 UTC. Z21HS was reported on 30 meters near 10.104 at 2345 UTC.

Only one 10 meter report was found with that of Z21JE working a DXer in Iowa on October 21st at 1345 UTC on 28.518 MHz.

IOTA

Art Phillips, NN7A, and Mike Sharp, NG7S, both members of the Northern Arizona DX Association, will return to South Water Caye (NA-180) where they will sign with V31JZ, 13-17 February. The operation will be mostly CW, with some SSB on the standard IOTA frequencies. They will be running barefoot to vertical and wire antennas. There should be many of us looking for them as this is only the second time the island group has been activated.

Dr. Rick Dorsch, NE8Z, will be in Mexico, 9-21 February and plans on activating a new IOTA group. Rick will not know what group it will be until mid-January, so we cannot state which group it will be.

Here are a few more of those IOTA islands that have been active during October and November.

EU-006	Aran Island	EJ/ON5KL
	14.260 MHz	1715 UTC
EU-016	Brac Island	9A2GF
	4.259 MHz	0745 UTC
EU-034	Saarema Island	ES1QD/Ø
	14.260 MHz	1600 UTC
EU-131	Murano Island	IK3TTY
	21.270 MHz	1130 UTC
AS-024	Yaeyama Island	JR6WNJ
	21.260 MHz	0930 UTC
AS-026	Cheju Island	HL93KZW/4
	21.270 MHz	1000 UTC
AS-082	Laptev Sea Coast	UAØQFC
	7.003 MHz	0645 UTC
NA-054	Berry Island	K5BDX/C6A
	21.260 MHz	1900 UTC
NA-060	Tigre Island	HR1RMG/HR4
	21.260 MHz	1630 UTC
NA-091	Quadra Island	VE7BPL
	14.260 MHz	2100 UTC
NA-111	Absecon Island	K2BR
	7.253 MHz	1730 UTC
OC-059	Kosrae Island	V63UF
	14.010 MHz	1100 UTC
OC-154	Troughton Island	VK8AN/6
	14.260 MHz	1345 UTC
OC-174	Tawi Tawi	KI7AM/DU8
	21.260 MHz	0900 UTC
SA-008	Tierra del Fuego	LU8XPA
	14.260 MHz	0118 UTC

Jonathan Lofton, KZ5⁷/DA1LO, notes that Sergey, UAØKB, is active from Dickson Island (AS-005). Sergey is a professional radio operator and signs 4K4/UAØKBZ from the island. And when on Franz Josef Land, he signs with 4K2KBZ. If you work him

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he requests that you QSL direct as he does not collect cards from the bureau.

Now is the time to get your IOTA cards together as the annual update is just around the corner. We will be curious to see what the Honour Roll will be with the humongous growth in the program.

Canadian Islands Award

Although this award has been around for some time it has recently gained a particular interest. Most likely, the IOTA program has spurred it on. Unlike IOTA all islands for this award count, including islands in rivers and fresh water lakes.

The Canadian Islands Award (C.I.S.A.), sponsored by the Maple Leaf Radio Society, is the work of Garry Hammond, VE3XN. Canada has the distinction of having the longest coastline in the world, which is made possible because of all the Canadian islands.

The C.I.S.A. (not to be confused with the C.I.A.) is offered in five classes: IV, III, II, I and Honour Roll. The Honour Roll class requires 25 or more islands, with an attractive plaque available for 50 or more islands worked and confirmed.

All bands and modes count and there

Don C. Wallace, W6AM
Amateur Radio's
Pioneer

THE HISTORY OF
AMATEUR WIRELESS
by Jan Perkins, N6AW

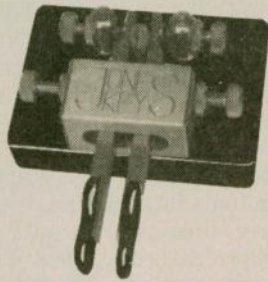


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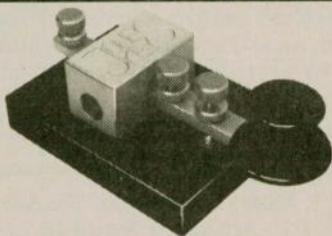
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are no time or date restrictions.

Garry did not indicate the number of islands required for classes IV, III, II and I. But, with all the islands activated for IOTA it should not be hard to come up with 25 for the first time around. And, most likely you have those easy ones sitting around such as Newfoundland, Prince Edward Island, Montreal (yes the city is on an island), Vancouver Island (no, the city is not on the island), etc.

To apply for the C.I.S.A. please prepare a list of islands worked that includes the name of the island, the island reference number (if known) and call. Include a fee of \$3.00 (\$5.00 for stations outside of the U.S. and Canada) and send to Garry V. Hammond, VE3XN, c/o The Maple Leaf Radio Society, 5 McLaren Avenue, Listowel, ON N4W 3K1, CANADA.

A comprehensive island list is available for \$1.00 or two IRCs from Garry.

And, speaking of Canadian Islands, Rick Dorsch, NE8Z, had planned operations from several Ontario islands during December. Remember, Ontario islands are not valid for IOTA.

DXCC Desk

The DXCC Desk has received documentation and has approved the following operations with dates beginning as indicated:

3D2UF	20 Nov 92
4J1FM	21 Oct 92
4J1FW	21 Oct 92
5W1VL	25 Nov 92
60/FE1LVR	18 Jan 93
9G1XA	23 Aug 93
9H3RU	09 Aug 93
A61AF	03 Aug 93 (See below)
BV/K4IQJ	19 May 91
C21/KC6DX	07 Sep 93
C21/KC6ZM	07 Sep 93
C56V	30 Oct 93
C56/KF7AY	28 Oct 93
C56/AA7NO	28 Oct 93
C56/N7BG	28 Oct 93
CY9/WV2B	09 Jul 93
CY9/WA0UJH	09 Jul 93
CY9R	02 Sep 93
ET3RP	20 Sep 93
KH2/N6SVL	05 Nov 93
KH6/N6SVL	03 Nov 93
JT1/JE7RJJ	05 Jan 93
JT1/JE7RJJ	19 Aug 90
SV5/N6MZ	16 Jun 93
T5/N3HQW	31 Aug 93
UA0S/JE7RJJ	28 Oct 91
UA0S/JM1SVJ	28 Oct 91
UA0S/JJ2HVK	28 Oct 91
UA0S/JK2NBE	28 Oct 91
V51/DJ2ZS	17 Aug 93
V51/DJ0WQ	17 Aug 93
V51/DK2WH	21 Jul 93
V63UF	10 Nov 93
V73UF	17 Nov 93
VS6/K4IQJ	27 May 91
YA1AR	05 Dec 92
ZB2/DL7URA	06 Apr 93

ZB2/DL7VEE	05 Apr 93
ZK1AUF	17 Nov 92
ZL/N6SVL	11 Nov 92
ZS9/DJ2ZS	06 Aug 93
ZS9/DJ0WQ	06 Aug 93
ZS0PI	28 Jul 93

The DXCC Desk reports that A61AF (U.A.E.) cards are not acceptable for contacts made prior to 3 August 1993. Contacts made prior to that date were unauthorized and are not valid for DXCC. If you have submitted a A61AF QSL card for credit prior to 16 November 1993, you must resubmit your card (regardless of the fact it is a valid date) as all credits have been removed from the database. If your card was for a contact made prior to 3 August 1993 forget it and go look for another A61 station.

DXCC Backlog

The backlog of unprocessed DXCC applications was down to 95 (9,222 QSL cards) at the end of October. During the month of October the DXCC Desk received 528 applications (47,548 QSL cards) for endorsements and awards. Applications being sent out at the end of October were received less than one week earlier.

By the end of November the backlog was 146 (16,153 QSL cards). During the month of November the DXCC Desk received 484 applications (46,942 QSL cards) for endorsements and new awards. Turnaround time now appears to be about 8 days.

Visalia

Don Bostrom, N6IC, says to get your reservations for the 1994 International DX Convention in early so that you may be in the pre-registration drawing for a super prize.

The convention will be held again this year at the Holiday Inn in Visalia, April 15 through 17. The pre-registration fee of \$45 will include Friday and Saturday evening cocktail parties, all HF, low-band and DX orientated forums and technical sessions, a convention patch, Saturday night banquet program and Sunday morning breakfast buffet. In addition to the super prize you will also be eligible for the grand prize.

Those types who like to chase a little white ball on the grass there is a Friday morning golf tournament. If interested please make note on your pre-registration. Make your check payable to "International DX Convention" and send to Don Bostrom, N6IC, 4447 Atoll Avenue, Sherman Oaks, CA 91423. Please do not send cash! For meal ticket or convention only tickets please call Don at home 818/784-2590 or at work 310/334-8717.

If you wish to bring your wife, there is a ladies luncheon for \$10.00.

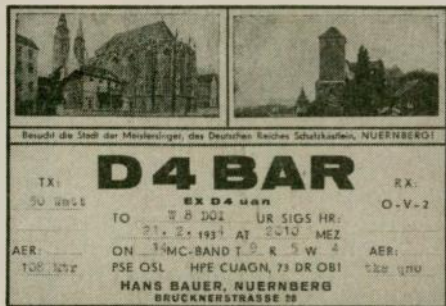
As far as we know the Holiday Inn is fully booked. Try the Raddison Hotel at 209/636-1111, or the Lamplighter Hotel at 209/732-4511. There are other places available in Visalia and neighboring Hanford. Speaking of Hanford, Amtrak has four trains a day from the bay area and southern California that stop there with connecting buses to Visalia if you wish to leave your car home.

If you have never attended the convention at Visalia or Fresno you don't know what you have missed. You haven't attended a DX convention until you have been to the big one — Visalia!

Antique QSL Department

No, the following card is not confirming a contact with the Cape Verde Islands. The call D4BAR was assigned to Hans Bauer of Nürnberg, Germany. Harold Mahlke, W8QG, of Lansing, Michigan, provided this 1934 QSL card. At the time Harold worked D4BAR, he was signing W8DOI out of Ann Arbor. The D for Deutschland, later became DL and other close by prefixes.

The C1JF card was submitted by Max Smith, WO7D, of Scottsdale, Arizona. Max worked this station back in 1947 from Richmond, California, un-



der his former call of W6WII. He was using a 6J5 crystal oscillator driving a 6L6 amplifier with about 25 watts in-



put. For this 40 meter contact Max was using a dipole and was receiving with a Hallicrafter S-38. Remember those?

DX Prediction — February 1994

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

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

CENTRAL USA

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

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(11)	*12	*16	(9)	*15
12	(11)	12	*15	(9)	14
14	(17)	11	*14	(14)	27
16	(23)	12	*20	17	31
18	25	(11)	18	(13)	*33
20	26	18	(21)	(11)	*33
22	22	25	26	(10)	*33
24	(19)	*26	30	(10)	*30
2	*17	23	30	9	*23
4	*14	15	24	9	*20
6	(13)	14	20	*10	*17
8	(12)	*13	18	(10)	*16

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	(14)	(10)	(15)	*9	*16
9	(14)	9	*14	(9)	*15
11	27	9	14	14	21
13	32	10	*27	*19	*26
15	34	(10)	22	*20	*29
17	*34	(9)	(19)	18	*32
19	*29	(9)	(17)	14	*33
21	24	(17)	(25)	(11)	*33
23	*19	(18)	29	10	*27
1	*17	(12)	20	10	*23
3	*15	(11)	(18)	9	*20
5	*14	(10)	(16)	9	*18

Max no longer works DX, having quit about 20 years ago with 285 DXCC countries in the log, all on CW. His reason for quitting was the arrival of bad language on the scene along with QRMing and all that kind of stuff. He always felt that Amateur Radio was sort of a gentlemen's game and that sort of actions were not warranted. . . .

Unfortunately, what Max says is true. However, it is the sign of the times and is not restricted to Amateur Radio.

As you can see, it isn't hard to transpoe the last two letters.

DX News Sheet reports that cards sent to TT5BP are being returned marked "sorry wrong address."

Please do not send QSL cards for VK9LX via G3ZAY. Martin no longer holds this call and it has been reissued to another operator.

QSL Help!

Dave Van Der Weele, WA3L, is looking for a QSL route for 8J0JES/0, GM0LO, and FD1RUQ/P.

QSL Information

Hal Silverman, W3HWC, writes that he is not, and never has been a QSL manager. Hal suggests that care be taken when copying the QSL manager's call. Hal gets some 10 to 12 cards per year that have been mistakenly sent to him. We think Hal is getting cards that should have been sent to Mac, W3HCW.

QSL Routes

3A/1RBJ	--11A	5V7GL	--HK1LDG
3A/G6SLY	--WA3CGE	5Z4BI	--EA5GPA
3D2CK	--I4LCK	5Z4PU/A	--W4FRU
3D2HG	--JR2KDN	6V6U	--DL8AA
3D2HI	--JA1JKW	7J1AOE	--K3IPK
3D2HK	--JR1LVB	7Q7DQ	--K3DI
3D2ID	--JE1XXG	7Q7OO	--JA2WED
3D2KZ	--JA8VE	7Q7XX	--K6VNX
3D2MQ	--IV3DHD	7Q7ZZ	--JH3RRA
3D2MU	--7M1QAP	7X4AN	--JA1UM
3D2SG	--JA6SJN	7Z2AB	--DJ2BW
3D2SH	--JA1JQY	8Q7AD	--K1SE
3D2YA	--W6YA	8Q7AS	--DL3SAS
3D2YO	--K6JYO	8Q7BX	--DL8LA
3G1I	--CE1HIK	8R1K	--I4ALU
4F2IR	--DU3DO	9A4D	--OH1VL
4O7AV	--YU7AV	9A5Y	--9A1HCD
4J3GM	--RG6GM	9D2UU	--9A1CCY
4J4GK	--GW3CDP	9G1FN	--LZ2UU
4K2BY	--UW6HS	9J2MT	--W4FRU
4K2MAL	--UA4RC	9K2JC	--JP2BMM
4L1AB	--UF6AB	9M8R	--VESOMC
4N7R	--UL7RE	9V1WE	--W7EJ
4O7AV	--YU7AV	9X5CW	--JH1FNS
4S0DX	--DL4EBE	9X5GC	--9B1TD
4U1TU	--IK3STG	9Y4H	--IK9PHY
4U1VIC	--DL1QQ	9Y4VU	--K6NA
4X/JH9XZG	--JH9XZG	A22MN	--W3EUV
			--WA8JOC

PITCAIRN ISLAND

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VHS Tape

Filmed & narrated on the island by Kari & Brian Young, VR6KY. 72 minutes —the hams, the people, the island. \$29.96 includes shipping.

TIBI PRODUCTIONS

P.O. Box 129, Medinah, IL 60157

A25/OH7XM	--OH7XM	IU4U	--I4ALM	V31DX	--KA6V	WA3LRO/PJ4	--K28B
A35MQ	--IV3DHD	J28BM	--K1SE	V31EN	--KF8NN	WB2ABD/VP9	--WB2ABD
A35UZ	--G0HUZ	J28BQ	--F5SOZ	V31JR	--NK7U	WB2P/KH0	--WB2P
A45ZV	--K1SE	J28RP	--F5RPP	V31JZ	--NN7A	WB2RAJ/VP9	--WB2RAJ/VP9
AF2SP	--DL3KWR	J37K	--W8KCF	V31KF	--W5ASP	WB2YQH/VP9	--WB2YQH
BV3BV	--AA7AN	J5UA1	--NW8F	V31MJ	--N17T	WF2S/VP9	--WF2S
C21/KC6DX	--JA2NVY	J73K	--W8KCF	V31RL	--NG7S	WH6OS/NH8	--WH6OS
C21/ZL1AMO	--ZL1AMO	JW9DFA	--LA9DFA	V31YZ	--W5YZ	WK6V/KH8	--WK6V
C21/KC6FM	--JR2BEF	JY8VJ	--DL1VJ	V47KP	--K2DOX	WR6R/KH6	--WR6R
C50BI	--6W6JX	KB2NMV/VP9	--KB2NMV	V47NS	--W9NSX	X5EBL	--YU1FW
C51A	--W3HKN	KF2QE/VP9	--KF2QE	V47RM	--AA5DX	XA5T	--XE2KB
C59GW	--VE1QD	KH4/N7TNL	--W1OO	V63UF	--G4TUF	XE2MOO	--KD5RQ
C56V	--KD7E	KI7AM/DU8	--VE3KN	V7X	--KH6HH	XE3EEF	--KH8IW
C6AFP	--N4JQQ	KP2/CT1BOH	--CT1AHO	VE3YBH/VP9	--VE3YBH	XE3RKK	--KC6KXE
C6AFT	--AA5NT	L4D	--LU1EYW	VF1L	--VE1AL	XT2BW	--WB2YQH
C6AGN	--KA1DIG	L5V	--LU8VCC	VI9XN	--W5KNE	XU6WV	--K6LJM
C91AJ	--CT4RM	LT6F	--LU1FC	VK6SD	--K1SE	XX9AS	--KU9C
C91AJG	--CT4RM	LK4B	--OK1AHO	VK9LI	--LK1TI	YB3AQE	--PAOGIN
C91BH	--SM6CTO	LZ9A	--LZ2KTS	VK9LO	--K6VNX	YB3OSE	--W7TSQ
C91J	--W8GIO	NP2V	--WB4FLB	VK9LQ	--WB60KK	Z31FK	--YU6FK
C94BE	--CT4DK	OA4CWR	--K3JXO	VK9XO	--VK4CR	Z31VV	--YU5KCS
CE3B	--CE3BFZ	OD56MM	--HB9CYH	VK9XZ	--VK6TZ	Z39M	--Z37DRS
CE9RAC9	--EA8BGY	OD56PL	--HB9CRV	VO5TX	--V01TX	Z4OK2PSZ	--OK2PSZ
CH2SEK	--VE2ZV	OH8AM	--OH2BAD	VP2E/NACD	--N4CD	ZB2K	--OH2KI
CH9DH	--VE1DH	OH8DX	--OH2BAD	VP2EC	--N5AU	ZC4C	--G8LJN
CN2JF	--WA8RJV	OH7W	--OH7AA	VP2EDK	--W1GAY	ZC4K3	--G8PWR
CN2JR	--EA7KW	OJ0/OH0M	--OH1NOA	VP2EJ	--N6ZJM	ZC4ML	--G4LSL
CQ9M	--G3PFS	OK0ITU	--OK1DRQ	VP2ERN	--WB6CJE	ZD8M	--K02FOU
CT3EU	--G3PFS	OK10FM	--OK1DRQ	VP2ETK	--AA7MH	ZD8Z	--VE3HO
CU2T	--CU2CE	OK51PA	--OK1DRQ	VP2MBK	--K8UE	ZF2J1	--KG6AR
CW6L	--CX2CS	OL1A	--OK1DWX	VP2MBX	--K8UE	ZF2ML	--WB2P
CX2BP	--JA3GIV	OL5PLZ	--OK1DRQ	VP2MEU	--K8UE	ZF2TB	--KJ6H0
D2EGH	--CT1EGH	OM5PZL	--OK1DRQ	VP2MFA	--K8SJ	ZF2TU	--N7BG
DP8GVN	--DL1JCV	OT3A	--ON7LR	VP2V/KU4J	--AB4J	ZF2VE	--NK7Y
DX1B	--JA1KJK	OT3T	--ON4UN	VP2V/WA2TMP	--AB4J	ZF2VF	--K6GKO
EA6/N6RA	--N6RA	P29WK	--N3ART	VP2V/WA4DPU	--AB4J	ZF2VZ	--KCTV
EA8EA	--OH2MM	P49C	--AA2U	VP2VFP	--AB4J	ZF2VV	--NK1L
EA9UK	--EA9LZ	P46J	--WX4G	VP2VR	--AB4J	ZK1AEB	--JINJC
EC9BN	--EA9TL	P46L	--N5RZ	VP6/NO4J	--K4UTE	ZL2T	--ZL2AHC
ED6XCK	--N6RA	P46W	--N2MM	VP5L	--K4UTE	ZL7FD	--DK8FD
EI7M	--E16HC	P43A	--P43ARC	VP5N	--N2VV	ZP8Y	--K4UEE
EL2CX	--WA3CGE	P49T	--K4PI	VP8CEH	--VP8CBB	ZP8OA	--ZP6CGI
EL2PP	--N2CYL	P14CC	--PB8AU	VP8GAV	--GM0LV	ZV9Z	--PY5CC
EO6U	--PA3BUD	P14COM	--PA3CAL	VP9AD	--W3HNV	ZW6JR	--PP5JR
EP2A	--EP2HZ	P1J1B	--K2SB	VP9MZ	--WB2YQH	ZW5B	--PY5EG
ER8F	--LY1FF	PJ2/WJ2O	--WJ2O	VQ9KC	--AA7AN	ZW9A	--W5CC
ER1A	--F1JAE	PJ5JP	--K1BXE	V86WO	--K9EC	ZX6F	--PY5EG
ER1AM	--SP9HWN	PJ8CW	--K1BXE	VY1QST	--NL7TB	ZX5C	--PY5CC
EV8A	--F6AML	PJ9U	--OH1VR	VY9QR	--VE5SF	ZX9A	--PY5CC
EW/R3AW	--GW3CDP	PJ9Y	--OH3GZ	W2KKZ/VP9	--W2KKZ	ZY1UP	--PY1UP
FG5FR	--F6FNU	PP5XK	--PY5CC	WA1RAJ/JX	--WA1RAJ	ZZ5A	--PY5CC
FG6FR	--F6FNU	PR5A	--PY5CC	WA2AOG/VP9	--WA2AOG	ZZ9A	--PY5CC
FH/DL6XU	--DL6XU	PS8C	--PY5CC	4K2KBZ			
FH/F6NCU	--F6NZD	PT9ZZ	--PY5CC				
FH/DL9AWI	--DL9AWI	PU5A	--PY5CC				
FJ/N2HIG	--N2HIG	PX5A	--PY5CC				
FK8FAB	--F6AJA	PX9A	--PY5CC				
FO6BI	--F6HSI	PY8FM	--PY5CC				
FS/W2QM	--W2QM	PY5CC/PY8F	--PY5CC				
FY6GJ	--F2YT	PZ5JR	--K3BYV				
GD8SLY	--WA3CGE	R93SIB	--UA9OBA				
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GJ6SLY	--WA3CGE	S21A	--W4FRU				
H2FP	--5B4ES	S21SAE	--PA8EQ				
H44/JE1XXG	--JE1XXG	S21ZW	--VK2DFL				
H44/JA8VE	--JA8VE	S79TD	--F6ITD				
H44/JA1JQY	--JA1JQY	SM1TDE/4U	--SM1TDE				
H44/7M1QAP	--7M1QAP	SN6O	--SP6DVP				
H44/JA1KJW	--JA1KJW	SV/WY3V	--WB2RQW				
H44/JF1UGA	--JF1UGA	T32BE	--WC5P				
H44/JA6SJN	--JA6SJN	T46CG	--CO6CG				
H44/JR1LVB	--JR1LVB	T46RR	--CO6RR				
HB4FG	--HB9ALM	T49AB	--CO6DD				
HC8N	--AA5BT	T9/PASDZN	--PASDLM				
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HR1ERL	--HR1RCT	TL8BS	--SP8TK				
HR2BDC	--AA5ET	TML1AG	--F5FLO				
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HS1BV	--W3HCW	TM2Y	--F8BEE				
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YL75R --J. Baltins, P.O. Box 100, Riga 7, LV-1007, LATVIA

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Many thanks to the following contributors: DA1LO, VE3XN, W2SZJ, W3HWC, WA3L, K3RV, KC5ALW, WN5MBS, NN7A, KI7NL, KH8AL, W8QG, K8SJ, NE8Z, The American Radio Relay League (K5FUV), Western New York DX Association (KB2NMV), Salt City DX Association (KB2G), Western Washington DX Club (WA0RJV), Northern Arizona DX Association (W7YS), *The Low Band Monitor*, *The Long Island DX Bulletin* (W2IYX), *DX News Sheet* (G4DYO), *QRZ DX* (W5KNE), and *The DX Bulletin* (VP2ML).

