Worldradio

Year 13, Issue 1

July 1983 • 80¢

Coalingans rely on hams

Amateur Radio operators played a vital role in disaster relief efforts following the Coalinga, California earthquake of 2 May, which damaged or destroyed more than 2,000 homes in the community of 7,300 people.

Amateur communications assistance facilitated the flow of medical assistance and supplies, and provided the only immediate link to the outside world, according to Mary Lou Taylor, Red Cross disaster relief director.

Amateurs also answered more than 100 welfare inquiries from worried families of Coalinga residents, assisting Red Cross chapters throughout the country.

Within five minutes of the 6.5 quake, Coalinga resident Jack Ebury, W6IYY, a trustee of the Sequoia Pacific Chapter Telephone Pioneers Amateur Radio repeater, had checked on his family and was headed for the hospital to help. He consulted with directors there, witnessed the damage, and radioed for a helicopter and ambulance, making contact with a Fresno amateur who is a doctor.

After advising members of the Kings Amateur Radio Club, Jack radioed Lyle Melton, KC7GT, to get another helicopter from Lemoore Naval Air Station. He then contacted Ted Carlson, KD6YQ — located in Avenal — to check with the hospital there, which reported minimal damage. Coalinga Hospital officials then arranged for the injured to be transferred to Avenal. *(please turn to page 4)*

Standing in front of the Fresno ARC mobile communications van are (left to right): Tom Akin, KU6A; Allen Ross, W6JPS; and Biggie Burkholder, N6GPA. ***(Fresno Bee photo)***

Van transports Fresno club hams

Robert Hardwick, KB6DG

About one hour after the earthquake hit Coalinga, our club van was rolling from Fresno toward the disaster scene with several hams aboard. The van was used in Coalinga for 24 hours. Allen Ross, W6JPS, took his motor home to Coalinga for one night.

We are not sure we have an accurate, complete list, but here are people who helped out in one way or another, that we know of.

In Coalinga: Zip Fraley, W6SMS; Allen W6JPS; Frank Maul, W6ZYR; Harry Hill, KA6JKS; Ed Kraft, KA6ACE; Al KF6IH; Tom Akin, KU6A; Biggie Burkholder, N6GPA; and Glenn N6HEW.

Those who worked with the Red Cross: Lucile Crown, WB6TSH; Harold WB6OYR; Charlie Wright; N6DL; Cleve Potter, WB6RGU; Dave N6HWO; Howard Hill, KA6SDH; Robert Hardwick, KB6DG; Harry Billings, WA6UOR; George KF6IK; John Morrice, WB6ITM; and Bill Stenger, K6QOG.

On standby and backup were: Pat Fennacy, W6YEP; Frank Wukits, K6BKZ; and Lee Rhoy, WA6YAB. Doug Johnson, WA6YYY, worked as liaison with Army MARS. He also took his motor home to Coalinga and set up a MARS station for a day and a night.

— Fresno ARC, CA □

PCB warning

Katherine Hevner, WB8TDA

Thanks to an alert from some Atlanta, Georgia amateurs, the Center for Disease Control (CDC) is conducting a small-scale nationwide investigation in Boston and other cities, into potential dangers associated with dummy load antennas manufactured prior to the late '70s.

According to CDC