As you read this we are now in a new year. Good news for DXers is the Peter I Island DXpedition in February. This will bring out Slim and other lids. Let's keep cool heads in the pileups and show the rest of the Amateur Radio community that DXers have class. If you cannot control yourself, then you had better turn the radio off and try again later. 73 and GL DX de John N6JM. WR

--Sergey Tsyzibov, P.O. Box 2, Dickson Island 663241, RUSSIA

4K4/UA0KBZ

--Sergey Tsyzibov, P.O. Box 2, Dickson Island 663241, RUSSIA

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P29KAB --P.O. Box 1079, Goroka, EH, PAPUA NEW GUINEA

T5JB --P.O. Box 100, D-34414 Espenau, GERMANY

TA2BK --Bahri Kacan, P.O. Box 88, 34002 Topkapi, TR-Istanbul, TURKEY

VQ9NY --Chuck, NCTS, Box 8/873, APO AP 96464

VR6DB --Dave Brown, P.O. Box 13, PITCAIRN ISLAND via NEW ZEALAND

XF4CI --Nellie S. de Lazard, Sierra Chalchihui 235-502-B, Mexico 11000 DF, MEXICO

Pretty good DX!

R.L. CARON, KK6GP

The Russian MIR space station continues to orbit the earth after some seven years, and the latest crew is using the call R0MIR for FM voice and R0MIR-1 on packet. It makes several passes a day and can easily be heard... even on a HT with a rubber ducky! Just set 145.55 into your radio and wait. Even if you don't have a computer tracking program, set that frequency into your packet program and watch for activity.

Digital contacts with the on-board Personal Message System are easy with whatever setup you now use for terrestrial work. Orbits are about 1 hour 35 minutes apart, and "good" passes generally happen in threes and fours, followed by 12 to 15 hours of silence. Unless there is a US Space Shuttle SAREX mission aloft, activity on this frequency is almost certainly the Russian spacecraft. And if you are lucky, you'll hear either Vasily or Aleksandr on regular NBFM. This crew is more chatty than previous ones, so give it a try.

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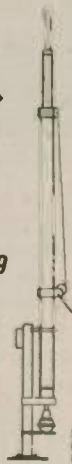
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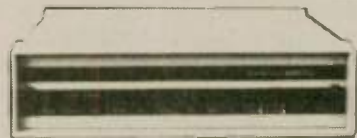
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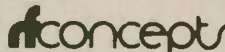
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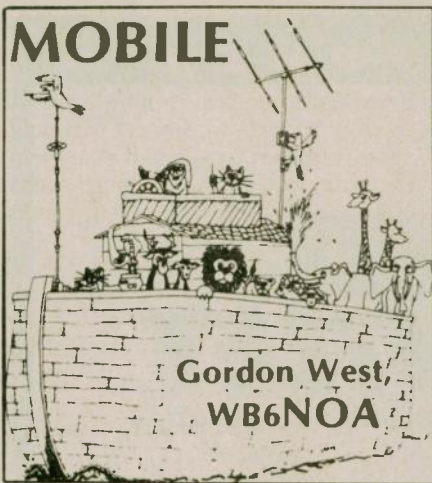


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Mobile at rest

Operating a high frequency SSB transceiver "mobile at rest" may now take on a new meaning. Back in the old days, "mobile at rest" meant that we had pulled over to the side of the road, stuck on that big extension whip, and were operating our HF equipment in a stationary position while sitting behind the steering wheel.

That's all changed now, thanks to a

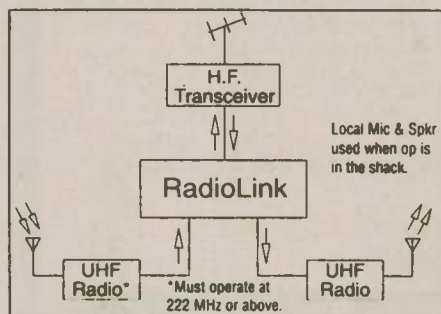


Diagram showing RadioLink setup.

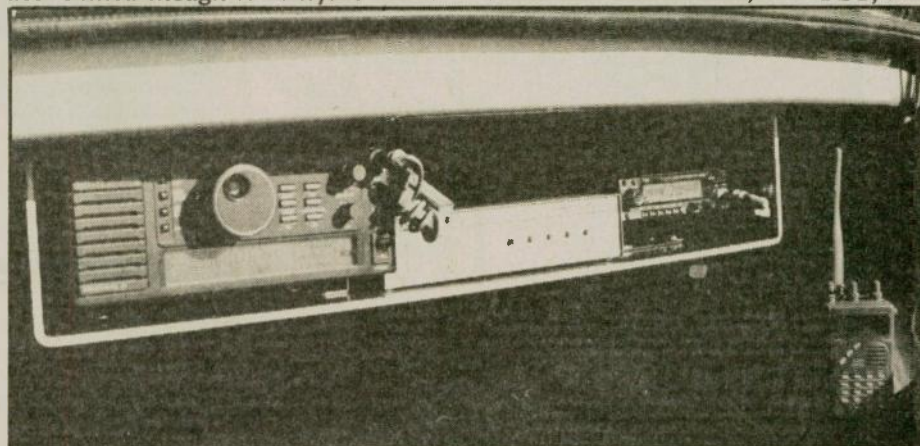
new device called RADIO LINK from AEA in Lynnwood, Washington. You can now operate your mobile SSB station, or for that matter your huge home SSB equipment, completely remote with your little handheld FM transceiver. And unlike systems that have tried this approach in the past, this new AEA set-up is inexpensive, simple to operate, and is almost a plug-in affair to any HF rig which has a computer port: e.g. ICOM HF rigs with a CIV computer port; any Kenwood HF with an active

computer port; Yaesu FT890, FT990, FT1000, FT747GX, and FT757GXII.

When I asked AEA whether or not their product could be used with an HF radio that does not have computer control, their answer was, "Absolutely." I'm not convinced — they go on to say that the link can be used to control a radio with no computer interface for a user skilled enough to interface them.

You'll hear the receiver audio coming back to you. Your friends standing around you will be amazed that you are talking and listening over your little handheld dual-band transceiver on the worldwide bands!

"You can also tune up and down the band at various steps — plus you can scan preset memories or frequencies," comments Don Arnold, WD4FSY, the



The RadioLink package mounted in the trunk of WD4FSY's vehicle.

Those last few words would rule out a relatively simple installation to a non-computer-type HF.

"We have tested it with almost all ICOM and Kenwoods, plus all of the Yaesu radios listed, and Radio Link indeed works well with them," comments an AEA representative.

So here's how it works for you when you are mobile at rest or away from your big HF base station. You operate the set-up on 222 MHz or above. A simple handheld transceiver is all you need to energize the Radio Link to receive your UHF transmission, and to transmit out on the two meter band to let you hear what your mobile or base station is working. Once you log onto your Radio Link, you can use the tone pad on your microphone or handheld to control your station completely. You can change bands, change frequency, switch modes, and the star key controls the transmitter.

Press the star key once to activate the transmitter just like a push-to-talk button. When you are finished transmitting, press the star key again, which deactivates the transmitter.

Outbacker antenna man who regularly uses his handheld inside a hotel to work DX on high frequency with his mobile out in the parking lot.

"When I work my home base system from my dual-band handheld, I can even control some external relays that allow me to turn my antenna, or run the tower up and down," adds Arnold.

So no longer does "mobile at rest" mean you must stay glued behind the wheel in order to operate your HF. Once you have preset Radio Link, you can control your HF mobile set-up down at the campsite firepit and work the boys back home on 40 or 80 meters just as if you were sitting inside the cab. They will be surprised that you're on an HT working HF!

Call this number and listen for yourself: 206/880-6050. When the phone answers, you will hear four beeps, and you should enter the code 1-2-3-4. You will then hear an announcement of the frequency and mode on which Radio Link was left. You now hear audio coming through on HF just as you would hear it coming over the speaker of your dual-band handheld. Change to the band and/or frequency you want by #2NNN# command.

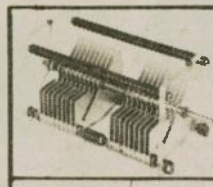
To make this thing work as easily as possible, I recommend the optional cable kits that tie directly into any ICOM, Kenwood, or Yaesu radio. This is what Don and I did, and we were on the air in no time. So if you enjoy HF mobile, or are operating your base station from your handheld transceiver, look into this new product from AEA called Radio Link (AEA, 206/774-5554). WR

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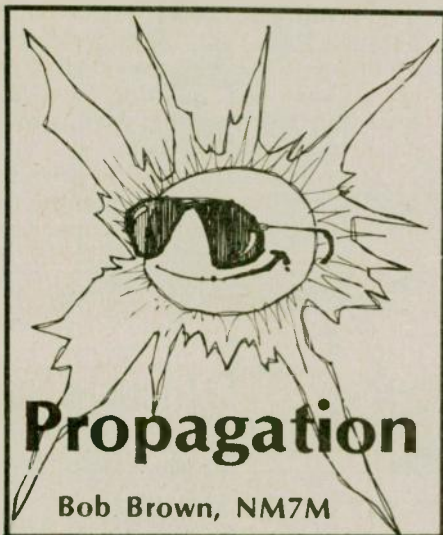
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Okay, when was the last time you did a complicated mathematical calculation? Myself, I can point with pride to recently balancing the family checkbook to within 17 cents. But that was after I found the \$100 subtraction error (in my favor). That's just one part of life that has a quantitative side to it. I happen to think that Amateur Radio does too but lots of folks try to avoid it.

For example, we constantly talk about things that are calculated to astronomical precision — the rising and setting of the sun and the changes of the seasons -- yet we don't deal with them directly. On the other hand, we deal directly, even cope with some other problems which are fuzzy, to say the least. Here, I'm thinking of weather and HF propagation predictions. Of course, the problem there is that we're working with systems that are wispy, without the same cohesion or organization as astronomical systems.

Those of the Amateur Radio fraternity who own PCs have the means of doing calculations of interest; all they have to do is call on the BASIC program that comes with their operating system and do some modest programming. Others, myself included, also have all sorts of aids the Nautical Almanac, spreadsheets with a full complement of mathematical functions, real number-crunchers like MathCAD and various HF propagation prediction programs.

Spreadsheets can assimilate a lot of

data and provide the user with a statistical evaluation of how well organized it might be. HF propagation programs come complete with statistical information buried in their databases and provide predictions with various degrees of confidence, from 10% to 50%, even 90%. If you think about those circumstances, the "operative term" is "statistical," that's quite different from "certainty," the latter being the "Yes/No" sort of thing we like to deal with.

I have to think that instability and uncertainty are more often the case than not; life is just like that, various outcomes not always sure or going the way we'd want or even predict. So if we "keep score," as it were, it's not surprising that we'd accumulate data which shows a spread about what would have seemed to be the likely outcome of any circumstance. But there are different ways of "keeping score;" take solar activity as a case in point.

At the moment, there are three main ways of looking at the level of solar activity — the 1-8 Angstrom background X-ray flux, the 10.7 cm solar radio noise and the sunspot count. But the amount of experience with the three methods varies as they're not all of the same vintage. Thus, the background X-ray flux is the newest one, only be-

coming available in the last decade or so when X-ray sensors were placed on NOAA's GOES satellite. Obviously, the X-ray database is quite small and while the X-ray flux is a quantity of considerable interest because it's a form of ionizing radiation, it hasn't become one which is predicted days, weeks or years off into the future.

The 10.7 solar noise flux is non-ionizing radiation but it has a longer tradition as an indicator of activity in solar physics, getting started after WWII. If you look at the 10.7 cm flux predictions coming out of NOAA in Boulder, you'll note that they're of two kinds: daily values predicted for the next 27 days and 13-month, smoothed values for the remainder of this solar cycle.

Of course, the 27-day predictions are based on recurrence tendencies while the long-term predictions are limited to something like an average based on the few previous cycles where noise observations were available. In any event, if you read the fine print, you'll notice the predictions for the smoothed solar flux have a disclaimer that says "due to the small sample size, useful confidence limits cannot be provided for the radio flux prediction." So you'll see predictions for now and into the future but no indication of how reliable

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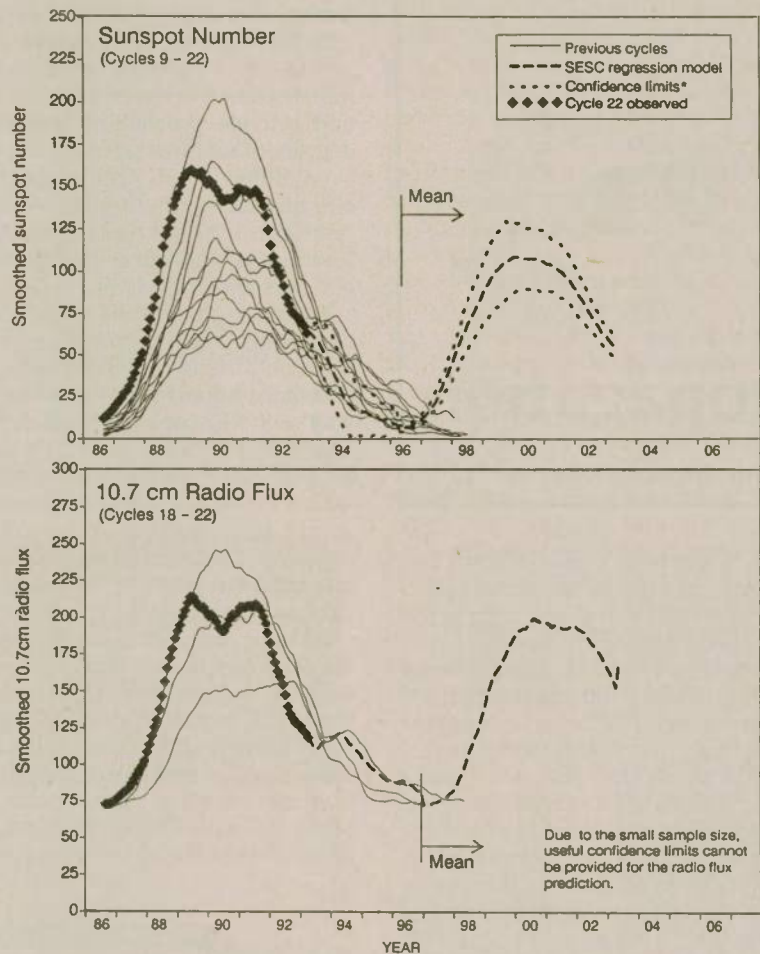
they may be.

The sunspot count is another matter, the database going back hundreds of years. I'm sure you've seen figures showing the rise and fall of the sunspot cycle; however, it wasn't until 1859 that it became recognized as having an 11-year periodicity. But now, over 100 years later, when it comes to predictions of the course of events into the future, smoothed sunspot counts are forecast a full solar cycle in advance. But how do they do that? That's a good question and it goes to the basic assumptions one makes at the outset.

For example, if you had limited experience you might assume that the sun is pretty steady in its behavior, at least in the short-term, and come up with the idea that the next solar cycle is going to be a lot like the ones before it, say in the last 10 cycles. Then you could get the data for the last 10 cycles, average it month by month and make a prediction for the next cycle.

But if you went to the historical record, as given by the NOAA Weekly Report back at the end of February '90, and used the rise times and maximum SSN values for Cycles 12-21, the averaging approach would suggest that Cycle 22 peaked 3.99 years after the solar minimum in September '86 and

Solar Cycle 22 Compared to Previous Cycles



* 90% Prediction interval or 90% confidence limit of the mean.

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reached a smoothed sunspot count of 115.7. So how does that compare to reality? Well Cycle 22 peaked in July '89, 14 months earlier than the prediction and its peak, smoothed SSN value was 158.1, 37% higher than predicted. That leaves something to be desired.

What went wrong? Well, those were averages and one has to look at the deviations from average values as well. So, for one thing, Cycle 19 was in the database; that was the biggest cycle ever recorded with a peak SSN of 201.3 and must have biased the outcome. The next cycle after that peaked went

back to a much lower level, 110.6, and then Cycle 21 peaked at 164.5.

Given the latter, maybe averaging sunspot counts over 10 years is not the way to go and just trying "more of the same" might be a better way of making predictions. That would have given an error of only 4% in the predicted peak SSN and when it comes to rise-time, Cycle 22 should have peaked in March '90, only 8 months later than the actual peak in July '89.

To me, that approach isn't what I'd call a prediction method. While it assumes the basic periodicity in solar activity, it relies on continuity more than anything else. So is there any other way of approaching the problem? After all, there's a ton of data to work with, 21 cycles of monthly values of the smoothed SSN from March 1755 to September 1986 giving over 2,700 data points.

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In that regard, I'm sure you've seen a plot showing the rise and fall of SSN values over the course of time, the 11-year peaks bounded by something of an irregular envelope. Given that, it shouldn't come as any great surprise to you that attempts at predictions have been made using the methods of waveform analysis. So one assumes one or more periodicities are involved in how sunspots show up on the solar disk and since the average length of a solar cycle is 11.0 years, that periodicity would show up in the analysis at once, loud and clear. After that, there may be other periods as well as long modulation-like components that show up in the frequency spectrum for the sunspot cycle. The size of the latter would be limited by the length of the data record, the long-period components certainly being less than the length of the data record and warranting less confidence than the ones close to the obvious periodicity in the record.

As an example of this approach, in the early 70's Cohen and Lintz used the SSN record from 1750 to 1963 and found periodicities of 11.2, 9.9, 8.1, 57.1 and 89.6 years. A recent effort along these lines by MacDonald in '89 used a somewhat longer database, back to 1700 instead of just 1750, He came up with a period of 98.33 years for a modulation term as well as values of 11.04 and 9.97 years.

Another way of looking at the problem is to go beyond sunspot counts and the periodicities in their occurrence, invoking some other aspect of past behavior as a guide in adjusting the future level of the basic 11-year component. In that regard, Ohl has suggested that the intensity of magnetic activity before a sunspot minimum may be correlated with the level of solar activity at the next maximum.

But magnetic activity has different origins, on one hand magnetic storms due to solar flare outburst early in a solar cycle and those of a more recurrent nature later in a cycle. Ohl favored the latter in making adjustments in predictions of an upcoming cycle. The problem then becomes that of sorting out the recurrent type of activity from the more sporadic, flare-related activity and making the adjustment.

These are a few of the ideas out there, aimed at predicting future levels of solar activity with ionospheric propagation in mind. NASA obviously has an interest here as high levels of solar activity, say solar proton events, could pose a problem for manned space flight. In addition, because the atmosphere expands and contracts with the rise and fall of solar activity, the change in density at perigee affects the mo-

tions, even the lifetimes, of satellites. Thus, NASA has been active in the prediction business but I must confess I am not "in the loop" when it comes to their ideas and have to rely on the methods and predictions of the group at NOAA in Boulder.

Right at the moment, Figure 1 shows their current predictions for the course of events in the remainder of Cycle 22. There, predictions of the smoothed sunspot number give a mere 6 as the minimum value around 1996 and skimpy 108 at the next solar maximum in 2000. I derive little comfort from either of those numbers and, being human, place my hopes on the uncertainties in those Predictions, a solar minimum before 1996 and a high-

er peak sunspot count for Cycle 23. As they say, "I want it all, NOW!"

One cannot visit a topic like this without offering advice when it comes to DXing. So let me suggest you first get what you can out of the bands right now while there still is some vestige of real solar activity. As that declines, then give up trying to work through higher latitudes; critical frequencies up there will drop like a rock before you know it. Instead, try to concentrate on the lower latitudes as transequatorial propagation holds up no matter what. And if you're inclined to go on DXpeditions, then try the equatorial latitudes; the heat may be miserable but the equatorial ionosphere is the last to go. WR



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10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ
10-10 19636

10-10 Net Control station changes

Nat Green, 8P6SA #45858, 10-10 Net Control Manager, has announced that there are two changes in the daily 10-10 Net Control Stations. Dick Gird, K6PZE #1341, of San Diego, CA will be the Net Control for the Monday 28.380 net. Dick is replacing Dianna, KB6NAN #42850 who found it necessary to be relieved of her duties on the Monday net.

Ed Fowler, KC4RIY #58203, of Bardstown, KY, will be Net Control for the Saturday net on 28.380. All 10-10 nets begin at 1800Z. With the addition of the Saturday 28.380 net, 10-10 now runs two nets every Monday through Saturday. One net operates on the lower portion of the band at 28.380 MHz and for those with a General or higher class license, the original 10-10 net frequency of 28.800 MHz also operates every day except Sunday. The 10-10 "Never on Sunday" policy of precludes nets on Sundays.

Daily Net Control Stations are located around the country making check-ins possible on most days regardless of band conditions. Listen at 1800Z everyday, except Sunday, on either 28.380 or 28.800, and check-in if band conditions permit. It is a great way to pick up new 10-10 numbers and

meet new 10-10 friends.

New 10-10 Information Manual

A new 10 10 Information Manual, dated December 1993, has been issued and has all of the up-to-date information about 10-10, including the complete current 10-10 Bylaws. All Officers, Directors and Net Officials are listed along with their addresses. The Information Manual has grown from its original 24 pages to 38 pages packed with new and expanded information. If you would like a copy of the December 1993 issue, please send \$1.00 plus 2 first class stamps and an address label to Mike Elliott, KF7ZQ, 10-10 Information Manager, address listed below. No SASE please as the Info Manual requires a special size envelope.

Mark this on your calendar

The Castle Craig Chapter of Ten Ten will operate W1AW, 10-10# 57575, on 13 March 1994 from 1400Z to 2100Z. Here is a chance to work #57575, W1AW, and get a confirming QSL card. QSL route will be announced on the air. Look for the Castle Craig Chapter on 28.375 plus or minus QRM on this special W1AW 10-10 event.

Summer '93 QSO Party results

Don Zielinski, KØPVI #9902, Chairman of the Scoring Committee for the Summer 93 SSB QSO Party has announced that a total of 483 logs were submitted with 56 10-10 Chapters reporting. The average number of QSOs was 77. This may seem lower than previous summer parties, but let us not forget where we are in this sunspot cycle!

The overall high score, world wide, was achieved by Mike Davidson, KC5CP #24949, with a total of 523 QSOs and 954 points. The DX high score honor goes to Judy Millsbaugh,

VP5JM #52729, Providenciales, Turks & Caicos Islands, with a total of 527 QSOs and 918 points. The high 10-10 Chapter award goes to the Possum Trot Chapter of North Carolina, with a whopping 41 logs from members, making a total of 2626 QSOs and 4905 points. Congratulations to all who participated for making the Summer 93 SSB 10-10 QSO Party another successful 10-10 event. Also thanks to Don, KØVI #9902 and Eva, WAØCON #53964 for scoring the contest.

Another "mark your calendar" . . . The next 10-10 SSB QSO Party is scheduled for the weekend of February 5-6, 1994. The contest begins at 0000Z on 5 February and ends at 2400Z on 6 February. Remember these are ZULU times which means that in the US the contest begins on Friday evening and ends on Sunday afternoon (check times in your time zone).

A suggestion. I have mentioned twice above to "mark your calendar." As I read the various ham publications, and read about some interesting contest, party, special event station, or whatever, I actually mark a calendar for the exact day, time, frequency and publication that carried the information. This allows me to plan ahead and know what and where to look for the various special activities, and where to look for the QSL info, etc., after the event is over. Many businesses and banks give away calendars that have a block that you can write information relative to the date. These are also available in most stationery stores. If you have not tried this technique to track various activities coming up in the future, give it a try. Now is a good time with the beginning of the new year. I find that this technique provides the planning necessary so that I don't plan a fishing trip or golf game on the day or weekend that I wanted to participate in some special ham activity.


New 10-10 WPX (Prefix) Award

Announced at the 10-10 Convention in Wichita in September 1993 was the new 10-10 WPX Award. Yet another new 10-10 award for those who chase awards. This is an interesting award in that every 10-10 contact with a new 10-10 prefix is counted as another point toward the certificate. The basic certificate is awarded for contact with the

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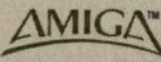


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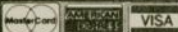


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first 100 stations with a different prefix. For example, W1, WA1, WB1, WD1, etc. are all different prefixes.

Think of all the combinations in the U.S. call sign assignments alone. Now add all those DX prefixes, and you could accumulate a large number. The only requirement is that the contact must be with another 10-10 member. This award is based on the "honor system," that is, no QSL card is required. For more information and a set of detailed rules and an application, send an SASE (business size with one first class stamp) to Rex Holford, KFØYF

#20423, WPX Award Manager, 3123 11th Avenue, Council Bluffs, IA 51501.

Information about 10-10?

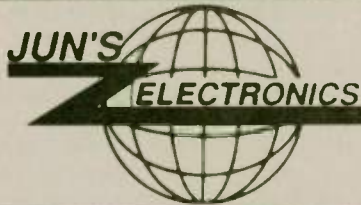
If you are not now a 10-10 member and would like to learn more about the 10-10 organization, send a green stamp (\$1.00) to help cover the cost of printing and postage, along with two first class stamps and an address label for the return of the 10-10 Information Package. Please no SASE as the 10-10 Information Package requires a 9 x 12 envelope. You will receive a copy of the 38 page Informational Manual along

with a copy of the latest issue of the 32 page 10-10 International News. Send to: Mike Elliott, KF7ZQ #54625, 10-10 Information Manager, 9832 W. Gurdon Court, Boise, ID 83704.

Finally

If you have let your 10-10 membership dues expire, or have lost your 10-10 number, the same as above (\$1.00 + 2 stamps + address label) to Mike will get you the Info Package along with your lost 10-10 number.

73, es cu next time... Chuck, W6YLJ #19636. WR



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TED HEITHECKER, W5EJ

The Old Old Timer's membership certificate is a one-of-a-kind, highly respected artifact that has its very own historical significance. Let's look back in time a bit to see just how this very special award which calls the world to witness that its possessor is a member of amateur radio's Premier Association came to be.

In 1947, immediately following the decision to form a very special Wireless Association, and while there were yet no formal members, Hubert E. Ingalls, W1ZQ (1) joined hands with Irving Vermilya, W1ZE (2) and Roland Bourne, W1ANA (3) as Founder, President and Vice President respectively, of the organization to be known as the Old Old Timer's Club (OOTC). They visualized OOTC as a fraternal organization dedicated to keeping old friends in touch, and setting by example, standards of courtesy and radio operating practices for all to see.

Members of OOTC who had been professional operators and were then licensed amateur operators, would come together creating an organiza-

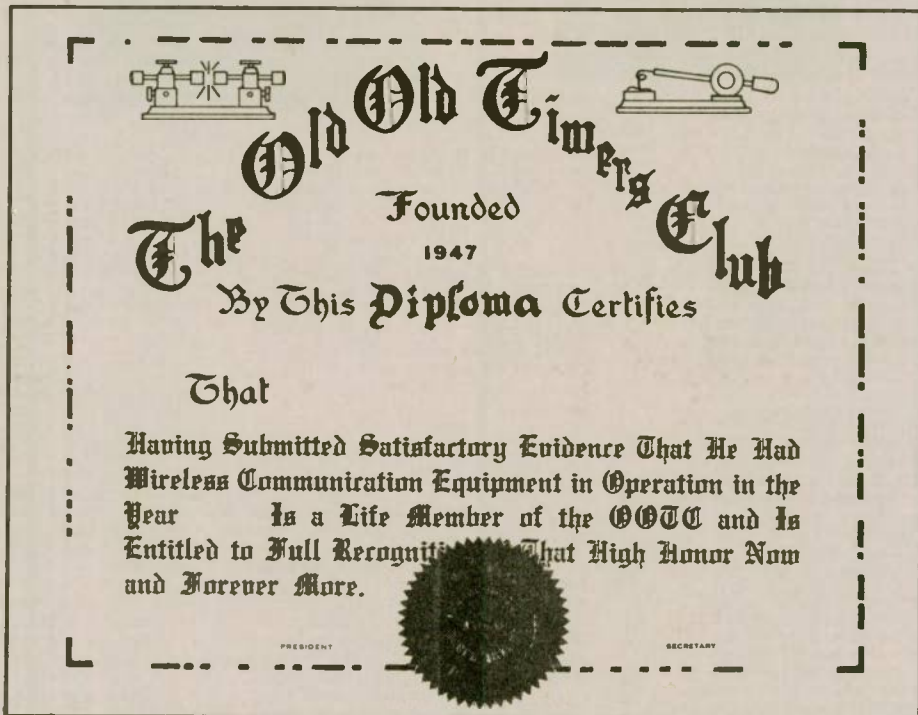
tion memorializing both early pioneers and present day amateurs, perpetuating stories of their lives and activities. To that end OOTC would establish and maintain a publication which would be a vehicle to commemorate the achievements of wireless operators and, to chronicle the human-side of those who, through the years created electronic communications.

The immediate need of the organization in that distant year, four and a half decades ago was 1) establishment of a constitution and by-laws and, 2) design a suitable membership certificate which would commemorate each

won the grand prize in the Trans-Atlantic receiving contest, and in 1929 took a job with RCA at Riverhead, NY, as one of that facilities engineers. In 1924 he became Chief Engineer for C. D. Tuska Company and then in 1925 he went to work for Hiram Maxim in the Maxim Silencer Company. Roland was an inventor, having more than 70 patents himself, at the time OOTC was born. In his work he had become proficient as an illustrator, a trait which held him in good stead for OOTC.

Following several weeks of intense effort, Roland presented the OOTC membership certificate, shown below. It was completely hand drawn and on a parchment type paper. The certificate was immediately adopted by the officers.

At that time OOTC did not have a treasury, or for that matter a treasurer, so Roland undertook preparation, by hand, of the first 35 certificates, just as they are shown, and in full color, for OOTC. The present day certificate of OOTC membership is un-



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member's joining hands in the venture. All three of the founders played a part in one or both of these needs, it fell to Roland Bourne, W1ANA to create the membership certificate.

Roland began a lifetime career in wireless with his first communication in the new art at age 13, in the year 1908. In 1912 he began as a Marine Wireless operator aboard ship and at shore stations using calls MJZ, WCC, KKR, WIM and others. When war broke out he joined the American Expeditionary Forces, 1917 - 1919. In 1923 he

changed from that prepared by W1ANA so long ago. To members of OOTC, the membership certificate is a very much treasured possession, not only because it signifies membership, but also because it is a tribute to the dedication to OOTC by Honored Member Number 3, Roland Bourne, W1ANA who brought it to being and gave it to OOTC.

Roland passed away early in the year 1972. We pause in appreciation of his contributions to the welfare of mankind, to Amateur Radio and to the Old Old Timer's Club!

WR



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ALABAMA

Montgomery Amateur Radio Club, (W4AP). P.O. Box 3141, Montgomery, AL 36109. Meets 3rd Mon./monthly, 7 p.m., State Trooper Dist. Office, Coliseum Blvd. & Federal Dr. Nets Sun, 8:30 p.m. 146.84- & Thurs. 8:15 p.m. 147.18-. Info: Fred, K8AJX, (205) 270-0909.

ALASKA

North Pole Hamsters ARC. Meets 1st Mon./monthly, 7 p.m., VFW Bldg., Old Rich Hwy. & VFW St., P.O. Box 56424, North Pole, AK 99705.

South Central Radio Club. 8023 E. 11th Ct., Anchorage, AK. Meets 2nd Fri./monthly, 7 p.m., UAA Business Ed. Bldg., Rm. 220, KL7CC, (907) 338-0662 for info. Club rpt: KL7CC/R 146.37/146.97 PL 103.5 Hz.

ARIZONA

Central Arizona DX Assoc., (CADXA). Meets 1st Thurs./monthly, 7 p.m., Salt River Project Pera Club, 1/2 mi. West of 68th & Continental Dr., Scottsdale, AZ. Rptr. K5VT 147.32/92. Packet Cluster nodes (S): 145.09, 144.93, 145.03. Info: Warren Hill, KF7AY, (602) 396-2218.

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. W4TKYT/R 146.16/76 rptr.

Scottsdale Amateur Club. Meets 1st Wed./monthly, 7:30 p.m., Scottsdale Sr. Cntr., 7375 E. 2nd St., Scottsdale, AZ. Net Tues., 7 p.m., 147.18 rptr. Info: Barney Fagan, KB7KOE, (602) 861-2817.

Tucson Repeater Assoc., P.O. Box 40371, Tucson, AZ 85717-0371. Meets 2nd Sat./monthly, 7:15 p.m., Pima Co. Sheriff Bldg., 1750 E. Benson Hwy. Net Thurs. 7:30 p.m. 146.22/82 (146.88-, 147.08-, 448.550-, & 145.15 Packet).

CALIFORNIA

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

Amateur Radio Club of El Cajon, WA6BGS. P.O. Box 50, El Cajon, CA 92022. Meets 2nd Thurs./monthly, 7 p.m., La Mesa Church of Christ, 5150 Jackson Dr., La Mesa, CA. Rptrs. 147.675(-), 224.08-. PL 107.2. Nets 147.570 Wed./Sat., 7 p.m. Info: (619) 697-2700.

Conejo Valley Amateur Radio Club, (CVARC). Meets 2nd Thurs./monthly, 7:30 p.m. Thousand Oaks Elks Lodge, 158 Conejo School Rd., Thousand Oaks, CA 91360.

Contra Costa Communications Club, Inc., WD6EZR. P.O. Box 20661, El Sobrante, CA 94803-0661. Meets 2nd Sun./monthly (except May & Dec.), 7 a.m., Baker's Square Restaurant in Richmond, CA. Info: Ed Caine, KA60FR, (707) 996-0962.

Downey Amateur Radio Club. Meets 1st Thur./monthly, 7:30 p.m., So. Middle Sch., 12500 S. Birchdale, Downey, CA. Wkly nets—Thur., 7:30 p.m. 146.175(+). For info: P.O. Box 207, Downey, CA 90241-0207.

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 8 p.m.-10 p.m., West Co Times Bldg., 4301 Lakeside Dr., Richmond, CA 94806. Info: Rachel Lewellen KB6LHR, (510) 233-5034.

Fullerton Radio Club, Inc., W6ULI. P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Ctr., 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975 (-600). Info: Bob Hastings, K6PHE (714) 990-9203.

Gabilan Amateur Radio Club (GARC). P.O. Box 2178, Gilroy, CA 95021-2178. Meets odd months, 2nd Thurs., 7:30 p.m., First Interstate Bank, First St., Gilroy and even months for brkfst., 2nd Sat., 8:30 a.m.

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

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

Kern River Valley Amateur Radio Club. P.O. Box 2611, Lake Isabella, CA 93240. Meets 4th Sat./monthly, 4 p.m. with potluck supper following. Talk-in on 144.50 Simplex.

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

Lee DeForest Amateur Radio Club. Meets 3rd Thurs./monthly, 7:30 p.m., Simpson Neighborhood Center, 305 E. Devonshire, Hemet, CA.

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

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

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

Mount Diablo Amateur Radio Club. P.O. Box 23222 Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 8 p.m., Our Savior's Lutheran Church, 1035 Carol Ln., Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+). Info: George K16YK, (510) 837-9316.

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Elks Lodge, on Cypress at Hackberry in Carmichael, CA. (P.L. 162.2) Net K61S Thurs., 8 p.m. 145.190. 220 Net, Tue. 8 p.m. 224.40(-).

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

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

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. + Stockton Blvd., Sacramento, CA. Info net every noon on rpt. W6AK/R 146.910. Jim L. White, N6UGO, (916) 773-5890.

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

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

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

Santa Clara Valley Rptr. Society, (SCVRS). P.O. Box 2065, Sunnyvale, CA 94087. (408) 247-2877. 146.76(-), 224.26(-), 444.60(+), 2meter/220net Mon. 9 p.m. Mrgs/3rd Fri.

Santa Monica—Westside Amateur Radio Club. Meets 3rd Thurs./monthly, 7:30 p.m., Santa Monica Red Cross, 1450 11th St., Santa Monica, CA. Info Net every Tues., 8 p.m., 146.67(-).

Shasta Cascade Amateur Radio Society, (SCARS). P.O. Box 664, Anderson, CA 96007. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkway Ave., Redding, CA. Net 146.64, Wed., 8 p.m.

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

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Airport, 3301 Airport Dr., Torrance, CA. Talk-in on WB6MYD rpt. 244.38/78. Info: (310) 328-0817.

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

Stanislaus Amateur Radio Assoc., Inc. (SARA). Meets 3rd Tues./monthly, 7:30 p.m., Stanislaus County Admin. Bldg. (lower level conf. rm.), 11th & H St., Modesto, CA.

Stockton-Delta ARC. Meets 2nd Thurs./monthly, 7:30 p.m., Red Cross Bldg., 747 N. Pershing Ave., Stockton, CA Rptr. 147.165(+). Net Wed., 8 p.m. 146.655.

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

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

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7 p.m., Vaca Fire Dist. Str. on Vine St. in Vacaville, CA. Rptr.: WD6BUS 145.470-PL 127.3. Dan Bissell (707) 446-7411.

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tues./monthly, 7:30 p.m., Victor Valley Museum, 11873 Apple Valley Rd., Apple Valley, CA. Talk-in 146.94(-), info net Sun. 7 p.m. 146.94(-).

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

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

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

CONNECTICUT

Shoreline ARC, (SARC). P.O. Box 256, Westbrook, CT 06498. Meets 3rd Thurs./monthly, 7:30 p.m., Westbrook Ingraham Sch., (203) 245-1969. Call-in: 145.29.

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

DELAWARE/PENNSYLVANIA

Penn-Del Amateur Radio Club. P.O. Box 1964, Boothwyn, PA 19061. Sponsor of KA3TWG/Rptr. on 224.22 covering Delaware & Tri-state area. Info/net Thurs./wkly, 20:00 hrs. or call Hal Frantz, (302) 798-7270.

FLORIDA

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

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

Orlando Amateur Radio Club. P.O. Box 3262, Orlando, FL 32802. Meets 1st Wed./monthly, Beardall Center, Gore St. & Orange Ave., Orlando. 146.76(-), 145.11(-), 146.82(-), 147.015(+), 443.275. CTCSS 103.5 Hz on all except 146.76.

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

Suncoast Amateur Radio Club. P.O. Box 1992, New Port Richey, FL 34656-1992. Meets 2nd Mon./monthly, 7:30 p.m., First Lutheran Church, corner of Polk & Delaware, New Port Richey, FL. Sponsor of WC2G/rptr. on 145.35, serving west Pasco County.

GEORGIA

Dalton Amateur Radio Club, Inc., (DARC). Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Bill Jourdain, N4XOG, (404) 226-3793.

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721-1938. Meets: 2nd Tue./monthly, 7 p.m., HELCO Auditorium, 1200 Kilauea Ave., Hilo. Talk-in on 146.68(-), 146.76(-), 146.88(-), 147.02(+), & 147.04(+).

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elem. Sch., 615 Auwailoimu, Honolulu. Nets: nightly 7:30 p.m., 146.88 & 146.80. Rptrs: 146.76(-), 146.80(-), 148.88(-), 148.98(-) 146.94(-). Info: (808) 621-5916.

IDAHO

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

Kootenai Amateur Radio Society, (KARS). P.O. Box 5222, Coeur d'Alene, ID 83814. Meets 2nd Mon./monthly, 7:30 p.m., Sheprock Bldg., Coeur d'Alene Airport.

ILLINOIS

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

Chicago Suburban Radio Assn., (CSRA). P.O. Box 88, Lyons, IL 60534. Meets 3rd Tues./monthly, 7 p.m., Mid City Nat'l Bank, 7222 W. Cermak Rd., N. Riverside, IL.

Dupage Amateur Radio Club, (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Holy Trinity Church, SE corner of Cass & Richmond, Westmont, IL. Net Sun., 9 p.m. on 145.250. W9DUP rptrs. 145.250(-) (107.2PL), 442.550(114.8PL), 224.680(-).

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

Hamfesters Radio Club, W9AA. P.O. Box 42792, Chicago, IL 60642. Meets 1st Fri./monthly, 8 p.m., Crestwood Civ. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.41 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.07. Info: (312) 262-7897.

Peoria Area Amateur Radio Club, (PAARC). Meets 2nd Fri./monthly, 7 p.m., 1401 N. Knoxville Ave. Info: (309) 685-6698. Rptrs: 146.25/85 & 147.675/075.

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

The Starved Rock Radio Club, W9MKS. P.O. Box 22, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rptr. net 7 p.m. Wed./wkly., 147.72/.12.

Tri-Town Radio Amateur Club, P.O. Box 302, Hazel Crest, IL 60429. Meets 1st & 3rd Fri. (Sept.-June), 8 p.m., Hazel Crest Village Hall, 3000 W. 170th Pl. Net Wed. 146.49. Info: (708) 335-9572.

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

York Radio Club. Meets 3rd Fri./monthly, 8 p.m., Elmhurst, IL. Net Mon., 8 p.m. W9PCS/147.42 simplex. Rptr. 442.875.

MICHIGAN

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

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

Utica Shelby Emergency Communications Assoc., (USECA). P.O. Box 1222, Sterling Hgts., MI 48311-1222. Meets 2nd Tue./monthly, (Sept.-June), Donald Bemis Jr. High Sch., 12500 Nineteen Mile Rd., Sterling Hgts, MI (between Schoenher & Clinton River Rds.) Talk-in on 147.18+ 100Hz PL. 24-hr. hot line: (313) 268-6730.

MINNESOTA

Minneapolis Radio Club. P.O. Box 583281, Minneapolis, MN 55458-3281. Meets 3rd Fri./monthly, Mpls. Red Cross Bldg., 11 Dell Place, Mpls, 7:30 p.m. Making waves since 1916.

MISSISSIPPI

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

MISSOURI

Central Missouri Radio Assoc. P.O. Box 283, Columbia, MO 65202. Meets 2nd Tues./monthly, 7 p.m., Boone Electric Coop, 1413 Rangeline Rd., Columbia, MO. Talk-in 146.76.

Gateway To Ham Radio Club, N0DN. Young hams of all ages. Meets 1st Sun./monthly, 2-4 p.m., Sacred Heart Sch., 10 Ann Ave., Valley Park, MO 63088 (St. Louis). Net Sun., 8:30 p.m. 146.94 rptr. Beginners classes, VE exams, Club station & mtgs. Info: Rev. Dave Novak (314) 225-1952 (voice or Fax).

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

NEBRASKA

The Ak-Sar-Ben ARC of Omaha, NE. Meets 2nd Fri./monthly, 7:30 p.m., Omaha Red Cross near 38th & Dewey St. 146.34/94. Contact Jim Miller (NØORV), (402) 253-8272.

NEVADA

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

NEW HAMPSHIRE

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

NEW JERSEY

10-70 Repeater Assn., Inc. 235 Van Emburgh Ave., Ridgewood, NJ 07450. Meets 1st Wed./monthly (except July & Aug.), 8 p.m., VFW, Valley Rd., Clifton, NJ. Rptrs.: 146.10/70, 223.24/224.84, 449.15/444.15.

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

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

NEW YORK

Amateur Radio Assoc. of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955/.355 rptr. W2PVL.

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

Hall of Science Amateur Radio Club. P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Charlie, WA2JUU, (518) 420-0046.

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

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly (except July/Aug.), 7 p.m., Masonic Temple, Rt. 78, Java Village, NY. Other Wed., 8 p.m. 145.1701 144.57-Repeater KC2JY.

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

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

Westchester Amateur Radio Assoc., (WARA). Meets 1st Thurs./monthly, 7:30 p.m., Scarsdale Town Hall, Scarsdale, NY 10583. All invited. Info: Dan Grabel, N2FLR, Pres. (914) 723-8625.

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains. Contact WB2VUK or call WECA INFORLINE (914) 962-9666 or WECA landline BBS (914) 738-6857 for details. Talk-in WB2ZII/R 147.66/06 MHz.

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-8995. 146.865-, 445.15/440.15.

NORTH CAROLINA

North Carolina Chapter TSRAC. Meets Mondays, 28.35 on the air, 8:30 p.m. local time, Sat. 10 a.m. on 7240 and Wed. 9 p.m. on 7259. "The Alligators" — all month, no ears.

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

OHIO

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

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 44811. NF8E rptr. 145.35 and 442.625 MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS.

Firelands Area Rptr. Assn., (FARA). Meets 4th Tue./monthly, 7 p.m., Ohio Veterans Home, Sandusky, OH. WB8LLY rptr. 146.805-/205. Net Sundays, 8 p.m. Info: Rob Harshbarger, N5XR8.

Greater Cincinnati Amateur Radio Assn., (GCARA). Meets 4th Wed./monthly, 7:45 p.m., Cincinnati Museum of Nat. History, 1720 Gilbert Ave. Amateur Radio Station W8DZ. Info: WA8STX or (613) 563-7373.

Lancaster & Fairfield County ARC. Meets 1st Thurs./monthly, 7:30 p.m., American Red Cross, 121 W. Mulberry St., Lancaster, OH 43130. Info net Mondays, 8 p.m., K8QIK/R 147.63- rptr.

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

Springfield Independent Radio Assoc., (SIRA). Call-in 145.45—224.26. Meets 2nd Tues./monthly, 7:30 p.m., Mercy Hosp. & 4th Tues./monthly, 7:30 p.m., Am. Red Cross. Info: Rodney Myers, KB8WV, (513) 399-1022.

Toledo Mobile Radio Association. P.O. Box 273, Toledo, OH 43697. Meets 2nd Wed./monthly, 7:30 p.m., Luke's Barn, Lucas County Rec. Ctr., 2901 Key St., Maumee, OH. Contact: Brian, WD8MXR, 385-5624.

Triple States Radio Amateur Club. Meets Wed./weekly on 28.48 at 8:30 p.m., 7260 at 9 p.m. Rptrs. 146.91- & 146.115/715- P.O. Box 240, Rd. #1, Adena, OH 43901. (614) 546-3930.

Van Wert Amateur Radio Club, Inc. 1220 E. Ridge Rd., Van Wert, OH 45891. Call-in: 25/85. Meets 1st & 3rd Sat./monthly, 8 p.m.

OKLAHOMA

Enid Amateur Radio Club, Inc. W5HTK, WA5QYE, WA5OUB. P.O. Box 261, Enid, OK 73702. Meets 4th Thurs./monthly, OK Hwy. Patrol Stn.

OREGON

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thurs./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. Net Sun. 7:30 p.m. 147.06(+) MHz. Info: (503) 382-1739.

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

Oregon Coast Emergency Rptr., Inc. P.O. Box 254, Florence, OR 97439. Meets 3rd Sat./monthly, 9 a.m. for brkfst. Net, Wed. 7 p.m., 146.80. Info: 997-2323 or 997-3081.

Salem Amateur Radio Club, (SARC). Meets 4th Tues./monthly, 7:30 p.m., Four Corners School, 500 Elma Ave., SE, Salem, OR. Talk-in 146.86. Info: (503) 390-1386.

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Courthouse, Rm. 311, Douglas St., Roseburg, OR. Info: W5PII/R 146.90(-) or (503) 673-1310.

PENNSYLVANIA

Butler County Amateur Radio Assn. P.O. Box 1787, Butler, PA 16001-1787. Meets 1st Tues./monthly, 7:30 p.m., Boy Scout Cntr., 830 Morton Rd., Butler, PA. Call-in W3UDU/R 147.96/36. Net 10:10 p.m. nightly.

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

Warminster Amateur Radio Club, WA3DFU. P.O. Box 113, Warminster, PA 18974. (215) 672-9985. Meets 1st Thurs./monthly, 7:30 p.m., Neshaminy-Warwick Presbyterian Church, Warminster, PA. Net on 147.6901/147.090 Wed. 8:30 p.m. and 28.450 Sun. 9 p.m.

TEXAS

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

VIRGINIA

Southern Peninsula Amateur Radio Club, (SPARK). Meets 1st & 3rd Tue., Salvation Army Community Bldg., Hampton, VA. Rptrs. 146.13/73 & 449.551(-) 5 T. VE Exam Info: (804) 898-8031, W4RTZ.

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

WASHINGTON

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

WEST VIRGINIA

Jackson County Amateur Radio Club. Clark Stewart, W8TN, Pres., 104 Henrietta St. Ravenswood, WV 26164. Meets 1st Thurs./monthly, 7:30 p.m., United Nat'l Bank of Ripley. Net Mon. 9 p.m. on 146.67/07 WD8JNU/R.

Tri-State Amateur Radio Assn. Club mtgs. 3rd Thurs./monthly, 7 p.m., monthly brkfst. 1st Sat., 9:15 a.m., Green Valley Vol. F.D., 16th St. & Norwood Rd., Huntington, WV.

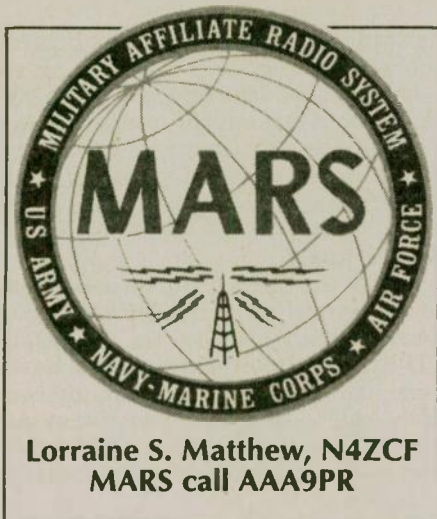
WYOMING

Sheridan Radio Amateur League, 146.82. 926 La Clede, Sheridan, WY 82801. Meets 4th Thurs./monthly, 7 p.m., Sheridan College Tech. Cntr.; Saturdays, 8 a.m. at J.B.'s. Info: (307) 674-6666, WA7B.

MEXICO

Lake Chipala Amateur Radio Group. Meets Fri./weekly, 10 a.m., St. Andrew's Episcopal Church, Chipala, Jalisco, Mexico (30 mi. so. of Guadalajara). Simplex 146.49. Info: W4FAW/XE1. Charles C. Leonard, APDO 381 Ajijic, Jalisco, Mexico.





Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

Army MARS Public Relations Director

February, 1994 continues to be a time of change for all of Army MARS. A new field manual in the form of the DA PAM-25 has been reviewed by many Army MARS members nationwide and is being prepared for general distribution. This well-written document is in the form of several PAM-phlets or Annexes covering specific topics as well as one general manual. With the adoption of the new documents, many questions of procedural changes over the years will be clarified and Army MARS operation will be even smoother than it has been before.

February is also a month in which we honor two Presidents under whose guidance this great country took shape — George Washington and Abraham Lincoln. The two specific holidays have been joined into one holiday called President's Day to honor all other Presidents as well. Considering the emphasis during this month, Army MARS also honors the soldiers and veterans who support our Constitution and the Presidents every day of the year. It is fitting to repeat here, the Veteran's Day message sent to all MARS members and veterans by Robert Sutton, Chief Army MARS. Much of his message and the remarks by Major General Samuel A. Leffler, Commander of the United States Army Information Systems Command, are also directed at the soldiers and the MARS members currently in service for their country. Yes, MARS members are in service of their country even though we do not wear uniforms.

"On this day of tradition and honor, Americans across the globe remember and pay tribute to the men and women who proudly served or are presently serving our country. We all have benefited from the freedom they have

achieved and are most thankful. Army MARS proudly joins our great nation in honoring them all.

"Many of our veterans also served or are continuing to serve in a most unique way as a member of Army MARS. Providing the morale support that is highly desired and appreciated by countless thousands is one way that Army MARS shows our gratitude and I assure you that your dedicated efforts are well appreciated."

General Leffler extended his thoughts, "As our nation pauses on this special day, let all of us remember that through the contributions of ISC (Information Systems Command) soldiers and civilian employees working around the world, the bright torch of liberty continues to shine as a beacon of hope for all Americans."

Army MARS operates under the Information Systems Command banner. We, too, carry that torch of liberty — everyday. Every American can remember and be proud of our soldiers and veterans and all who support them — everyday. The patriotic nature of February reminds us all to do just that.

Last month's column featured a description of the operations at a phone patch station, specifically AAR4CSS. Space limitations prevented me from giving credit to the people behind the scenes who so generously support this station.

Jim Yandle, W4HTK was kind enough to supply this information in full. He writes:

"During the early days of Desert Shield while AAR4CSS was being assembled in Ocala, FL, patriotism was running high throughout the land. When Desert Shield developed into Desert Storm, American forces in the Kingdom of Saudi Arabia and sailors at sea were on the minds of those of us at home.

"Army MARS station AAR4CSS was built by members of the Silver Springs Amateur Radio Club to bolster the morale of American forces overseas through phone patches to their families and loved ones at home.

"Although the national economic situation was nothing to talk about, raising money for operating expenses was no problem after the station was

constructed.

"Then the 100-hour war ended and soon the troops were coming home. The public was told there was peace again in the Middle East and the troops and AAR4CSS were apparently forgotten.

"After running thousands of phone patches from the desert and Kuwait, AAR4CSS almost signed off and closed down after Desert Storm."

The troops and AAR4CSS were not forgotten by the Veterans of Foreign Wars McCullough-Mixson Post 4209 and its Ladies' Auxiliary in Ocala. VFW Post 4209 and its ladies were there and were determined to see that the station remained on the air.

Jim continues, "Phone patches have originated from Saudi Arabia, Kuwait, aircraft going to and from the desert, Germany, Egypt, Western Sahara, Somalia and a place called Croatia. Now Americans are in Macedonia. No patches have been run, at this writing, from that section of what was Yugoslavia. Johnny Williams, K4ANJ, the Army MARS Committee chairman, said that the troops there are having a difficult time putting a station on the air."

When that Macedonian station goes on the air, AAR4CSS will be ready. "If American men and women in uniform on duty in Macedonia want to call home, that big rhombic antenna of AAR4CSS, backed by those big hearts at VFW Post 4209, will carry the traffic."

In terms of dollars, the post contributes between \$250 and \$300 per month to the AAR4CSS operation. In terms of further generosity, we must acknowledge "the patriotism and love of American service personnel by communications giants Sprint and MCI. Those two companies absorbed the costs of more than 25,000 phone patches; service personnel and their families never paid a cent for the service. Things like that are what make America great."

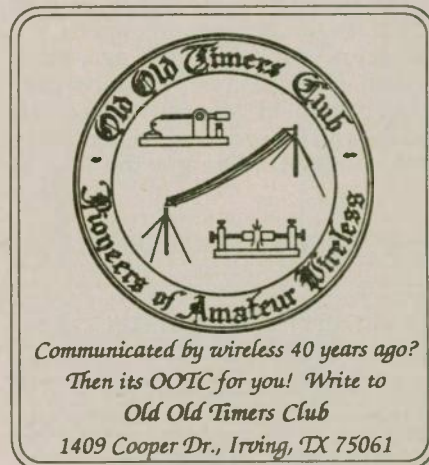
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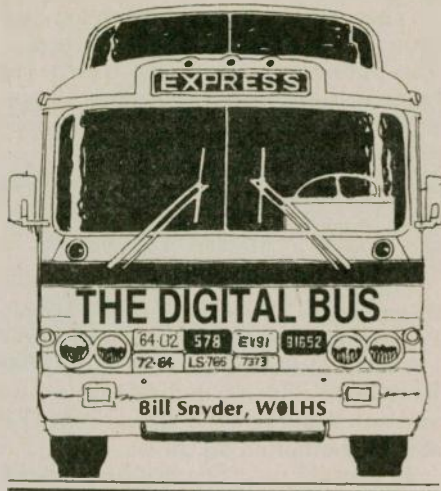
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During the eleven years that I have been writing for *Worldradio*, I have occasionally written about my ham radio and cinematographic adventures in Africa. In 1947-48 I spent a year in the then so-called "dark continent," and a portion of that time was spent with the Gatti-Hallicrafters African Expedition as a amateur radio operator and part-time cinematographer. I was on the expedition along with Bob Leo, W7LR, now of Bozeman, Montana. It was a lot of fun, and the junket was the first really big DXpedition sponsored by a radio manufacturer.

For many years, Bob and I have been talking about writing of our experiences, but Bob is busy with his consulting business after retiring from the electrical engineering faculty at Montana State University, and I was swamped with my desk top publishing adventures, so we kept putting it off. I did, however, start in once and typed in 20,000 words into the computer before I had to quit to do something more important. I had just brought the story to our arrival in Mombasa when I quit typing, so you can see it will be long yarn if it ever gets put on paper!

About a year and a half ago, Mike O'Brien, N0NLQ, a newspaper writer from Springfield, Missouri called Bob and me and interviewed us about our days in Africa. Mike got the idea of

writing about the G-H Expedition from a Springfield neighbor named Weldon King, a free lance photographer who was with us on the expedition as a still picture shooter. Weldon showed Mike some of the brochures about our junket to the "Mountains of the Moon" in Uganda; and so Mike, being a good newspaper man, envisioned an article that would fit in a little magazine called *Electric Radio*, published by Barry Wiseman, N6CSW/Ø, of Durango, Colorado. So, Mike put it together and it was published in Barry's magazine in March of last year. Barry's magazine (*Electric Radio*, Box 57, Hesperus, Colorado 81326) is dedicated to the "bygone era" of old time radio, and it is full of want ads aimed at tube-type radio gear collectors.

If you are a member of the American Radio Relay League and get *QST* magazine, look in the December 1993 issue on page 59. There you will see that the League picked up Mike's *Electric Radio* article and had Mike expand it some. I think he did a fine job and I enjoyed reading about my days with Weldon, Bob and Commander Gatti in Africa.

I've recounted some of my adventures in Africa on these pages, too. I wrote, in April 1992, about tossing bottles into the ocean as we journeyed by ship to Mombasa in Kenya Colony. We put crazy notes in the bottles and tossed them overboard to let the wind and current take them somewhere. Only one bottle was ever found and that was one thrown into the ocean as we were leaving Capetown on the way up the coast. The note it contained was a fake and it was done as a trick on one of my old ham buddies, Ken Christensen, who held the call WØGHN at the time. In the note, I said the jug had been tossed into the Mississippi River instead of near Capetown. The South African press had a field day with the

news until they found Ken, who denied the whole thing.

One of these days I hope to finish my tome about our adventures in Kenya, Tanganyika, and Uganda. I had better get to it before too long, as memory fades fast after 45 years or so.

Other stuff

One of the neatest things to happen to me recently was the arrival of the October 29th issue of the HamCall CD-ROM from Buckmaster. I have been using the HamCall disk instead of the call books for the past five or six years. Time goes so fast I can't recall just when I started using disks instead of books.

The best thing about using a CD-ROM instead of a book is the fact that you can search by name, town, Zip Code, or any of the parameters in the disk. For club use, the disk is a great source of prospective members, and mail lists for local hamfests are easy to make. But I find one thing that it doesn't do, and that is keep current as to silent keys.

The USA list is obtained from the FCC files; and it has, in addition to name, address, city, and ZIP, the date of license expiration, year of birth, and class of license. If when you search for a call address and you add the /S switch to the request, you get as a bonus the latitude and longitude of the station, the name of the county, the elevation above sea level, the time zone, and the telephone area code. This information is excellent for those county hunters in the ham fraternity.

It must be because the FCC is issuing licenses for ten years duration that one can die and still remain in the list for years. One of my old ham buddies, Paul Carufel, WØPQW, has been gone

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to his reward for six years and he's still in the FCC listing. Paul's license is due to expire about the time this column gets in print. And when you request Paul's address from the disk with the /S switch, you'll find that his address is "¼ miles south west of the Detroit Lakes, Minnesota airport." If the postal address is to a box number, the physical location of the station is indicted in miles from a known city. So the CD-ROM is better than a printed book in many ways.

Buckmaster keeps adding the foreign stations as fast as they can get them, but some countries do not allow their listings to be put on CD-ROMs, so not all the DX stations are in the file. But the latest disk tells us there are over a million hams listed on the little platter. And in addition to the call listing, there are programs, programs, and more programs; thousands of public domain and shareware radio programs and files fill up the blank space on the CD-ROM. There are programs from analog circuit analysis to 10-10 members to Morse code practice to moon bounce calculations to an Enigma Code Machine simulation to the Holy Bible. It's amazing!

When I got the latest disk I tried out the search feature to see if I could locate an old high school buddy (from 1934) whom I had been writing about in the high school alumni newsletter I edit. His name was Robert D. Pollock and he had held a number of call signs over the years. When I put Bob's name into the computer up came Robert D. Pollock, Jr., KE6ARW, but his birth year was listed as 1953, so I reasoned it had to be my old buddy's son. My friend Bob's name did not come up at all.

I immediately wrote a letter to Bob Pollock, Jr. and back came an answer. Yes, he was the son and young Bob then proceeded to fill me in on his father's life between the last time we'd seen each other until his death two years ago. Old Bob (last call was W6BBH) had been an engineer for General Electric and during the big war had been part of a team that had taken a captured German RADAR unit and modified it so that it could be used against the Germans themselves.

Young Pollock, a pilot for Delta Airlines, also enclosed pictures of old Bob taken during their life together. It was great fun to see my old high school pal in photos. If you read this column regularly you probably read a story about old Bob and old Bill courting our high school girl friends in an old Model T Ford touring car. How the Model T was wrecked story is in the July, 1993 issue.

Finding young Bob and hearing about old Bob was certainly worth the fifty bucks that the new CD-ROM cost me.

Packet traffic test

For some time now, Chip Purchase, N5NPR, in Houston, Texas has been sending me a packet message on an irregular pattern. So far, Chip has sent me 23 messages, but I have received only a percentage of them. Here is the last tally and the sequence of arrival: numbers 14, 15, 11, 12, 19, 23, and 20. Doesn't say much for the personal packet mail system, does it?

If you would like to try the same experiment, send me a string of 10 packet messages and spread them out at least one day apart. Keep the text short and number them in the title and also in the text. Also put the sending time and date in the message body. I'll answer each one and keep some statistics on how the system works. Should be an interesting test.

EAVESDROPPINGS

"MY BEAM ANTENNA WENT CRAZY — IT GOT LOOSE AND STARTED CHURNING CIRCLES IN THE WIND. . . THE WEATHER TODAY IS NICE IF AND WHEN YOU LIKE A BLIZZARD. . . DOES THE HOLE IN THE OZONE LAYER HAVE ANYTHING TO DO WITH SPOIL-

ING DX? IF IT DOES I'M DEAD SET AGAINST IT AND WE SHOULD GET ROSS PEROT TO FIX THE HOLE. . . MY KIDS TRIED WARMING UP COLD BEER IN THE MICROWAVE . . . I CAN'T WAIT UNTIL I GET THAT VOICETALKER MACHINE SO I CAN GET IN THE PHONE DX CONTESTS WITHOUT WINDING UP HOARSE. . . I'D GET IN MORE CONTESTS IF THEY HAD A COMPLETELY COMPUTERIZED CONTEST PROGRAM THAT DID EVERYTHING BUT PAY THE LIGHT BILL. . . IN MY YOUNG DAYS I USED TO HUNT FOXES WITH AIRPLANES — NOW IT'S COUNTIES ON RADIO. . . RTTY, AMTOR, PACTOR, AND CLOVER ARE MOVING AHEAD TOO FAST — I'M STILL BACK IN RTTY WITH AN OLD MECHANICAL MACHINE. . . WHAT EVER HAPPENED TO JIM AND TAMMY FAYE BAKKER'S BIG THEME PARK? . . . ARE YOU GOING TO PUT ALL THE MULTI-MEDIA STUFF IN YOUR NEW COMPUTER? . . . GIVE ME YOUR 73S AND I'LL GIVE THEM RIGHT BACK TO YOU AND PULL THE BIG SWITCH."

Write me: Bill Snyder, WØLHS, 1514 South 12th St., Fargo, ND 58103. My packet address is WØLHS @ WØLHS. #SEND. ND. USA. NA. 73 de Bill. DIT DIT. WR



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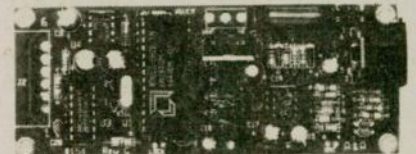
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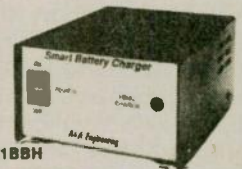
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Coming events

Feb 10 & 12 BYLARA CONTEST
 Feb 12-14 YL-OM Contest (SSB)
 Feb 19-20 Guides on the Air
 Feb 26-28 YL-OM Contest (CW)

Contests

YLRL Vice President Carla Watson, WO6X, has announced the winners of the YL Anniversary Party, which was held in October 1993. In this contest, the North American YLs compete against other North American YLs, and the DX YLs compete against other DX YLs, so there are actually two winners in each category. Although the SSB and CW portions are scored as separate contests, the North American YL with the highest combined SSB and CW score wins the Corcoran Award and the DX YL with the highest combined score wins the Hager Award.

Congratulations go to Marcia Rast, K6DLL, who won the 1993 Corcoran Award, and to Rosel Dach, DL2FCA, the Hager Award winner. In the SSB contest, first place winners were Marcia Rast, K6DLL, and Christa Elksnat, DJ1TE; in second place were Robin LaByer, KR4DI, and Rosel Dach, DL2FCA; and in third place were Darleen Magen, WD5FQX, and Greta Hubacher, HB9ARC. In the CW contest, first place winners were Joyce Collins, N8UOO, and Rosel Dach, DL2FCA; in second place were Ruth Wardell, WA8YPY, and Nadine

Bressier, F5NVR; and in third place were Darleen Magen, WD5FQX, and Kuni Kan, JA1YL.

YLRL also sponsors another major YL activity in February. That's the annual YL-OM Contest, where the YLs look for OM contacts and the OMs look for YLs. The SSB and CW portions are scheduled two weeks apart and are scored individually so separate logs are required. They should be mailed to Carla Watson, WO6X, 473 Palo Verde Dr, Sunnyvale, CA 94086, and must be postmarked not later than 30 days after each contest ends. Complete rules can be found in most of the Amateur Radio magazines, or you can get more information from either Carla, WO6X, or me.

BYLARA, the British Young Ladies Amateur Radio Association, also holds an annual contest in February, which is open to both OMs and YLs. The YLs work both YLs and OMs, and the OMs work YLs only. The contest lasts only six hours, three on February 10, and three on February 12. I'll be glad to send you complete details, if you need them.

Cathy Hrischenko, VE3GJH, is the chief coordinator for another YL operating event each February, the Guides on the Air (GOTA). This is now a joint project of CLARA, the Canadian Ladies Amateur Radio Association, and the Girl Guides of Canada, very much like our Girl Scouts. Cathy organized the first GOTA in 1985 to celebrate the Guides' 75th anniversary. Amateur Radio operators throughout Canada invite the Girl Guide troops to visit their stations and make contacts with other girls and stations around the world. The UK, Australia, and New Zealand have participated from the beginning, with special calls. They call it "Thinking Day."

Cathy extends an open invitation for all Amateur Radio operators to take part in this year's GOTA. Just listen for the Canadian suffix GGC, the British Girl Guides special call GB4CRA,

or anyone calling "CQ GOTA." Cathy will be operating VE3GGC on 14.133 MHz. She'll move up to the American phone band if you give her a quick break on CW. Come join the fun and help to create an interest in Amateur Radio for these young girls.

YL scholarships

This year the Foundation for Amateur Radio administered forty-nine scholarships, and there were thirteen YL recipients. Among the winners were Diane Magen, KG5CS; Dianne Weldon, KA1NOJ; Melissa Benish, N3FAC; Elisa Niemtow, KA6WWY; Jensen Montambalt, KC4GPZ; Michelle Czaikowski, N4QHT; Jennifer Doerrie, KA5MWJ; Karen Schneider, N9SVA; Dori Baker, AA8IT; Beverlie Hartnett, N3WZK; Elizabeth Skolaut, KAØYSP; Neisha King, N6SFS; and Kresta French, N3MMM.

The Foundation funds four scholarships and administers, without cost, scholarships offered by several other Amateur Radio organizations or as memorials. These scholarships are open to all licensed amateurs, who meet the qualifications and residence requirements, which may be specified by the sponsors. For more information on how you can apply for next year's

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awards, write to FAR Scholarships, 6903 Rhode Island Avenue, College Park, MD 20740.

YL updates

You may remember a note in this column about a year ago when Martii Laine, OH2BH, challenged Christine Dons, GM4YMM, to raise funds to buy equipment for Merila Prenci, ZA1L. Christine would like to thank everyone who contributed so generously to this appeal, as she collected 490 pounds Sterling, about \$725.00. Albert Mueller, HB9BGN, is buying a good used radio and microphone and will get them safely to Merila. She'll soon be on the air and will share the rig with other Amateurs in Albania.

Congratulations go to Nellie de Lazard, XE1CI, who just earned 5BDXCC #3373. Nellie earned the first 5BWAS certificate, to be endorsed as "Worked All YLs" by the ARRL, in March of 1992, and I've talked to her on 18 MHz so I know she's looking for YLs on the WARC bands. She has gone on several DXpeditions and given out new YL countries to many people, so if you can help her out now, you might drop her a line.

The DX YL 222 Net, Mondays on 14.222 MHz, at 0530 UTC, with Dave Johnson, ZL1AMN, as NCS, continues to be a great place to meet YLs. On November 29, there were several YLs from New Zealand and Australia, two from the U.S., two from Italy, one from England, and Irma Mishellany, using her special call of OD50MM, and Clarice Brown, also with the special call of VR6FLY/CB.

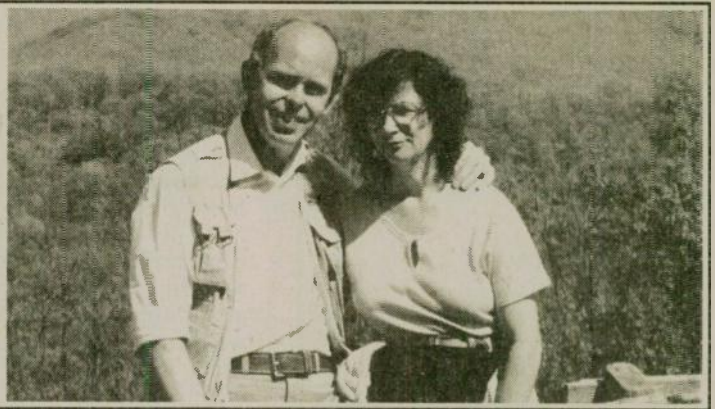
Louisa Sando, W5RZJ, who wrote the *CQ Magazine* YL column for many years recently cleaned out her files, and sent me a box of priceless YL photos and items. Included are the convention updates for her book *CQ YL*, and I have several copies available if you need the updates for your copy.

CQ YL, the first and only full account of early YL participation in Amateur Radio, has been reprinted. It's spiral-bound, with a soft cover, contains over 200 pages and 600 photos, and is available (at cost) for \$6.50 from the YLRL Supplies Chairman Flo Reitzel, KU7F. This third edition includes YLRL officer data through 1985 and YLRL convention reports through 1982.

Romance at Dayton

Liz Emery, now Liz Buckland, G0JWN, and I met at the Dayton Hamvention in 1992. I just learned more about her trip to Dayton that year, and since it's almost Valentine's Day, I asked her to tell you about it.

Tony, G4IMZ, and Liz, G0JWN, Buckman in the Smokey Mountains in North Carolina, after the 1992 Dayton Hamvention.



Here's her story:

"I had always wanted to visit the Dayton Hamvention and the opportunity to go arose through a trip organized by *Practical Wireless Magazine* (in England) in 1991.

"I was very excited as I had never been to America before. I also looked forward to purchasing something from the famous flea market, but I didn't expect the trip to change my life!

"Tony Buckland, G4IMZ, came on the trip too, along with approximately 50 other Radio Hams. He nearly didn't go, but he helped out at the *Practical Wireless* stand at the show. We met and had a long chat at one of the

evening meetings and found we had a lot of other things in common. At the end of the four days, we said our good-byes and exchanged telephone numbers. I went on to visit a girlfriend in Canada for a week. When I returned to England, we arranged to meet to see each others' photos (an excuse!).

"In 1992, we went to Dayton again so we could enjoy it together. We did purchase some equipment, but the most important items were not at the Hamvention. We bought our wedding rings at Dayton, as a permanent reminder of where we met. We married in July '93 and look forward to a life-long QSO together!"

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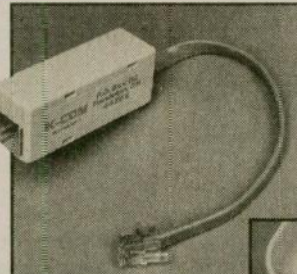
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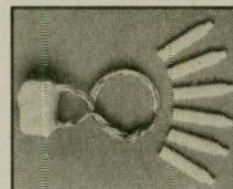
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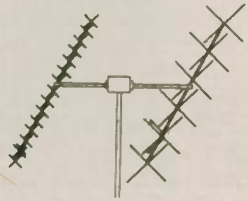
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A video review

This month I'll review the *CQ* Communications video tape, "Getting Started in Amateur Satellites." I received my review copy from *CQ* at the Valley Forge Ham Show in late August, last year. The tape is 49 minutes and 5 seconds in length and is technically very well produced.

The video features several satellite operators giving the viewer a guided tour through their shacks and a quick tutorial in satellite communications. On the surface, this video tape seems to be just what the doctor ordered to stimulate newcomers interested in amateur SATCOM. It promises to be a beginner's guide to the fascinating world of space communications. The video covers high orbit analog birds (OSCAR 10 & 13) in depth, a quick glance at the low earth orbit (LEO) satellites, RS-10/11, 12/13 and AO-21 (also referred to as the EasySats), a comprehensive look at the PacSats (AO-16, LO-19, WeberSat, KO-23, UO-22, etc) and manned space platforms (MIR & the U.S. Space Shuttle).

After viewing the video several times, I don't think that this *CQ* operating guide accomplishes its purpose. Entirely too much time was devoted to the high orbit, long-haul satellites OSCAR 10 & 13. As a matter of fact, almost the entire first two thirds of the video centered on these two high tech, high cost birds.

Only 2 minutes and 22 seconds was devoted to the discussion of the EasySats (RS-10 & 12), including how to assemble a station and establish contacts through these two satellites! It was even implied that you didn't need to use a computer to calculate pass times for these two LEO birds, but could rely instead on the trusty old "OSCAR-Locator" found in the back of

the ARRL's *Satellite Experimenter's Handbook!* We can use amplitude modulation to make contacts on the HF bands, too, but who wants to step back into the stone age? Anyone who has ever used an OSCAR-Locator knows all too well the hassles involved in computing accurate AOS/LOS times. Not only does this video place most of the emphasis on high orbit birds it seemingly wants to make the EasySats so unappealing that new SATOPS won't even try these exciting satellites.

Unfortunately, *CQ*'s "Getting Started in Amateur Satellites," misses its mark early in the tape. The *CQ* folks had the right idea; take the topic and break it up into understandable, bite-size chunks that can be easily digested by the new/potential satellite user. However, they got caught up in the standard approach many SATOPS (and AMSAT-NA) continue to use, that of demonstrating the "glitz" of the high orbit birds at the expense of the "hohum," low earth orbit EasySats. If *CQ* would have devoted the first 10 minutes of the tape to an in depth analysis of RS-10 & 12 and AO-21 (RS-14) and how to effectively set up a Mode-A, Mode-B and Mode-K SATCOM station, the video guide would have been right on target.

Looking at the rest of the tape, I was really impressed with the descriptions and advice given as to how to communicate using the digital modes and with manned space flights. The SATOPS featured on the video were extremely knowledgeable and presented their information in a very easy to understand conversational format.

Bottom line on the *CQ* Communications video operating guide "Getting Started in Amateur Satellites": this video tape contains good information but misses the mark for the prospective newcomer to the amateur satellite field. My advice: 1. If you are a new satellite operator or just getting interested in amateur satcom, spend your money on a 1 year subscription to

Worldradio magazine and read my SPACECOM column. There you'll find the necessary information to start enjoying amateur SATCOM with out applying for a second mortgage on the family farm. 2. If you have some experience in amateur satcom, you will find this video tape very interesting and full of information needed to take the step up to the high orbit birds or the PacSats.

Alpha-Delta coaxial switches

Adequate grounding and lightning protection are absolute musts in any amateur radio station. Not only is the safety of the operator at stake, damage to equipment can occur if proper grounding is left undone. Unfortunately, when it comes time to accomplish this task, all too often the radio amateur will "cheap out" and rely upon poorly crafted coaxial switches, inadequate arrestors/surge protectors and less than optimum grounding and bonding techniques.

While absolutely nothing short of a commercially designed and installed Ufer ground system will protect your station from a direct lightning strike, a nearby miss, with its high induced voltages, can be dealt with using some common sense and some readily available devices from Alpha Delta. This also applies to static discharges including rain static.

In an effort to properly engineer my new ham shack, I spent some extra time and energy investigating many of the coaxial switches and lightning protection devices currently on the market. To be certain, cost was a factor, but more importantly, protection for the operator and equipment was paramount. I settled on the Alpha Delta two and four position RF coax switches and the Transi-Trap surge protectors using the patented Arc-Plug Cartridge Pill for use in my new shack.

Currently I'm using two DELTA-4N (four position coax switch with N-connectors) to switch and ground the four VHF and three UHF antennas connected to my Yeasu FT-726R V/UHF multi-mode rig. A third DELTA-2 (2 position coax switch with SO-239 connectors) switches the two HF antennas on my Ten-Tec Argosy II. The Transi-Trap surge protector is in-line with the 10 meter vertical OSCAR downlink antenna on the FT-726R. All these devices are grounded to the main station DC ground (a #6 copper wire going directly to the ground on the AC breaker box) using quarter inch wire braid. With this arrangement, I sleep much better at night during electrical storms!

The Alpha Delta coax switches are

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designed to provide low insertion loss, low VSWR, high isolation between ports and the best protection from surges you find for the price. Specifications on the DELTA-4 coax switch (SO-239 connectors) are listed as follows:

Frequency	VSWR	dB Loss	dB Isolation
30 MHz	<1.1:1	.1dB	> 60dB
150 MHz	<1.3:1	.15dB	> 50dB
450 MHz	<1.4:1	.5 db	50dB

The DELTA-4N switch, which is rated through 1.3 GHz, (with the N-connectors) actually specs out better than the SO-239 version, making this switch ideal for V/UHF stations.

While low insertion loss, low VSWR characteristics and high port isolation are important, the real purpose behind these devices is to provide lightning/surge protection for the RF gear and the operator. Alpha Delta accomplishes this with their patented Arc Plug Cartridge Pills. These gas discharge devices effectively shield sensitive electronic equipment from the effects of nearby and distant lightning/static surges. As the rapidly rising wave front of a lightning surge encounters the Arc Plug Cartridge Pill, the gas tube acts as a voltage dependent switch, going from over 10 megohms to a few milliohms in less than 100 nanoseconds. This shunts the surge voltage directly to ground, saving the equipment from damage.

The lifetime of the Arc Plug Cartridge is a function of the amplitude and duration of the surge current to which the device is subjected. With this in mind, one Arc Plug Cartridge could last several hundred operations. Extra Arc Plug Cartridges are available for each Alpha Delta switch, just in case.

Proper function of all Transi-Trap Surge Protectors and coaxial switches manufactured by Alpha Delta is dependent upon proper grounding. Each device MUST be grounded to a good earth ground using heavy ground wire or cable. The ground run should be as short as possible to keep the DC resistance low.

Note: These devices will function as advertised only when properly installed and grounded in accordance with the instructions.

Do they work as advertised? Personally speaking, I have yet to have the pleasure (?) of finding out first hand. However, other radio amateurs with whom I've spoken have high praise for the Alpha Delta line of surge protectors and coaxial switches. Do I personally think the cost of these devices is worthwhile? Absolutely! What would

you rather do: replace a small gas filled plug at a cost of a couple of bucks or replace several kilobuck radios? In the yuppie world, this type of decision is called a "No Brainer." Spend the money and buy however many switches or surge protectors you need to effectively isolate your antennas from lightning and/or static discharges. It will be well worth the expense, when you replace the Arc Plug Cartridge and not the radio.

For more information on the Alpha Delta series of lightning/surge protectors and coaxial switches please write or call Mr. Don Tyrrell, c/o Alpha Delta Communications, 1232 East Broadway, Ste. 210., Tempe, AZ 85282. Telephone 602/966-2200.

ARSENE update

It is with a note of sadness that I report that the first French amateur radio satellite, ARSENE, has apparently suffered some sort of catastrophic failure and is dead. Information provided by AMSAT-NA News Service relates that on September 25th, a group of French radio amateurs attempted to gain control of the satellite using the F5ELL UHF moonbounce station. A series of commands was sent to ARSENE via the 26 foot dish (and 2KW of RF power) available at F5ELL. The S-Band (2.4 GHz) downlink was monitored at F5PL, using a 23 foot dish antenna, but nothing was heard from the satellite. After several attempts recovery efforts ceased. Some efforts will be made to regain control of ARSENE in the future, but it remains likely that the satellite is lost.

While the loss of ARSENE is a blow to the French amateur satellite group, I am sure that they will take this setback and turn it into a learning experience. ARSENE spurred many SATOPS toward S-Band experimentation. Progress is a wonderful thing but it does have its price. I am confident that this dedicated group of French radio amateurs will orbit another satellite in the not too distant future which will be a resounding success thanks to the lessons learned from ARSENE.

S-BAND ANTENNA

Last column I relayed information gleaned from OSCAR Satellite Report #276 regarding a new, compact S-Band downlink antenna being considered for use in OSCAR service. Recently R. Myers Communications, P.O. Box 17108, Fountain Hills, AZ 85269-6872, started selling this antenna as part of their product line. The Model SB-32 antenna is manufactured in two models. The SB-32A comes with hardware

for 1 1/2 inch crossbooms and the model SB-32B includes hardware for 2 inch crossbooms. Either antenna takes about 1 minute to assemble! There is no downconverter included with this antenna at the present time, therefore, you must provide your own S-Band downconverter (available from SSB Electronics, Mountain Top, PA or Down East Microwave, Troy ME: see ads in various ham radio magazines).

The dimensions for either the SB-32A or B are approximately 24 inches by 36 inches and both can be mounted for either horizontal or vertical (linear) polarization. The low profile design significantly reduces windloading. This new antenna coupled with a quality S-Band downconverter will enable many of us to take advantage of Mode-S at a reasonable cost. Speaking of cost, both models cost \$55.00 not including UPS shipping. For further information contact Bob Myers, W1XT at the address listed above or call him at (602) 837-6492.

Product review correction

Last column I reviewed SPECTRA-COM WWV-Format Universal Time Piece by JZO Research. Due to a typographical error the name of the distributor was printed wrong. The source of the WWV-format clock is JZO RESEARCH, 7140 Colorado Avenue North, Minneapolis, MN, 55429. The author accepts responsibility for this glitch and regrets any confusion that may have happened.

That's a wrap for this month. 73 Rich, K7YHA WR

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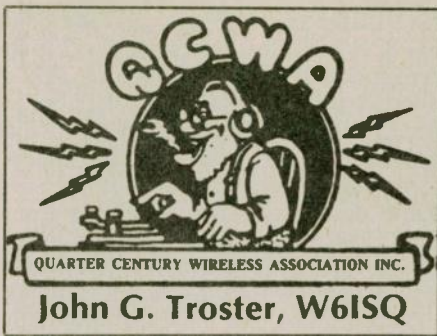
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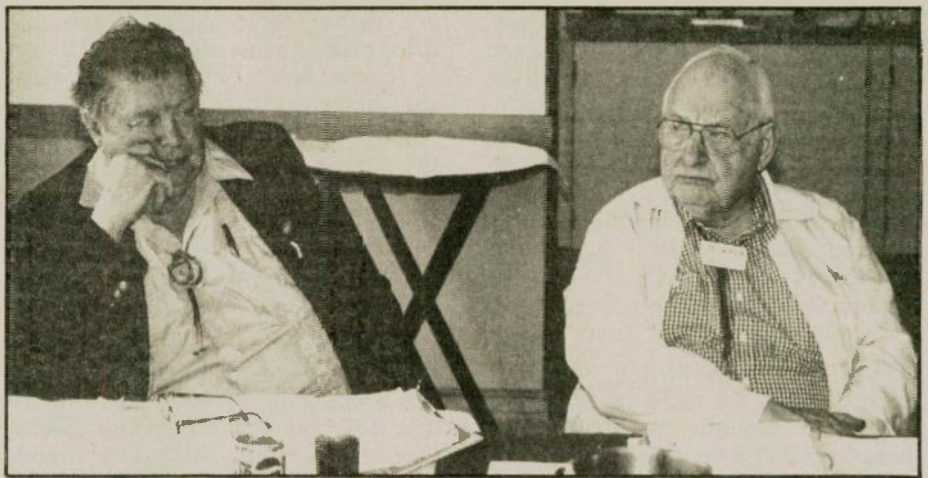
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Let's get Amateur Radio growing again!



Thanks a Milt. . . ahhh, Meg

Milt Chaffee, W1EFW, Director, QCWA has the pleasant custom of using the National Traffic System to send information and greetings to fellow hams across the country. I have received two from Milt of late and answered him via the station who telephoned me with the traffic. There are traffic nets of all kinds, phone, CW, packet, etc. each kind an enjoyable activity, the kind of thing more of you might like to become involved with. I was on CW traffic nets for many years and always enjoyed it. Further, handling traffic is a great way to put something back into Amateur Radio because in so many cases you're doing something helpful for someone else. Con-



Chef Lew McCoy, W1ICP and Milt Chaffee, W1EFW. — Photos by W6ISQ

sult your Section Communication Manager as listed in *QST*. He'll help you get in. If all else fails, QSP Milt!

Chef Lew McCoy's Chili

As I mentioned last month, I detected QCWA Veep Lew McCoy, W1ICP, was in mellow mood during the QCWA National Convention in St. Petersburg, FL, so I was able to lure him into a corner to ask if he would consider releasing his heretofore secret chili recipe for which he is known and honored. While thoughtfully toy-

ing with the enviable silver and turquoise Indian bolo he was wearing, he hawed and hummed, considered, and then carefully, thusly spoke:

"Well, if it is for QCWA folks, OK, I'll release it. But remember it is secret and for QCWA eyes only."

Absolutely Lew, we will ask any readers who have not yet taken the QCWA oath to read no further, unless of course, they promise to join now, if qualified, or instantly when they get 25 years under their ample belts. Those in any of the above classifications, may read on in good conscience.

The recipe about to be unveiled will be known henceforth and hereafter as "Chef McCoy's Pollo con Chili Verde." It will be included in Chef McCoy's *Southwestern New Mexico Lacrymose Cookbook*, when he gets to writing it. Veep Lew writes: One thing about living in Silver City, New Mexico, there are over 50 Mexican restaurants in our town — and our population is only 10,000. Of course, with this many restaurants, the competition between them is fierce. One in particular has very, very good green chili sauce but I never could get their recipe — talk about secrecy! Finally, after eating there scores of times, I figured out how they made their sauce and after much experimentation, I not only duplicated it, but felt I improved on it. (One of my hobbies is cooking). I have tried my recipe out on many people and, with my usual modesty, I can say that they were overwhelmed. John Troster has convinced me I should pass this priceless jewel on to our friends.

"This, believe it or not, is a low calorie dish. If you don't believe it, add up the calories yourself. The recipe uses either skinned chicken breasts or thighs, all fat trimmed off. Most areas of the country now have fresh green chilis available (not jalapenos!!) but if you cannot get fresh, use a small can of chopped green chilis.

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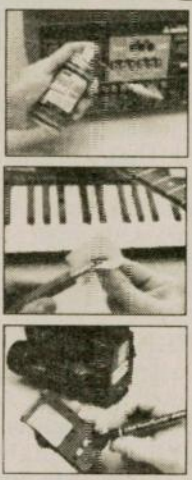


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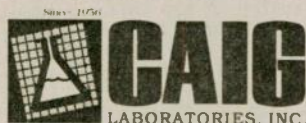
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"I must add I nearly always try to use "mild" green chilis — but chilis seem to have a mind of their own. Sometimes the dish is pleasantly "picante" (hot) to the taste — and sometimes it requires lots of cold beer — not in it, of course, but to cool your palate.

"If you like this dish — let Troster know and I'll treat you to another I concocted called "Pork Surprise." That has a story to it.

Later a telephone conversation with Lew produced these additional comments: "if you wish to make it "hotter,"

I asked for a taste I was told it wasn't ready yet. Seems it was on the burner most of the day. But folks, it's worth the wait.

We ran a taste test on the Pollo con Chili Verde in our family. Granddaughter said "Neeeat. . . cool, I mean hot." And all around the table, "Hey what is this, it's good?" "Where did you find this." "You think we could can it and sell it?" Best endorsement was from Phil Edwards, ex-K9MDE, member of the United States Bitsy Grant Tennis Team. That team, for men 75-80, is the

Inspired by Chef Lew, I hied myself to the kitchen and made some of those chocolate covered potato chips which I learned about at the convention. They're great folks, but there's one problem. We don't know whether to serve them as hors d'oeuvres or dessert!

And a good New Year to you all. Hope you will make your New Year Resolution to include sending W1EFW and Lew a message or two. Then maybe you will hang in there and help out a bit on a traffic net. That's a good New Year Resolution to actually keep!

73 + 25 and HNY. Jack, W6ISQ.WR

Chef McCoy's Pollo con Chili Verde

Ingredients:

- 1 can Campbell's Cream of Mushroom soup
- 1 medium onion, chopped
- 8 fresh chilis, skinned and chopped into one inch square pieces
Or, one can, 6 or 8 ounces, chopped green chili
- 1 Tablespoon of ground cumin powder
- 1 clove garlic, minced
- 1 cube chicken bouillon
- 4 chicken breasts or 4 skinned thighs or combination of both

In a large frying pan or pot, put the mushroom soup and add 3 or slightly more cans of water, using the soup can as a measure. Stir to mix the soup, add the chopped onion, bouillon cube, minced garlic and bring mixture to a boil and then lower to a slow simmer. (Yes, I know it looks very watery!) After a few hours, (three or four) the mixture will reduce and thicken. Add the chilis and cumin, stirring them in. Add the chicken. Again bring the mixture to a bubbling simmer and cook about one hour and a half, turning the chicken occasionally. The final result should be a thick sauce (thin with water if necessary). Serve this over rice or noodles.

add jalapenos cut in tiny bits to taste, or use chili powder."

Now just to let you know how tasty this dish is, wife KC6NFE, made up a batch of Chef Lew's Pollo Con Chili Verde and it was — how shall I say this — terrifico! Seemed as though the pot boiled all day — smelled soooo good. But talk about frustrating, every time



Tennis champion Phil Edwards, ex-K9MDE, awaits pollo con chili verde. — Photos by W6ISQ

equivalent of the Davis Cup Tennis Team. Incidentally they defeated all comers in Europe this past summer. Said Phil, "Hey, gimme another bowl of this and I'll take on the whole Davis Cup team one by one."

All right, you heard from our Veep Lew and you read the Product Review. How did you like it? Suggestions? Let's have a little interactive newsprint here and leave us hear from you with your comments. And remember, we absolutely must coax Lew to tell us the story of his "Pork Surprise." QSL?

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WORLDRADIO, February 1994 51

World Radio History



Have Light Talker, will packet!

LEONARD SMITH, KZ7I

In the fall of 1992 I thought to myself that it would be a great idea to volunteer my services to the Courage HAN-DI-HAM System. After all, I had been a ham for over 25 years and I figured it was time to put back into Amateur Radio what I had gotten out of it.

I went on down to Courage Center and introduced myself to Sister Alverna, WAØSGJ and Pat Tice, WAØIDA. They welcomed me warmly and said that my help would be greatly appreciated. Sister Alverna told me that when she had a request for help from a HANDI-HAM she would call me and ask for my assistance.

About three weeks went by and I heard nothing from HANDI-HAMS.

Then I received a phone call from Sister Alverna. She told me that since I had an interest in packet radio, I might be able to help a ham with a disability who would like to get on packet.

"No problem," I said. I remember thinking that this would be a simple

She also explained that the Light Talker was somehow interfaced to her computer and that maybe I could figure out how to interface that to a packet system. Well, I'm no computer genius but I thought, "nothing ventured, nothing gained."



Len, KZ7I, looks on as Kris, KAØVIY, determined to run her own packet station, uses the Light Talker.

assignment. Then Sister told me that the ham who I would be helping is Kris Hass, KAØVIY, who is a non-verbal, non-mobile individual with cerebral palsy. I hesitated and said, "What do you mean non-verbal?" Sister then explained to me that Kris used a device called a Light Talker to communicate.

I set up a time to meet Kris and she wanted to get going right away. I met with her the following day. I had heard about Light Talkers before but had never seen one used. Kris has a laser pointer attached to her forehead by a headband. In front of her wheelchair is a type of keyboard that displays different numbers, letters and pictures. Using the laser light on her head she skillfully guides the laser to activate the keyboard, which in turn uses a speech synthesizer to translate her input into audible speech. Kris explained that she had an interface unit that attached to her personal computer and her Light Talker. Using this device she is able to work programs on her computer and use her word processor program to write letters.

I looked at her computer, which was an IBM PS/2. I knew it would need two serial ports to do what was needed. Her Light Talker interface was using the RS232 port but I saw what I thought



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was a second serial port on the back panel. I told Kris that I was fairly certain I could help. She needed a two meter radio and a TNC to get going.

Kris asked for help from HANDI-HAMS for the equipment. It took about two months, but a TNC and radio were obtained. I wired everything up and took it over to Kris' apartment. I chose Lan-Link software by Joe Kasser to operate Kris' packet station.

Lan-Link was perfect for Kris as it had easy pull down menus and lots of buffers for pre-written messages. After I wired everything up, it all worked perfectly except for one drawback . . . Kris' interface to her computer was not working. After studying the problem, I discovered that what I thought was the second serial port was in reality only a mouse port. Without two serial ports, Kris' Light Talker would not work with packet as the TNC required a serial port to operate. Kris braved it out for about a week using the pointer on her head to manually punch the computer keyboard. This, however, became too physically tiring for her and she could not continue. Then there was another setback: Kris' radio died and was deemed too expensive to repair. I started calling around looking for a serial port card to install in Kris' computer. I discovered that her computer was a Micro-Channel model, which was incompatible with standard generic (cheap) types of serial boards. To buy a serial board that would work I was quoted \$190 to \$242 for the part alone. Since her computer was about six years old and worth maybe \$150 (tops) by today's standards, I felt that we could do better than that. So now I was down by three drawbacks!

I suggested to Kris that we could build her a new computer from scratch. She thought that was a good idea and obtained a gift from her parents of \$200 for that purpose. The challenge was on.

I worked for several months trying to get donations for the cause. I was successful at obtaining donations, but had problems with blown power supplies, bad boards and software glitches. It was now September 1993. I went to an electronics supply house in Minneapolis as a last resort. There before my eyes was a new 286 clone computer with a 20 megabyte hard drive, a 360 floppy, one megabyte of RAM and a color monitor for \$319. I couldn't believe it. I talked to the salesman and told him I didn't need the monitor but did require two serial ports. He put in an extra serial port, took off the monitor and sold me the thing for \$240.

Kris was thrilled. After a few days of minor problems in setting up, Kris now


has a fully functional computer and packet station that is interfaced entirely to her Light Talker. Kris now has access to amateurs across the country and throughout the entire globe. The look of gratitude and happiness on her face was worth the months of work and the ups and downs that came with it.

If you wish to communicate with Kris, you may leave her a packet message at the following address: KA0VTY @ KZ7I.#MSP.MN.USA.NA. I am sure she will be excited to hear from you and knowing her, I am positive you will get an answer back.

I would also like to thank and credit the following people who donated time, equipment, parts, money and most importantly, the gift of caring and love. Without them, this project may not have come to a successful conclusion: Pat Tice, WA0TDA; Sister Alverne, WA0SGJ; John Douglas, N0ISL; Jim Muehlberg, N0WMMR. Last, but definitely not least, to Kris' parents, Mr. and Mrs. Hass. Their gracious parenting have made Kris a winner when the odds were stacked against her. They deserve the most thanks of all.

73 to all.

WR


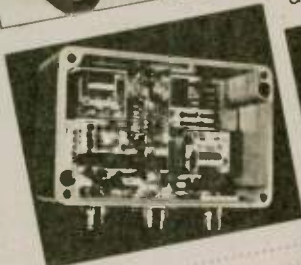


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BASIC Toroids

Anyone remember Ami-Tron? More than thirty years ago a company going by that name started business by marketing such items as rub-on panel marking sets, E-Z Etch printed circuit etching supplies and, according to their literature, "...interesting and useful Toroid kits. . . ." In those 30+ years many electronics suppliers have come and gone, but the only things to change at Ami-Tron were its name and its nearly total reliance on those "interesting and useful Toroid kits." Today their name is Amidon Associates, and their toroids are practically the de facto standard for nearly every project calling for ferrite or powdered iron cores. From its very start Amidon has always been willing to help experimenters needing small quantities of their products. If you're interested in finding out more about toroid cores and Amidon's other interesting products, ask for one of their free tech data flyers. Their new address is 2216 East Gladwick Street, San Dominguez Hills, CA 90220.

Guest program

James Gray, K7MS, apparently uses Amidon cores. He submitted a program for selecting toroid cores and determining winding data. Jim also

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```

10 REM TOROID.ASC, IN GW-BASIC, BY K7MS 4/07/93
20 CLS: PRINT: PRINT " +++ POWDERED IRON TOROIDAL
CALCULATIONS +++": PRINT
30 PRINT " Core AL Freq Core AL Freq"
40 PRINT " Type Value Range Type Value Range"
50 PRINT " _____"
60 PRINT " T44-1 105 0.5-5 T37-6 30 10-50"
70 PRINT " T50-1 100 " T50-6 40 " "
80 PRINT " T68-1 115 " T68-6 47 " "
90 PRINT " T37-2 40 2-30 T80-6 45 " "
100 REM — CONTINUE LISTING WITH OTHER CORES, AL VALUES
AND FREQ RANGES ...
200 PRINT: PRINT "Calculate (T)urns or (M)icrohenries": PRINT
210 A$ = INKEY$
220 IF A$ = "" THEN 210
230 IF A$ = "T" OR A$ = "t" THEN 250
240 IF A$ = "M" OR A$ = "m" THEN 300
250 INPUT "What is the required inductance (uH)...";LR
260 INPUT "What is the AL Value...";AL
270 N = 100* (SQR (LR/AL) )
280 PRINT:PRINT "The number of turns for";LR;"uH is";N
290 END
300 INPUT "What is your number of turns...";NT
310 INPUT "What is the AL Value...";K
320 A = K/10 330 LU = (A* (NT^2) ) /1000
340 PRINT:PRINT "The inductance value for";NT;"turns is";LU;"uH"
350 END

```

likes to keep his programs short, less than a page long, to encourage people to type them in. The program provides a screen full of toroid data for various operating frequencies. It's kind of like a data reference page. A prompt near the bottom of the screen asks what you desire to calculate, and two subroutines provide the answers. And although Jim says the program is in GW-BASIC, I don't see why it wouldn't run in any BASIC. The only commands that

might not work with some of the other BASICs are CLS, which stands for "clear screen," and the INKEY\$ string.

Jim's program is pretty straightforward, even though I edited it slightly for this column. Jim's lines 100-190 include core data for T50-2, T68-2, T80-2, T94-2, T106-2, T130-2, T157-2, T184-2, T200-2, T200A-2, T225-2, T94-6, T106-6, T130-6, T37-10, T50-10, T68-10, T80-10, T94-10, T25-12, T37-12 and T50-12 toroids. You can, of course, use different cores — just fill in the omitted lines with your own data. You can find Amidon's data from their literature, or from tables in the *ARRL Handbook*. The only suggestion I would offer in the way of a program change is to have the first routine lead right into the second one without ending it at line 290. The reason? A rule of thumb says that anytime a winding passes through the center hole it counts as a whole turn. It would be nice to know how much different the inductance would be between the computed partial winding and its nearest whole turn. Actually, the difference is kind of moot anyway. There are enough variances in the toroid manufacturing process and in individual winding styles that chances are slim an actual inductance will match the computed value. Generally, though, the difference should be less than five percent.

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Tunable toroid

Ever need a tunable toroid? This one comes from Gilbert Addis, W2NH, as published in RSGB's *Amateur Radio*


```

10 CLS: REM TORUNK.BAS, BY KD5DL, 12/01/93
20 INPUT "NUMBER OF TURNS ";A
30 INPUT "MEASURED INDUCTANCE (uH) ";B
40 INPUT "OUTSIDE DIAMETER (inches) ";C
50 INPUT "INSIDE DIAMETER ";D
60 INPUT "HEIGHT ";E
70 F = INT (B / ( (A/100) ^2) * 10) /10
80 G = INT (B / (.0050743 * A ^ 2 * E * LOG (C/D) ) * 10) /10
90 PRINT: PRINT " AL = ";F;"AND PERMEABILITY IS";G
100 PRINT: INPUT "DO ANOTHER ";A$: IF A$ = "Y" OR A$ = "y"
    THEN PRINT: GOTO 20
110 END

```

Techniques a number of years ago. Gilbert suggests epoxying a slug-tuned coil to a toroid core before winding the coil, then wind approximately a third of the turns over the two. Figure 1 shows how. The resulting coil exhibits a tuning range over about 10% of the toroid's calculated inductance.

Junk-box toroids

A good project for a dead-band night might be sorting and testing junk-box toroids. They're the ones you've salvaged over the years from defunct equipment or have found in bargain boxes at flea markets. A word of warning, though — don't rely on sorting surplus cores by their color codes. Chances are it won't work. It seems that there isn't any kind of industry standard color code for marking toroids. The two important unknowns are a core's AL value (its approximate 100-turn inductance) and its permeability. The AL value can be found by winding a coil on the core and then comparing the number of turns against the measured inductance to derive the 100-turn value. Finding permeability is almost as easy, and once we know it we can make a judgment about the core's frequency range. Permeability can be found by measuring the coil's physical dimensions and its inductance for a

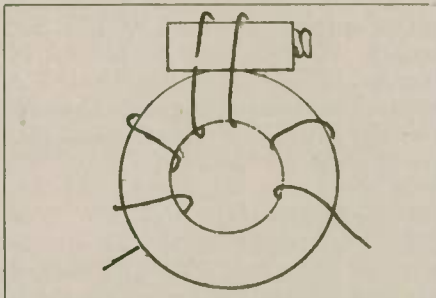


Figure 1. The W2NH tunable toroid.

given number of coil turns. The following program uses those measurements to approximate both AL value and permeability. (Physical sizes are input as decimal inches):

Figure 2 references permeability values to frequency range. You can

just as easily include the table in the program, either PRINTed as a table or incorporated within IF. . . THEN. . . PRINT statements. Finally, mark the

Perm.	Typical Range	Optimum Range
30 - 50	10kHz - 2MHz	50kHz - 500kHz
22 - 30	20kHz - 5MHz	500kHz - 2MHz
15 - 22	30kHz - 5MHz	1MHz - 2MHz
7 - 9	2MHz - 50MHz	10MHz - 20MHz
5 - 7	4MHz - 100MHz	20MHz - 40MHz
2 - 5	10MHz - 200MHz	30MHz - 100MHz
0.5 - 2	50KHz - 300MHz	80MHz - 150MHz

Figure 2. Use this table to match junk-box toroid permeability to useful frequency ranges.

toroids, or the envelope you plan to keep them in, with their sizes (perhaps referencing it to the nearest Amidon T or FT number), the derived AL values, the optimum frequency ranges and, if desired, the permeability. Obviously, you'll need an inductance meter, RCL bridge, dip meter or some other method to determine inductance. If you don't

already own one, then building your own could be a project for another dead-band night. *QST* magazine might be a good place to start. The December issue started the first in a series by Ron Portugal called "Computer Controlled Electronic Test Equipment." The IBM-compatible project features a computer interface, programmable in BASIC, several add-on test modules. One of the promised features is a computerized inductance tester capable of measurements between 1 uH and 1 H.

Your turn

If you have a short program to share, send me a copy and we might get it published. And, if you'd like any of the

programs we've done so far, a SASE will get you a listing. (My latest attempt is also a toroid winding program. You enter the desired frequency and inductance and the program lists possible cores, winding data, recomputed inductance, and wire recommendations. The program also includes a short discussion about toroid Q). wr

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Worldwide DX CONTESTING



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It was fun time again at ZF2JI for the CQ Worldwide Phone Contest. Operators were Chris, KG6AR; Larry, KJ6HO; Glen, WB4TIN; Bob, W9NQ; Keith, K6GXO and your truly, K4IIF. We had a goal of 10,000 QSOs, but thanks to Murphy, particularly on 20 meters, and not the best band conditions, we only made 7,370. The breakdown per band was:

10 meters	—	1,566
15 meters	—	2,517
20 meters	—	1,180
40 meters	—	1,192
80 meters	—	798
160 meters	—	117

The zone/country breakdown included 136 zones and 416 countries and a total score of 9,408,990. There were some good openings, lots of JAs, Europeans and even 4S-DX in Sri

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Lanka, but a few years of worsening conditions are still ahead of us.

Results of the 1993 Dutch "PACC" Contest

The 1993 contest took place the weekend of 13-14 February, 1993. For those of you unfamiliar with the event, the "PACC" Contest is an annual event, both CW and SSB, with the Dutch provinces as multipliers. A certificate is awarded to the country winner in each category single op, multi op and SWL and to the 2nd and 3rd scoring stations if there are sufficient entries from the country concerned. In addition, certificates go to the high scorers in each call area of JA, LU, PY, VA9/Ø, VE, W/K, ZL and ZS.

Some certificate winners from representative countries in the single op category included:

USA — KAIDWX, K4YT, and KZ3B
 Canada — VE1CHW and VE3FGL
 Germany — DL2VPPF, DL100 and DL2DTL
 Spain — EA3BHK
 France — F6CXJ
 England — G4UPS
 Scotland — GM3KLA
 Hungary — HA5MY
 Switzerland — HB9CKF
 Italy — IK8ODA, IKØSHF & IKØREH
 Japan — JR7OMD/2, JE1REU, JA9CWJ & JA6GU
 Norway — LH2TY
 Lithuania — LY750U
 Bulgaria — LZ2GS

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 Ukraine — UB5QMA & RB5EX
 Australia — VK2APK
 Romania — YO2DFA & YO9AGI
 Yugoslavia — YV2SF
 Republic of Macedonia — 4N5GB
 South Africa — ZS6AJS & ZS5S
 Israel — 4X4VF
 Croatia — 9A2OB

Dutch certificate winners in the single op, CW section were PAØVAJ, PA3DBG and PAØLOU. In the single op, SSG section top honors went to PA3EPN, PAØIJM and PA3AZF.

Announcing the 1994 Dutch "PACC" Contest

The 1994 contest is scheduled for the weekend of 12-13 February, from 1200 UTC, Saturday until 1200 UTC Sunday, using 1.8 to 29.7 MHz, CW and SSB. Preferred frequencies according to the I.A.R.U., Region I, contest preferred segments are CW: 1.830-1.850, 3.500-3.560 and 14.060, SSB: 3.600-3.650 and 3.700-3.800 and 14.125-14.300. SSB contacts on 160 Meters are not allowed in this contest. For W/KVE et al the exchange is RS(T) + QSO number, Dutch stations will send RS(T) + province abbreviation. These are GR, FR, DR, OV, GD, VT, NH, ZH, FL, ZL, NB and LB (total 12). For complete rules and official application send SASE to K4IIF.

The 1994 UBA (Belgian) CW Contest

The CW weekend of the annual Belgian Contest runs from 1300 UTC Saturday, 26 February to 1300 UTC Sunday 27 February, 1994. The U.B.A. contest committee suggests that you use the I.A.R.U. Region 1 Band-plan as follows: 3.500-3.560, 7.000-7.035, 14.000-14.060, 21.000-21.080 and 28.000-28.070 MHz. Call CW "Test UBA." The exchange is RST + serial number beginning 001, with Belgian stations adding their province abbreviation, i.e. 599001/AN. The multipliers are all Belgian provinces, Belgian prefixes and countries from the European Community. For complete rules and log form send SASE to K4IIF.

The 1994 REF (French) phone contest

The phone weekend of the French

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Contest begins Saturday, 26 February at 0600 UTC and ends Sunday, 27 February, 1994 at 1800 UTC. Suggested frequencies are: 3600-3650 and 3700-3800, 7040-7100, 14125-14300, 21200-21400 and 28500-28800. Send RS and serial number with French stations also sending their department number. At presstime K4IIF has not received the updated rules and application sheets, but we hope to have those plus the 1992 and 1993 REF Contest results in a few days.

The RSGB 7MHz CW contest

The RSGB & MHz CW Contest joins the Belgian CW and French Phone Contests on the last weekend of February. The contest begins at 1500 UTC Saturday, Feb. 26, and ends at 0900 UTC Sunday Feb. 27, 1994. Operation will be in the 7.000 - 7.030 MHz band segment. The exchange is RST and serial number, with UK stations also sending their county code. Overseas stations contact only British Isles stations, with a multiplier for each British Isles county worked.

Contesting from the Pacific

In the true Amateur Radio sharing tradition, HRO's Bob Ferrero, Jr., WB6RZK/FOØFR/3D2RF sends information on licensing and hotels on two island countries which he has visited, French Polynesia and Fiji. Three other countries which he hopes to visit are the Maldives, Kiribati and Tuvalu.

French Polynesia

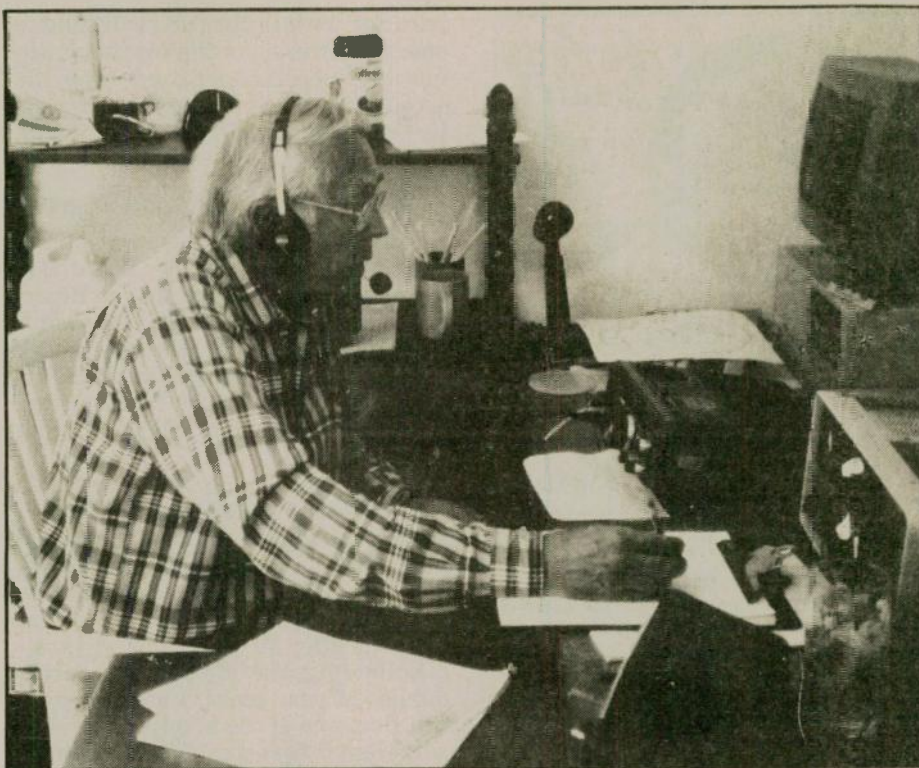
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The license will cost \$10.50 U.S. and may be paid by money order. You will need to provide a list of equipment with serial numbers, but customs was no problem and no fees were charged. You may request the call sign of your choice if it is available. Bob recommends the Moana Beach Park Royal Hotel on Bora Bora, and the Hotel Sofitel on Huahine, both of which have no objection to Amateur Radio and provide outstanding locations if you stay in the over water accommodations.

Licensing on Fiji

Write the Ministry of Information, Broadcasting and Telecommunications, P.O. Box 2225 Suva, Fiji.

The cost is \$13.50 US, and again a money order is fine. You must also send a copy of your home license, your passport and a list of equipment with serial numbers, although customs was again no problem and no fees were charged. You may choose a call sign if it is available. For a hotel on Fiji, Bob



John, K4IIF, at the operating position of ZF2JI during the CQ Worldwide Phone Contest

recommends the Turtle Island which has no objections to Amateur Radio and can provide accommodations right on the water with outstanding propagation to Europe. The disadvantage is price; it's very expensive, but nice. Turtle Island Hotel reservations may be contacted at 10906 NE - 37th Street, A-1, Vancouver, WA 98682.

Bob also included the following ad-

resses for licensing information:

Telecom Services Kiribati, Ltd., P.O. Box 72, Bairiki, Tarawa, Kiribati, Central Pacific.

Department of Posts and Telecommunications, Male, Republic of Maldives.

Mr. Lopati Tefoto, Telecommunications Officer, Private Mail Bag, Funafuti, Tuvalu. WR

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When we press the push-to-talk switch, we sure have a lot of little quirks that get shared on the air. Take, for example, the phrase "be advised." This has got to be the top of my irritant list. When someone says "be advised there is an accident on the freeway" what else would I be but "advised?" Why not just say, "there is an accident . . . etc." Wouldn't I automatically "be advised?"

Another one is the "station not heard" routine. Think about it. After someone has made a couple of calls and the other party isn't answering, it's pretty obvious a contact isn't going to happen. I'm not sure when I need to know someone didn't hear a station during a callup. Even during a sideband HF net, I figure a contact was made when NCS says "welcome to the net." When nothing is heard, that's pretty obvious too.

Be advised

Now you're thinking. So what? What's the big deal? What's a few extra words? And you're correct. It's not a big issue on day-to-day stuff. But have you ever been NCS during a search mission and "been advised" and "no contacted" about every 15 seconds or so? Hey, it gets pretty obnoxious.

I still say, run a tape during your exercises. Listen to some of the things that fill up air time. You may not understand unless you've operated from a very hectic site, but "quiet" is a blessed event! You can collect thoughts, make a potty run, deliver a message or just get caught up without having something interrupt you. Before you press the button and utter something during the next emergency or training net, consider what you're going to say and the purpose behind it. Make it short, to the point and understandable. Cute,

trite and useless phrases really add to operator stress. As the event continues and operators get tired (after the second 12-hour shift, for example) these little things become big irritants. Think first, then talk.

Emergency planning

During a meeting recently of the Utah Earthquake Advisory Board, Bob Carey of Utah Comprehensive Emergency Management, talked of how difficult it is to get support for emergency preparedness. He said what we need is the 5.5 magnitude quake. This, he said, wouldn't be enough to kill people, just wake them up.

Some years ago an Amateur Radio survey asked if operators didn't secretly wish for a disaster so they could make use of their skills and equipment. Not surprisingly a large number said yes. It's interesting to see what happens after an emergency strikes.

Following the California earthquakes of past years, I usually get a call from one of the area Scout troops who want to "get going" on their emergency preparedness merit badge and hold some classes. Our church will decide to sponsor a neighborhood emergency fair and show how to prepare for unexpected events. After the midwest flooding this summer, several requests again came for such events.

Once in a while a neighbor's relative will get stranded in a blizzard somewhere. The neighbor will stop by the house and ask if this large tower and antenna array would link him to relatives.

Are you ready?

Yet when the sun is shining and things are going well, thoughts of emergency preparedness vanish. When the ARES group doesn't get called out for a few weeks or months, the response gear gets left home, the batteries aren't charged and the fuel tanks aren't kept full.

So here's a challenge for you. Do what you can to promote emergency preparedness — ALL THE TIME! Yes, it will take a little effort but you'll enjoy it (trust me).

Some ideas.

Call your local Boy Scout and Girl Scout office and volunteer to teach

preparedness or be a merit badge counselor. On the Boy Scout side these merit badges include emergency preparedness, safety, and communications. These three are required for the Eagle Scout award so you should get some interest.

Call your local Scout troop and volunteer to conduct a preparedness seminar. Let your neighborhood church know too. Talk to the elementary school principal and volunteer not only to show off your radio gear, but to do a preparedness class. Talk to at least two neighbors a week about getting their families prepared for emergencies.

I can hear that voice now from eastern Washington. "I don't know what to teach. I don't have any materials." That's just an excuse. Pick up the phone, call the American Red Cross office and make arrangements to get some of their excellent brochures on preparedness. They're free and if you read the material, you can come up with a way to present it!

Contact FEMA

You can also request a list of preparedness materials from the Federal Emergency Management Agency. Write FEMA, P.O. Box 70274, Washington, D.C. 20024 and ask for their publications catalog. Then order a bunch. Get enough to hand out to neighbors and Scouts! Take some to the next Amateur Radio meeting.

You can also contact the National Sheriffs' Association, 1450 Duke Street, Alexandria, VA 22314. They have materials as well.

FEMA has contact people in each of their eight regions and in all 50 states to help you with family preparedness programs. If you cannot find out from your state emergency management office, write the Family Protection Program Manager, FEMA, 500 C Street, S.W., Room 602, Washington, D.C., 20472 and ask. They'll get you in touch and you can get involved. They have some excellent materials to get you involved so you can increase emergency preparedness awareness and get those you know and love involved. Do it now!

I mention Boy Scout involvement because the Boy Scouts of America and FEMA have announced an effort to get Explorer Scouts (the 14-20 age group) involved in family disaster planning. Each Scout council has been sent materials on how to get a Family Disaster Preparedness Explorer Post going.

The Scouts are going to need some help if this program is going to work. ARES members, CAP members and SAR groups could make a big impact

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on the quality of a local Scout effort. Call them up, get involved!

Where you work

Another way you can promote preparedness is within your work environment. Contact your state emergency management office and obtain videos and handouts. Put reminders in company newsletters and on bulletin boards (with permission from the boss, of course). Just making materials available is a good thing — many people know they need to get prepared, they just don't know where to get information.

Involve communicators

During the Utah Earthquake Advisory Board meeting several of the focus groups mentioned communications. There was the need to link the state, the need to link hospitals, the need to disseminate quake severity data, relay status of responders' families and coordinate transportation needs.

In several situations, Amateur Radio, ARES or RACES was specifically mentioned as a resource to meet the need. That Amateur Radio is recognized as a resource is simply outstanding. There is no doubt that Amateur Radio has and will continue to respond

to meet communications needs.

The thought that struck me came as I looked over the members of several focus committees — no communications people. Think of how much more effective Amateur Radio could be if someone were involved and then understood more than the basic request of "provide communications." If not only the need but an understanding of "why" were passed along to ARES groups, I believe the communications quality would improve.

I don't think it's enough to just task Amateur Radio with setting up stations and providing operators. We need to prepare and meet needs effectively. We can be efficient and do things right — but we'd prefer to be effective and do the right things.

My challenge to you in emergency planning is to get several people from the Amateur Community involved with EACH group needing communications. Allow Amateur Radio to understand the reasons behind the need to communicate. Allow them to feel the urgency and feel like they can make a difference. These operators will be able to better motivate and prepare their fellow communicators. Do this and Amateur Radio can be highly effective and all will be winners!

I know many of you in emergency planning are Amateur Radio operators and will say you represent ARES. But do you really? What is your main focus and what will you be doing when disaster strikes? You may hold (or have people that hold) an Amateur Radio license, but if you're not going to be the communication provider (such as the ARES group) it's tough to administer and motivate an effective Amateur Radio involvement.

There are many talented Amateur Radio operators who, given the opportunity, can get involved as volunteers and provide input so both the agency and the communications provider will understand the demands and limits. Unless both are aware, expectations will not be met. Many times one side or the other is aware of limits in advance. If both sides are made aware, we can plan in advance and prepare.

I would encourage ARES leaders to get their best people involved with planning groups. Make your resources and limits known before someone expects you to jump tall buildings. Everyone benefits with this involvement — especially the public who we ultimately serve.

Until next month, best wishes from Salt Lake City. WR

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The extraordinary 'NorCal 40'

In the highly charged and densely populated world of QRP home-brew and design, there are only a handful of circuits that can rightfully be called "classic."

Roy Lewallen's "Optimized QRP Transceiver," featured in the August 1980 *QST*, quickly comes to mind. Most of us today know it as the much-copied "W7EL Transceiver," bearing Lewallen's call sign.

The "Twofer" transmitter, designed and introduced in 1986 by John Collins, KN1H, with help from Mike Michaels, W3TS, certainly qualifies. So too, the "Neophyte" direct conversion receiver by John Dillon, WA3RNC, which made its debut in February 1988. There are others, to be sure. But it is an arguably short list, and one not easily added to. Yet among some veteran QRP homebrewers recently, there are whispers of "classic" being attached to a small, 40-meter transceiver introduced as a club project only five months ago by the Northern California QRP Club.

It's called the "NorCal 40," meticulously designed both electronically and physically by Wayne Burdick, N6KR, of San Carlos, CA. Many builders may remember his bell-and-whistle festooned "Safari-4" high integration, four band CW transceiver featured in the October, November and December 1990 issues of *QEX*.

With the "NorCal 40," though, Burdick achieves one of the highest "simplicity-to-performance" ratios in memory.

Now for the bad news: The club's run of 100 kits was exhausted just two months after the project was announced. Put simply, "there ain't no more."



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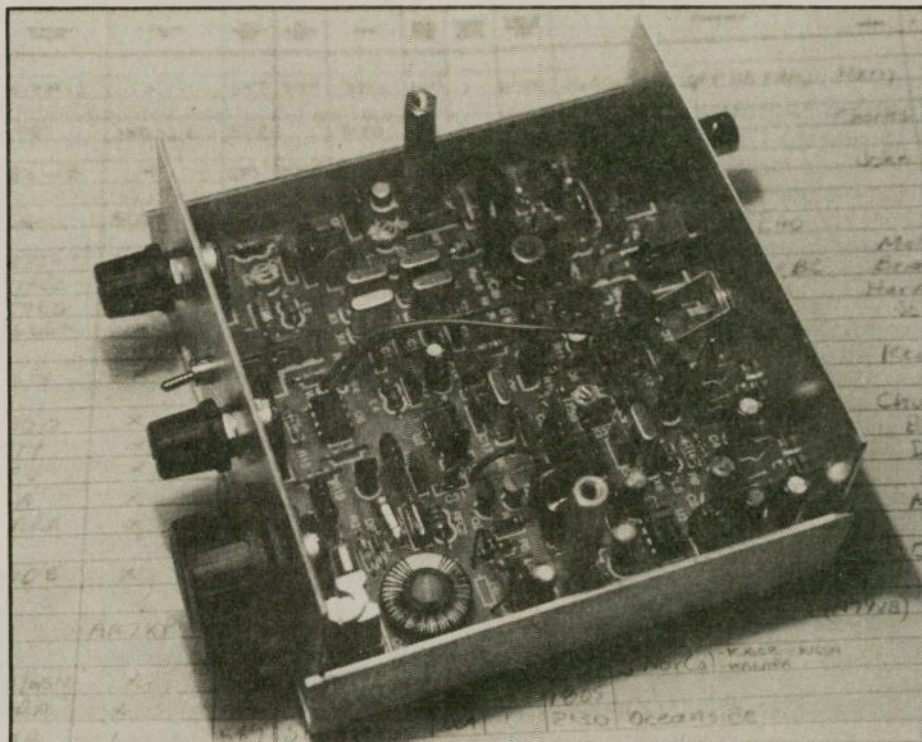
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The good news, though, is that Burdick has been talking with kit and circuit board manufacturers, and I would not be surprised if the "NorCal 40" is at some point commercially available. A rig this good is going to proliferate, one way or another.

In a cabinet slightly more than two inches high, about four and one half inches wide, and four and one half inches deep is a full featured superhet receiver, extremely stable VFO, and a transmitter capable of producing two watts of RF

ing these kinds of figures.

"But there must be a compromise in performance," you say. Judge for yourself: The "NorCal 40's" receiver is a single conversion superhet complete with switchable RIT (+/- 2kHz), an IF of 4.915 MHz with a four-pole Cohn crystal filter, selectivity of 400 Hz at -6dB, and 1.5 kHz at -30dB, and sensitivity measured at better than 0.5uV for 10dB S+N/N. A simple AGC circuit holds strong signals in check, and an RF gain control adds even more com-



The "NorCal 40" has one of the highest "simplicity-to-performance" ratios in memory.

output — all optimized for high efficiency with a very low parts count.

On receive, the rig's current drain is just 15 milliamperes. Key down, it draws only about 200 milliamperes at 1.8 watts output. Fans of battery operation dance in the streets after hear-

fort to listening.

There is ample audio to drive headphones, and I've used a speaker on several occasions without having to strain a bit.

The VFO is extremely stable, operating at a frequency of 2.085 MHz. Drift has been measured to be 25Hz from a cold start at 65 degrees. The rig tunes any 35 to 40 kHz portion of 40 meters. Transmitter output is adjustable from 500 milliwatts to two watts. The T/R function is relayless and fully automatic. And there is provision for monitoring the transmitted signal while pounding brass. The power amplifier is a 2SC799.

There are lots of unique features in the "NorCal 40's" design, but perhaps the most radical is Burdick's elimination of an IF amplifier. "It really isn't needed since the (NE602) has plenty of gain at 7 MHz, and because gain control has been moved to the AF channel," he writes in the rig's extremely

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comprehensive manual. "As anyone who has used an MC1350 IF amp with NE602s can attest, that's more gain than you really need for a 40-meter receiver, and it adds about 15 milliamperes of current drain, not to mention 10 or so components."

It's that kind of attention to design that makes Burdick's rig so extraordinary. Just as pleasing is the rig's physical design. All components—including switches, plugs, connectors and potentiometers—are wired directly to the board. There is no chassis wiring.

None.

The two-piece aluminum case is held in place by binding posts seated above and below the circuit board. Front and back panels are affixed by the switches, potentiometers, plugs and connectors—seated on the board. Construction just doesn't get any neater than this.

I built the "NorCal 40" in two unhurried evenings at the bench. Alignment took about five minutes, and the rig worked great the first time power was applied.

On-air reports have been stellar.

Burdick and fellow Californians Doug Hendricks, KI6DS, of Dos Palos, and Jim Cates, WA6GER of Sacramento, sowed the seeds for the "NorCal 40" over burgers at a McDonald's in Pleasanton last June. Their goal was to develop a simple, easy to reproduce construction project to help inaugurate the club they had recently founded. By October, the kits were on the benches of eager home-brewers. To say they succeeded is an understatement.

Stay tuned here for updates on "NorCal 40" availability. And if you'd like your name placed on a waiting list, should the Northern California QRP Club opt to produce more "NorCal 40" kits, write: Jim Cates, WA6GER, 3241 Eastwood Rd., Sacramento, CA 95821.

I suspect we've not see the last of this superb little rig.

HW-8 Handbook update

Has your collective call for a reprint of the "HW-8 Handbook" been heard? Seems so.

"I do plan on reprinting the "HW-8 Handbook," writes Mike Bryce, WB8VGE, who compiled the original manual several years ago. "I would like to say it's going to be done early this spring." That should be great news to the many, many readers who have expressed interest in receiving a copy of the popular modification manual for the Heathkit QRP transceiver series.

Their comments are being forwarded to Bryce in Massillon, OH.

If you'd like to express your interest in a reprint of the handbook, please

drop me a line and I'll note it here and send a copy of your letter to Bryce.

Among those who have recently shown interest: Mike Wood, N6MVE, Vacaville, CA; Paul Lo Cicero, K4TAF, New Bern, NC; Mike Shaw, K8ED, Southfield, MI; Eric T. Hansen, K2AIQ, Staten Island, NY; Roger Bohannon, N4OXX, Coral City, FL; and Eric J. Seifert, WA0GAI, Crystal Lake, IA.

I'll keep you posted on any late-breaking handbook developments.

Catalog of the month

David C. Green, N2DG, of Santa Barbara, CA suggests adding MXM

Industries' catalog to our libraries.

The Smithville, Texas-based company offers a line of simple kits including: "A Complete Station on Ten Square Inches of Board" for \$79.95; "A Communications Quality Receiver for Under \$50;" and "A Three-Watt Output Transmitter for Under \$25."

The company also has a small line of components and hardware including air variable tuning capacitors with built-in reduction, QRP calling frequency crystals, and project cabinets. For information write MXM Industries, Route 1, Box 156-C, Smithville, TX 78957. Telephone 512-237-3906.

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 - 12VDC operation . . . Has low current drain of 50 mA.
 - Easy to build and align.
 - Measures (HWD): 1 3/4" x 4 1/4" x 3 3/4".
 - 100% complete kit including cabinet, all components and instructions.
- The PC board supplied is a double-sided type with plated-through holes and component screen.*

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- Sinewave sidetone oscillator w/frequency & level controls.
- Silky smooth QSK circuit.
- Full 5 watts of RF output on all bands.
- 12VDC operation.
- Measures (HWD): 4" x 6 1/4" x 6 7/8" and weighs 47 oz.
- 100% complete kit including cabinet, all components and instructions. All coils are pre-wound. PC boards are quality double-sided with plated-through holes (except keyer board) and component screen.
- Previous building experience desirable.



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HT radios require a renewable battery power for extended emergency use, for which we use NiCds, gel cells and alkaline AAs. But something about throwing away boxes of spent alkaline batteries bothers me; and experience with standard HT power sources left me wanting something with less cost and local availability.

In search of an alternative I turned to NiCds used in electric power tools at local home-builder warehouses and hardware stores. They have very large capacity and are light in weight. With an appropriate case they can be carried in the hand, purse or hip pocket. They are rapidly recharged from 12V DC (auto) and 120V AC. Almost any emergency has some truck, fire engine, car or generator running for hours on end if the power grid is down or not available. Where that is not the case, several of these batteries can power an HT for days. If need be, you can charge them enroute to the assignment.

NiCd batteries for portable power tools range from 7.2 to 13.2 volts and will power any HT. They are designed for quick on-the-job changeout. Flip open the enclosed battery compartment, slide out the battery, slide in the

replacement, latch the case; insert the spent battery into a quick charger and continue while the spent battery recharges. Typically, battery terminals are recessed and the case or tool hous-



ing are keyed to prevent insertion with the wrong polarity.

Having determined a local low cost source, the next challenge was how to access the recessed terminals safely. The Makita 9.6V NiCd seemed a good starting point. It is used in tools which are real workhorses and have been proven over time. One example is the Makita electric drill¹ with a draw of 12 to 20 amps. Another is a portable 3"

power saw with a running current draw of 8.5 amps². Any way we look at it, that is a lot of energy in one battery. Compare them to the draw of your HT and you get an idea of what these batteries offer in way of long-term power. The same thing can be said for their 7.2 battery.

For a proto type I used the handle from a broken Makita tool to provide the plastic key-way that keeps the battery at the right polarity. It was broken right at the point where a spring loaded clip that fits atop battery terminals would have been wired to the tool motor. Rather than make a clip, I purchased one from Makita³ and a

This project offers longer operating time and quick charging.

cable was soldered to it. The clip was placed in the handle at the right location so when the battery was inserted it fit properly (there's a groove in the case). 100% silicone caulk was used to firmly hold it into place and "form" a new top to the case to replace missing plastic. When the

glue hardened, the result was a formed case to fit the battery, yet left it removable. Plastic stretch tape (not electrical insulation tape) was used to finish the case shape and protection. (Stretch tape is chemically bonded once stretched and has no sticky side) A 3-foot cable allows the battery to fit in a hip pocket, a brief case, on the table or the truck seat.

The result is shown in the photo.

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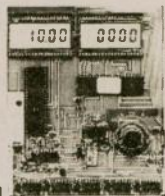
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Those handy with wood could make a hand-crafted case; or someone handy with plastic molds could make a case template. In two and one-half years there have been no problems, but plenty of enjoyment. I wired Anderson connectors to an adapter to fit the bottom of the HT case in place of a standard battery. The adapter was made by Handi-Tek⁴. It slides on and off quickly and is similar to Handi-Tek's regulator for HTs which I used to power an HT as a mobile radio. However, any HT bottom adapter will work as well if it is wired appropriately. The result is inexpensive replacement batteries readily available from the local store shelf. Cost is attractive. Three Makita batteries, totaling 4200 mAh capacity, cost about the same as one ICOM 600 mAh unit, but supplies seven times the capacity.

Makita later came out with a flashlight that uses the 9.6V battery. Unfortunately, the key-way is not polarized, so the battery can be inserted either way. However, if a plastic insert is placed in one of the two key-ways (using superglue) — so a battery can be inserted only in one way — then the case can access power to the HT. By adding the plastic insert and Anderson chassis type mounts on the case a handy

carrying case and flashlight would result. However, don't use the battery case without changing the keyways, as to do so can ruin the HT by placing the battery at the reverse polarization.

While this describes one manufacturer's battery, the principle applies to any make of battery powered tool NiCd. Thousands are in use throughout the country. Other brands, with their own battery shape and voltage, include Skil and Black & Decker. There is a DeWALT super battery charger⁵ that can charge Bosch, Aeg, Porta-Cable, Hitachi, Makita, Panasonic and Ryobi rechargeable batteries "in 18 minutes; and provide a trickle charge to insure 100% charge when the battery is needed."

Regarding NiCds, the Makita technical department had this to say: "As to loss of capacity, a stored NiCd will lose its charge at a rate of about 1% per day, but this will not shorten its life or capacity. Let a discharged battery cool to room temperature before recharging. A warm battery will signal the thermal cut-off switch to stop the charging process prematurely and will not get a full charge. Batteries, like people, perform best between 50-80°F. They should be stored and used within that range if possible. However, they can be stored at -40°C with no damage. Never

allow a battery to become fully discharged as this causes permanent damage. The proper time to recharge is when you notice a sharp drop in tool speed or power. Avoid recharging a battery already fully charged as there is the possibility of overcharging cells and reducing life span. The battery life is over when one or more cells develops an internal short or dries out. Shock treatment is only good for trashing batteries. There is no quicker way to destroy a battery than to totally discharge its cells. Although earlier designs suffered from a loss of storage capacity or "memory," technology has improved to where this problem is extremely rare. "A quality NiCd can last for many years and hundreds of rechargings."⁶ **WR**

1) Model 6093 with a locked rotor has a 40-50 amp maximum draw that occurs when a screw is unable to turn, as in metal. Even then there's much more power left in the battery.

2) Model 5090

3) Makita part #64909-9, \$4.40 in Feb 1991. A different connector is required for other brands.

4) Handi-Tek Regulators, PO Box 357, Pinon Hills, CA 92372. Makes a unique line of battery eliminators for HTs.

5) DeWALT Battery Supercharger, model DS9090, priced at \$179.99.

6) Extract from Makita Techline publications, Vol. 2, No. 4 and Vol. 2, No. 4a.

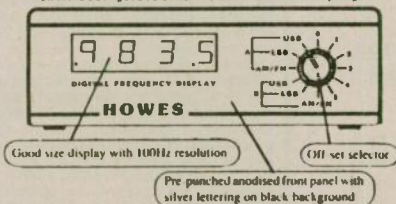
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To make the DFD4 even more suitable, we now offer the PMB4 Programmable Matrix as an optional kit. This enables you to switch between six different programmed offsets, so the DFD4 can be used with more than one radio, and to compensate for IF frequency differences when switching modes. Also new is the CA4M "hardware package." This contains a custom made case with pre-punched anodized aluminum front panel (see drawing above), plus switch, knob, BNC socket, nuts and bolts, etc. to enable you to achieve a high standard of finish for your project.

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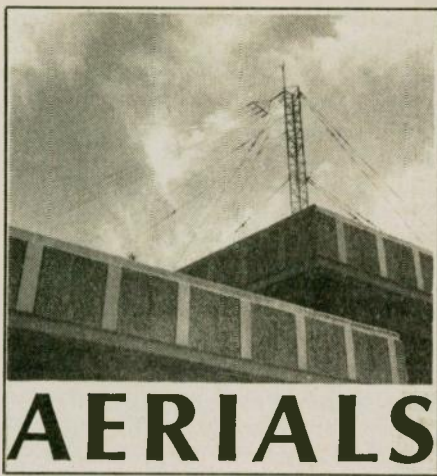
To build a transceiver with our kits is a simple modular, step by step approach. You can start with the receiver, and then add on the transmitter at a later date if you wish. Various accessory kits are available to increase the facilities, these range from a simple signal meter for the receiver to extra filtering and of course, digital readout. We offer a matching range of "hardware packs" (case, knobs, etc.) to enable your station to look as good as factory equipment! Whether you fancy a single band CW transceiver, or more complex dual band SSB/CW rig, all these kits are designed to be within the scope of the ordinary home constructor. The well thought out designs and the backing of professional RF test facilities mean you can build with confidence!

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AERIALS

KURT N. STERBA

The Lakeview Company, of Anderson, SC, makes a fine product and has a good reputation. The proof of that is that there's now yet even ANOTHER company attempting to (I believe) confuse the consumer. Lakeview, a family company with three generations presently working there, makes an antenna known for many years as the "HAM STICK." Another company has come out with a very similar looking product and is calling it the "HAMSTIK."

I hope there is a special place in Hades for those who pull stunts like that. For the second time I point out that the Lakeview will handle a kilowatt, the imitators only 300 watts. But, I fear that some sales will be siphoned off by those who lack originality. I just wonder how they can live with themselves. They disgust me.

I invite those who have a sense of decency and honor to call Lakeview at 803/226-6990 and ask for a catalog. Or, drop a note to 3620-9A Whitehall Rd., Anderson, SC 29624. I'm writing this on 22 November. Tomorrow I will have *Worldradio* order for me, from Lakeview, (They are the one in SOUTH Carolina, to help you keep the two companies separated in your mind) an antenna for my use in the ARRL 10 Meter Contest. (Let's support the good guys.)

It's just amazing. The people with doctorates in physics come up with one

set of dB gain figures and the Garage Louies come up with another — naturally higher.

There is one company now, I'll call them "Synergy Antennas" (that's because their whole is worth more than the parts, somehow) that is making absolutely goofus gain claims!

I remember a few years ago some other company went off the deep end. I mentioned it and wow, was a blistering letter sent to the *Worldradio* offices about me. But, strangely enough, and I think it's because that company must have received lots of letters from the not-so-dumb hams they never have repeated those particular claims.

Oh, my critics. A few years ago I got pages and pages from one of those who is a legend in his own mind. He really tore into me. This is the same guy who some years back was saying that slight height changes in the dipole would make huge differences in the signal. Now, I'm supposed to take him seriously????

Another "hot off the griddle" letter came from someone who, a bit before writing to me, was telling hams to make their feedline multiples of a half-wave long even if it meant coiling up a lot of excess. Hey, get real!

I have been accused of exaggerating — called to task about flippantly saying, in talking about a (claimed) antenna that gave 20dB gain "that would take a back yard the size of Rhode Island." Some people just take life too seriously. OK, so maybe I kid around a little too much for the real scientific types.

Then I thought, what would it take to get 20 dB gain on 160??? I gave the problem to my trusty assistant and he came up with: A 64-element Yagi; the boom would be 12,508 feet long. Hmmm, maybe I was right after all.

I was sent some pages from a Japanese hammag. Very interesting! A JA company is advertising a line of three-element HF monobanders. Claimed gain: 8.4 dBi. Let's see now. Take the 8.4 dBi, subtract the 2.1 isotropic gain and we have 6.3 dBd. I can live with that. But, in the very same magazine is an ad from our old friend the "Atlantic Antenna Company." They have a 3L trapped tri-bander for which is claimed: 8.0 dBd. Awwwww. Who can we believe? Well, the Yagi-Uda came from JA land so we figure that in the last 60 years they have got it down pat.

Amazing these catalogs. "A single wire, high performance quarter wave sloper." High performance. . . compared to what? No wire?

The "Atlantic Antenna Company" reports that with their antenna someone made DXCC in two days. Hmmm, didn't someone do it in 24 hours? What kind of antenna did they have? I'll get one of those instead.

And, doesn't that "pile-up breaking power" in reference to a vertical just crack you up?

Then there is the "Ruby" antenna. They are quick to tell us that they are the standard by which others are judged and that they have wide band performance and highest gain.

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*See review in Oct. 73, 1984 *Sept. 73, 1985 March 73, 1986
CQ, Dec. 1988 Mar. W.R. 91

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This gaijin doesn't believe all this gain game stuff. Here's an antenna for 50 MHz, a smidge over one-wavelength long with 6dB gain. Six dB over what, pray tell?

"Haley's Meteor" antennas has mobile verticals that give you "a low angle of radiation, directly to the horizon." I'd sure like to know more about that one.

The before mentioned "Ruby" company has a product 62-inches long that gives "5.2" of Gain/dB. Let's see now, a half-wave at 2M is about 39 inches, times two is 78 inches. Oh, well.

I sure could use an explanation on this one. I see a trapped tri-bander (20/15/10) on a 14 ft. boom that promises 8dBd. Same company makes a mono-bander on a 20 ft. boom that promises 8dBd. Am I missing something here?

And really now, isn't that claim of 10.2 dBd for a 4L Yagi just a bit much?

Then we come to "Pool Hall" antennas promising "reliability and performance beyond your expectations!" Gee, I dunno. At almost 200 bucks for a 2M vertical I may have some pretty high expectations.

What a puzzlement. It says the antenna length is 7'6" and the gain is 6dBd. That is, six dB over a dipole. Well, a dipole at 144 MHz is 3'3". Double that is 6'6." How does one more foot added on to that give 6dB over a dipole???????????

The claim for another of their verticals is "an extremely low angle of radiation" Hmmm, just how low is "extremely low" in degrees???

And aren't you glad that their ten-foot antenna is "totally self supporting?" I sure wouldn't want a partially-self supporting one, would you? Boy, that be must be some tough stuff that can stand up a whole ten-feet without guying.

Faxed to me was a magazine article about dipoles that, because of some wrapped around coax loops and capacity hats, had a radiation angle of "from zero to five degrees." Lil says the whole thing is a Kafka nightmare, whatever that means

Now, in the December issue of *Worldradio* (page 59) was an article about the simple end-fed wire. Great minds think alike. I've been working on something just like that. For the "I can't put up an antenna" crowd. Here at the Radio Ranch I put up some posts to simulate a fence. Ran a wire from the station, out the window, and along my simulated fence. Bent the wire around here and there. Total length was about 130 feet. Ran a counterpoise under it, same length.

Works great! To test it I went in that California QSO Party. Worked lots of Californians on every band. Surprised

so many of them were on the air. I thought that all Californians did was ride around in convertibles with bleached blondes.

Anyway, those with small children or big animals may wish to use insulated wire for the antenna and counterpoise. I just gathered up a lot of old pieces of hookup wire and spliced them together.

Before I forget. It was brought to my attention that many think that *AERIALS II* is the second edition of *AERIALS*. NO, it is an entirely different book altogether. Buy it. There is a rumor that it will be nominated for the Pulitzer Prize for Lofty Literature. Please pass the rumor on. (I started it.) I need your help in propagating that rumor for you see the soil conductivity here in Clint, TX isn't too good.

Back to short-longwires. You may find different methods with different tuners. On some you will have to run a jumper wire from the single-wire binding post to one of the balanced-wire binding posts. On another it may not be necessary at all. Or you may find that it may be required on the lower bands and not on the higher.

To answer a question. If on all the bands you are seeing, say, 100 watts on your wattmeter but on one band you

see 125 watts, here's what's happening. You are reading the forward and reflected power combined. Got to do a bit more work on the situation there.

When some manufacturer tells you that his antennas are "so efficient, powerful and successful that they defy comparison" please try to be polite and don't yawn in his face.

Then another company runs a testimonial saying "I am hearing things I never heard before." Ah, so. Just what was quoted station running before? One has to go an awfully long way to go from no copy at all to solid copy and "busting substantial pileups." What height were the previous and present antennas?

Doesn't the manufacturer know that such sordid promotion efforts will repel those who can count up to 20 dB without having to take off their gloves and shoes?

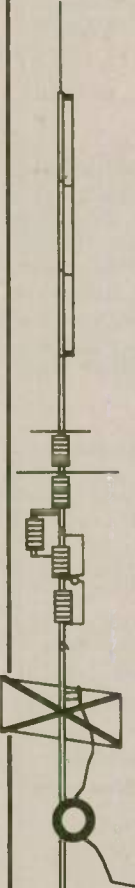
Odd, the really solid companies don't make these imaginative claims. I've heard many good things about that M² line of antennas but never have I seen them lurch off into the flights of fancy that plague so many others.

(Many have asked where Kurt's factory is. The answer is Bletchley Industrial Park.)

WR

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NEW! Model HF9V-X (shown to the left) for 80/75, 40, 30, 20, 17, 15, 12, 10 and 6 meters.

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HAMFESTS



California

THE LIVERMORE ARK is sponsoring an Amateur Radio/Electronic/Computer Swap Meet on 6 February from 7 a.m. to 12 noon at Las Positas College. Features include refreshments, free parking and covered spaces in the event of rain. Admission is free. Sellers pay \$10 space fee. Talk-in on 147.045(+) from the west and 145.350(-) PL 100Hz from the east. Contact Noel Anklam, KC6QAK, at 510/447-3857 eves. or leave message days at 510/783-2803.

Colorado

The Aurora Repeater Association will hold its 12 annual swapfest on 20 February from 8:30 a.m. to 2:00 p.m. at the Adams County Fairgrounds. For additional information contact Judi, WØHNP at 303/450-6910 or Jan, KA7TYO at 303/699-1944 or write to the Aurora Repeater Association, P.O. Box 39666, Denver, CO 80239.

Florida

The ORLANDO ARC is sponsoring the 1994 Orlando HamCation and Computer Show and ARRL Southeast Division convention 18-20 February at the Central Florida Fairgrounds, Orlando. Features include indoor swap shop, tailgating, forums, awards, fox hunt, exhibitors, ladies programs, free parking and VE exams (pre-registered). Admission is \$6 in advance, \$8 after 31 January. Talk-in on 146.76(-). For information contact the Orlando HamCation, P.O. Box 547811, Orlando, FL 32854-7811; 407/657-9052.

The MARTIN COUNTY AMATEUR RADIO ASSOCIATION is sponsoring a hamfest on 26 February from 8:00 a.m. to 3:00 p.m. at Langford Park in Jensen Beach. Features include tailgate space available at no charge but bring your own tables, snack bar, food and drink available, VE testing, register at 9 a.m., testing at 9:30 a.m. Free admission. Contact the Martin County Amateur Radio Association, P.O. Box 1901, Stuart, FL 33495 or Bob Hess, KA3EDL at 407/546-4353.

Georgia

The DALTON AMATEUR RADIO CLUB, INC. will sponsor a hamfest on 26 February beginning at 9:00 a.m. at the North Georgia Fairgrounds. Features include hourly door prizes, many dealers,

breakfast and lunch will be available. Talk-in on 145.230(-) MHz. For further information contact Harold Jones, N4OTC, at 706/673-2291 (after 6 p.m.) or James Jordan, K4FLG, 706/278-0630 (after 6 p.m.) or Richard Goswick, KB4MJW, 706/226-2583 (daytime); 508/481-4988 before 9 p.m. or write to Dalton ARC, Inc., P.O. Box 143, Dalton, GA 30722-0143.

Massachusetts

The ALGONQUIN ARC flea market will be held on 19 February beginning at 10:00 a.m. at the Marlborough Middle School. Admission is \$2. Dealer space is \$10 for tables and spaces, as available. For further information contact Ann Weldon, KA1PON, P.O. Box 258, Marlborough, MA 01752; 508/481-4988 before 9 p.m.

Michigan

The Cherryland ARC will sponsor their hamfest on 19 February from 8 a.m. to 1 p.m. at the Immaculate Conception School. Features include dealers, refreshments and door prizes. Admission is \$4. Vendor tables are \$5, set-up at 7 a.m. For more information contact Ken Musson, W8QKP, 9680 Peninsula Dr., Traverse City, MI 49684; 616/947-1372.

The LIVONIA ARC presents its 24th annual Swap'n Shop on 27 February from 8:00 a.m. to 4:00 p.m. at the Dearborn Civic Center. VE exams will be given during the swap. Talk-in on 144.35(-) and 146.52 simplex. For more information, send 4x9 SASE to Neil Coffin, WA8GWL, c/o Livonia ARC, P.O. Box 2111, Livonia, MI 48151.

Minnesota

13th Annual Midwinter Madness at National Sports Center, Blaine, 1700 105th Ave between 65 & 35W. Exposition on 12 February from 7:00 a.m. to 2:00 p.m. Admission \$7 at door. Features include computers, software, hardware, components, peripherals, amateur radio equipment. Over 30 commercial vendors; over 250 hobby market tables

selling used equipment. Info: RARC, P.O. Box 22613, Robbinsdale, MN 55422 or tel. 612/537-1722.

Ohio

The MANSFIELD MID WINTER HAMFEST/COMPUTER SHOW will be held on 13 February beginning at 7:00 a.m. at the Richland County Fairgrounds. Features include prizes and over 400 table flea market in three large heated buildings. Admission is \$4 in advance and \$5 at the door. Vendor tables are \$9 in advance and \$12 at the door (if available). Talk-in on 146.94(-). Advance ticket or table orders must be received and paid by 1 February. Contact Pat, N8YOB, 63 N. Illinois Ave., Mansfield, OH 44905; 419/589-7133, after 4 p.m. E.S.T.

The ARRL Great Lakes Division Convention will be held 26-27 February from 8:30 a.m. to 5 p.m. at the Cincinnati Gardens Exhibition Center. Features include free parking, all indoor exhibits, forums and prizes. Admission is \$6 in advance, \$8 at the door. Vendor rates range between \$18 plus admission to \$55 plus admission. Vendor set-up starts Friday afternoon. For more information, contact Stan Cohen, WD8QDQ, 2301 Royal Oak Ct., Cincinnati, OH 45237; 513/531-1011.

Oregon

The SALEM and OREGON COAST EMERGENCY REPEATER ASSOCIATIONS will sponsor the 1994 Ham Fair on 19 February beginning at 9 a.m. at the Polk County Fairgrounds. Features include flea market, exhibits and commercial dealers. Admission is \$5 in advance or \$6 at the door. Talk-in on 146.86(-). For more information contact the Salem Repeater Association, P.O. Box 784, Salem, OR 97308.

Tennessee

The Shriners of the KERBELA AMATEUR RADIO SERVICE will sponsor a hamfest on 5 February from 8 a.m. to 4 p.m. at the Kerbela Shrine Temple in Knoxville. Features include VE testing, pre-register until 9 a.m., code testing at 10 a.m. and written test at 11 a.m. Admission is \$2. Tables are \$8 plus admission of \$2 and tailgating is \$3 plus admission of \$2. Talk-in on 146.94(-). Contact Paul Baird, KY4A, 1500 Coulter Shoals Circle, Lenoir City, TN 37771; 615/986-9562.

Vermont

The NORTHERN VT/NY WINTER HAMFEST COMMITTEE is holding a hamfest on 26 February from 8 a.m. to 5 p.m. at Milton High School. Features include indoor flea market, forums, demonstrations, auction and VE exams at 9 a.m. and 2 p.m. Admission is \$3. Tables are free, first come, first served. Talk-in on 145.47(-) or 146.85(+ or -). For more information, contact Joe, N1DMP at 802/893-6458.

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CONTESTS

1994 Vermont QSO Party

4-5 February, 1994 EST 0000 UTC Saturday until 0500 UTC Sunday (29 hours).

5-6 February, 1994 7:00 P.M. Friday until Midnight Saturday, EST.

The 1994 Vermont QSO Party will take place during the first weekend of February 1994. All licensed Amateur Radio Operators are invited to participate. The Central Vermont Amateur Radio Club (W1BD) and any other legitimate Vermont Amateur Radio Club will be multipliers for this event.

Suggested frequencies: Phone: 160 — 10 Meters first 25 kHz up from the beginning of General portion of each band and entire Novice 10 meter phone band. CW: 40 kHz up from bottom edge of each band and 20 kHz up from bottom of Novice portions. VHF: 50.200, 144.200 and 146.69 MHz. Other modes in the customary section of the respective band. Repeater contacts do not count.

Exchange: Vermont Stations send RS(T) and County. CW two-letter designators as follows — AD, BN, CL, CH, ES, FR, GI, LM, OG, OL, RT, WA, WM and WR. Other stations send RS(T), state, province or DXCC country.

Scoring: Vermont stations count 1 point per phone contact, 2 points for CW, RTTY or other digital mode. Multiply by number of Vermont counties, states/provinces/countries. W1BD and other VT Club Stations. Multipliers count only once regardless of the number of bands they might be worked. Other stations count 1 point per Vermont phone QSO, 2 points per Vermont CW, RTTY, etc. QSO. Multiply by number of Vermont counties plus W1BD, and any other legitimate VT Amateur Radio Club Station. A station may be worked up to four times per band (e.g. Phone, CW, RTTY, other).

Awards: Vermont stations submitting a log will receive a Vermont QSO Party Certificate. Plaques will be awarded to the three highest scoring

Vermont stations. Other stations receive a certificate for highest scoring station in each state, province and country.

Send logs with name, address, call and class (Single Op, Multi-Op, Rover [mobile in VT counties], Club) post-marked no later than March 1, 1994 to: Central Vermont Amateur Radio Club, Vermont QSO Party, P.O. Box 674, Montpelier, VT 05602.

37th Annual QCWA QSO Party

12 February at 0001 UTC and ending 13 February at 2400 UTC the CW section of the QSO party will be held. On 12 March at 0001 UTC and ending 13 March at 2400 UTC the phone section on the QSO party will be held. The same rules apply for both parties.

Rules: Contact with a QCWA member will count as a single point. Every new chapter worked will count as only one multiplier no matter how many bands it is worked. "AL Contacts (At Large) will count as a multiplier of 1 for each state, country or province. Same rules as if they were a chapter. Exchanges: will include the following: 1) QSO number sent and received, 2) Operator's name, 3) Chapter number or use of "AL where needed, frequency: CW; 30kHz from each end of bands. Phone; 30kHz from low end of general band. WARC frequencies will not be used.

Scoring: The total number of contacts times total multipliers will be final score. Please use separate logs for each party and check thoroughly. All logs must be submitted before April 8, 1994. After that date, logs will not be counted. Send logs to: Bob Reed, WB2DIN, 597 Brewers Bridge Road, Jackson, NJ 08527.

YL-OM Contests

SSB: Saturday, 12 February, 1994 at 1400 UTC to Monday, 14 February, 1994 at 0200 UTC.

CW: Saturday, 26 February, 1994 at 1400 UTC to Monday, 28 February, 1994 at 0200 UTC.

You may operate only 24 hours of the 36 hour contest period. Operating

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--	---

breaks-must be indicated in the logs.

Eligibility: All licensed men and women operators worldwide are invited to participate.

Procedure: OMs call "CQ-YL;" YLs call "CQ-OM."

Operation: All bands may be used. No crossband, net or repeater contacts. On CW or SSB only one contact is permitted with each station on each band.

Exchange: Station calls, QSO numbers, RS(T)s, ARRL section/VE province/country. Entries in log must show time, band, date and transmitter power.

Scoring: (A) Phone and CW will be scored as separate contests. Submit separate logs for each contest. (B) Score each band separately. One (1) point is earned for each station worked on each band. YLs count only OMs; OMs count only YLs. Add together the QSO points earned on each band. (C) Multiply the number of QSO points by the total number of different ARRL sections/VE provinces/countries worked. (D) Each contestant using power output (AT ALL TIMES) of: 100 watts or less on CW, or 200 watts PEP or less on SSB, multiply the score claimed in (C) by: 1.5, the low power multiplier. Those not using low power are not entitled to a power multiplier and are limited to maximum power outputs of 750 watts on CW and 1500 watts PEP on SSB.

Logs: All logs must show your ARRL section/VE province/country to qualify for awards. For each QSO, logs must show: call of station worked, QSO number sent and received, RS(T) sent and received, ARRL/VE province/country of station worked, time, band, date. Logs must also state the power output and the operating breaks taken. If you have 200 or more QSOs submit a sepa-

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rate log for each band and submit a dupe sheet. Remember to file separate logs for each contest. Logs must show claimed score.

Awards: 1st place phone YL cup, OM cup; 1st place CW YL cup, OM cup. The second and third place YL and OM winners in each contest will receive certificates. The winner of the phone contest cup is eligible to win the CW cup. Certificates will be awarded to the high YL and OM phone and YL and OM CW winners of each US and VE call district and country provided there are at least ten valid contacts on the log.

Suggested Frequencies: CW 80 Meters: 3.540-3.725 MHz 40 Meters: 7.040-7.070 MHz 20 Meters: 14.040-14.070 MHz 15 Meters: 21.120-21.150 MHz 10 Meters: 28.150-28.200 MHz
SSB: 80 Meters: 3.940-3.970 MHz 40 Meters: 7.240-7.270 MHz 20 Meters: 14.175-14.280 MHz 15 Meters: 21.380-21.410 MHz 10 Meters: 28.300-28.610 MHz

NOTE: Since band allocations in other countries are often different than in the USA, NA-OPs should look for DXOPs in other parts of the bands.

All logs must be postmarked no later than 30 days after contest ends.

Send all logs to: Carla Watson, WO6X, 473 Palo Verde Dr., Sunnyvale, CA 94086.

1994 New Hampshire QSO Party

The 1994 New Hampshire QSO Party sponsored by the NH Amateur Radio Association (NHARA) will take place on 12 February from 1900 UTC to 0700 UTC 13 February and from 1400 UTC 13 February to 0200 UTC 14 February. This event is open to all license classes. Technicians w/o HF privileges, are invited to join in the fun on simplex above 50 MHz and on the various modes found there.

Exchange: signal report and QTH, county for NH stations; state/VE province/DXCC country for non-NH stations.

Scoring: All stations count one point per phone QSO (AM, SSB, FM), two points per digital QSO (RTTY, CW, PACKET). Contact with the following designated NHARA Contest Club stations are 5 points per phone QSO and 10 points per digital QSO: W1ET, WB1CAG, N0CUH, WB1HBB, K1RD, AA1EX, W1GUA WB1ASL, WW1G,

K1BKE, N1LT, KD1GJ, and W1OC. Include the bonus points for Club station contacts in the total QSO point score before the multiplier. All contacts, including Bonus Point NHARA Contest Club Stations, may be made on a once per band per mode basis. NHARA Contest Club stations are allowed to operate two transmitters on a single band — one for phone and one for digital. Multipliers: NH stations count number of NH counties, states, VE provinces, DXCC countries. Non-New Hampshire stations count number of NH counties worked only.

Suggested frequencies: CW — 1.810, 3.535, 7.035, 14.035, 21.035, 28.035. SSB — 1.875, 3.935, 7.235, 14.280, 21.380, 28.320, 50.115, 144.205. FM — 29.610, 52.540, 146.550, 223.500, 446.000, 902.100, 1296.100. There will be a 75 meter phone finale Sunday, on 3.950 +/- QRM.

Logs must be postmarked by 31 March 1994. Include an SASE when requesting NH QSO Party logging software (NH stations), summary sheets, contest rules and with logs and comments for contest results, to G.E.A.R.S., Conrad Ekstrom, WB1GXM, P.O. Box 1076, Claremont, NH USA 03743-1076.

WR

Special Events

Chinese New Year

The QCARC will operate NW7H 1500Z-2400Z 12-13 February, 1994 to celebrate the Chinese New Year in the only city in the Rocky Mountains observing this holiday. Phone on 28.395, 24.945, 21.325, 18.140, 14.245. For certificate send QSL with 9x12 SASE to Vranish, P.O. Box 2048, Evanston, WY 82931-2048.

Sled Dog Championship

The Hiawatha ARA will operate N8GBA 1700Z, 18 February to 1700Z, 20 February, to honor the Upper Peninsula 200 Sled Dog Championship. The lower end of the 10, 15, 20 and 40 meter bands will be used. For a certifi-

cate, send an SASE (large) with two stamps for an unfolded certificate to Richard Schwenke, N8GBA, 21 Smith Lane, Marquette, MI 49855.

George Washington's birthday celebration

The Mount Vernon ARC of Virginia will operate N4BV during the hours of 1600Z-2000Z on 19-20 February to commemorate George Washington's birthday. Operations will take place from George Washington's home at Mount Vernon, VA and will be in the lower General 80M-15M subbands, and on

the Novice 10M subband. For a beautiful commemorative certificate, send QSL and a 9x10 SASE to Steve Schneider, WB4EEA, 8602 Cushman Place, Alexandria, VA 22308.

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1994/95

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Repeater maps

FBenterprises wishes to announce an update of our popular Repeater Maps! We are now offering the 1994/95 edition of our Repeater Maps. The maps are available for all 50 U.S. States, as well as all Canadian Provinces, Central American countries, and islands in the Caribbean. The map for California is split into Northern and Southern California, so California residents should specify which part of the state they need.

The maps show two meter repeaters in full color on the front of the card, and the bands between 220 and 1.2 GHz are shown on the back. The newly updated cards now include information on which repeaters offer

autopatch, and now also include information on CTCSS tones for those repeaters which require them. The cards are 5 1/2" by 8 1/2", and are laminated in plastic to keep them free from spills or tears. The maps are very handy for travel, and much easier to use than a book.

The maps retail for \$3.95. Most orders are shipped the same day they are received. The maps are sold direct by mail order, and also through dealers. Dealer inquiries are invited. FBenterprises can be contacted by phone or FAX at 800/377-2339, or by

mail at 23801 NW 1st Ave., Ridgefield, WA 98642-8830. Catalogs are available by sending \$2.00 to the above address. The \$2.00 charge for catalogs is refunded with purchase.

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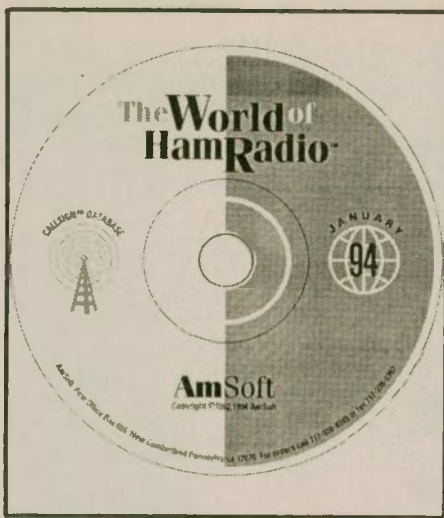
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AmSoft has released the January 1994 edition of "The World of Ham Radio" CD-ROM. New for 1994 is The FCC Amateur Radio license database. CALLSIGN will search over 700,000 new and previous call signs, and find any licensed operator in just seconds. Users can view CALLSIGN on-line or save to disk with simple on-screen commands, on-line help files, and instant information files from anywhere within the CD-ROM using CDVIEW without the need for any of your valuable hard-drive space.

Over 7,000 program files cover many of the latest software releases for Amateur Radio. Subjects include antennas, CAT, CW, engineering, exams, formulas, logging programs, MUF, multimode, controllers, packet, RTTY, satellites, SWL, weather tracking programs, plus many more categories, including Windows ham software. Over 1,000 radio modification files, plus thousands of short wave frequencies are readable on line.

AmSoft has placed all of these programs onto one ISO-9660 IBM-compatible CD-ROM for a retail cost of \$40.00 plus shipping (\$3 U.S.A., \$5 foreign). Charge to your VISA or MasterCard. Contact AmSoft, P.O. Box 666, New Cumberland, PA 17070-0666. To order, call Pete at 717/938-8249, or fax 717/938-6767.



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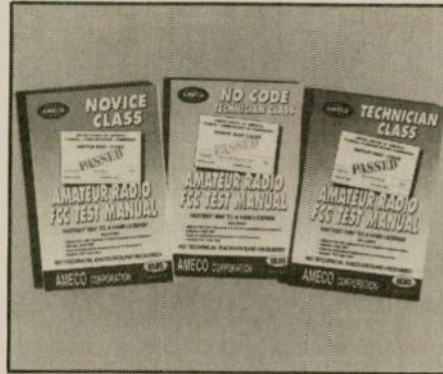
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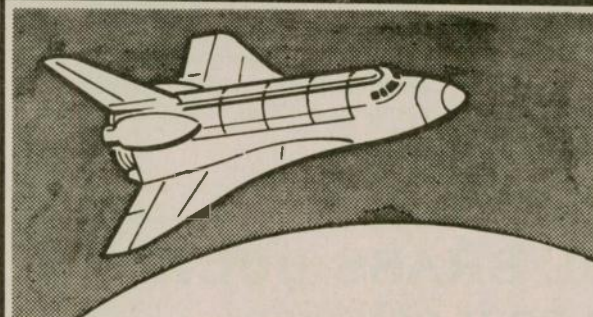
Ameco's books are authored by Mr. Martin Schwartz, who has over 40 years of experience writing amateur radio license instruction materials. Mr. Schwartz's books give students seeking their first ham ticket, or experienced operators desiring to upgrade to the next license class, a tremendous advantage in preparation for the FCC exams.

Ameco's License Manuals are available at local ham radio equipment dealers nationwide, or contact Ameco Corporation directly at 224 East Second Street, Mineola, NY 11501; Phone 516/741-5030; or fax 516/741-5031. WR

Thought for today

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VE exam schedules

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

Worldradio, 2120 28th St., Sacramento, CA 95818.

Please mark the envelope "VE Exams."

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

p/r=pre-register

w/i=walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
Alaska							
3/12/94	Anchorage	Jim, KL7CC 907/338-0662	p/r; w/i	3/23/94	Glen Burnie	Jerry, NU3D 410/761-1423	w/i OK p/r pref;
Arizona				Massachusetts			
3/1/94	Tucson	Micki, AA7RR 602/883-8305, call for info, testing done as requested	p/r	3/12/94	Braintree	Phil, K1UPY617/326-6446	
3/12/94	Tucson	Joe, K7OPX 602/886-7217	w/i	New Jersey			
California				3/9/94	Fort Monmouth	MARS 908/532-5354	w/i
3/5/94	Novato	415/883-9789	w/i OK	3/12/94	Cranford	24-hr. hotline: 201/377-4790	
3/6/94	Berkeley	Gary, N6YBD 510/530-0544	w/i only	3/17/94	Bellmawr	WA2VQG 609/933-1500	w/i
3/12/94	Adelanto	619/244-1396 or 619/247-5433	w/i only	3/19/94	Bayonne	Bob, N2IYY 201/435-5953	w/i OK
3/12/94	Jackson	WZ6Y 209/295-7947	w/i	3/19/94	Pennington	AA2F 609/737-1723	p/r pref; w/i OK
3/12/94	Modesto	W6KK 209/883-2968	w/i	3/26/94	Hamburg	Norm, KD2KK 716/824-1148	p/r only
3/19/94	Sacramento	Lyle, AA6DJ 916/483-3293	w/i	New York			
3/12/94	Santa Barbara	Darryl, KP6DI	w/i	3/5/94	North Tonawanda	Vern, AA2AC 716/634-5276	p/r only
3/12/94	San Pedro	N6DYZ 310/325-2965	p/r pref; w/i ltd.	3/6/94	Yonkers	AC2V 914/237-5589	w/i OK
3/12/94	Sunnyvale	408/255-9000 24-hr.		3/8/94	Hicksville	Bob, W21LP 516/499-2214	w/i
3/19/94	Redwood City	Joe, KB6OWG	w/i	3/16/94	Lancaster	Chuck, WD2AIK 716/937-3592	p/r only
3/27/94	Fairfield	Jerry, AA6NO 916/662-0801	w/i OK	North Carolina			
3/26/94	Petaluma	Dale, 707/762-9414	w/i OK	3/6/94	Hendersonville	W2YTO 704/891-4359	p/r pref; w/i OK
3/26/94	Vacaville/Elmira	Barbara, KM6AC 707/429-4878	w/i only	3/29/94	Jacksonville	Dick, KD4YOT 910/455-8834	w/i
3/27/94	Sunnyvale	408/255-9000 24-hr.	w/i only	3/19/94	Morehead City	Art, KC4QD	p/r pref; w/i ltd.
3/31/94	Long Beach	W6LRF 714/847-6370; N6LUH 310/592-1713	w/i OK	Ohio			
Colorado				3/5/94	Cincinnati	Herb, WA8PBW 513/ 891-7556	w/i OK
3/12/94	Denver	Glenn, W01JR 303/360-7293, 24-hr. message	w/i OK	3/1/94	Fremont	Greg, KJ6EP 510/791-6818	
3/19/94	Westminster	Phil, NP2X 303/421-2795	p/r or w/i	Oregon			
Connecticut				3/9/94	Roseburg	KB7CMB 503/672-5997 or AA7GD 503/672-7564	w/i OK
3/6/94	Milford	NB1M 203/933-5125; WA1YQE 203/874-1014	w/i	Pennsylvania			
3/12/94	Hampton	Dick, WE1Y 203/423-6420	p/r pref.	3/5/94	Erie	W3CG 814/665-9124	w/i OK
3/23/94	Shelton	WJ1T203/283-1044	w/i pref.	Rhode Island			
Florida				3/10/94	Providence	NN1U401/231-9156 or 401/454-6848	w/i OK
3/5/94	Orlando	Lou, AC4GB 407/898-0429	p/r pref	3/26/94	Slatersville	Bob, W1YRC 401/333-2129	w/i OK
3/19/94	Melbourne	WB91VR 407/724-6183	w/i OK	South Dakota			
Idaho				3/12/94	Rapid City	NU0F 605/348-6564	p/r 30 days prior
3/12/94	Boise	W7JMH 208/343-9153	w/i	Texas			
Illinois				3/8/94	Houston	ND5F 713/464-9044	p/r pref; w/i OK
3/12/94	Oak Forest	David, NF9N 708/448-9432	w/i	3/12/94	Houston	Jim, KB5AWM 713/488-4426	w/i only
3/19/94	Bolingbrook	Ralph, WB9RGZ 708/964-3417	w/i	3/12/94	Midland	KT5G 915/694-9450	w/i OK
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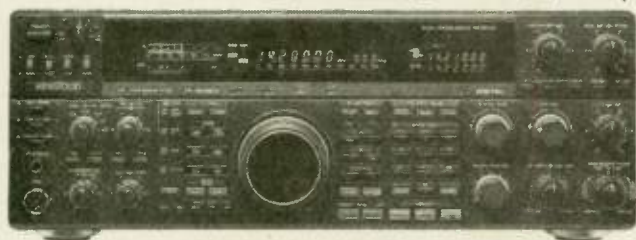
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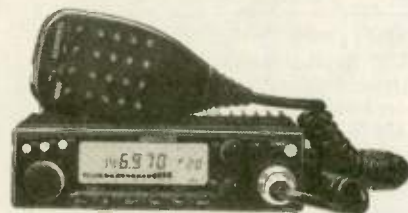
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Lloyd, W6KG, and Iris Colvin, W6QL, at their station in Richmond, CA. Just as we were going to press, we received notice that Lloyd had died in Istanbul, Turkey on 14 December while the two were on yet another DXpedition. We will print a more complete story in our next edition.



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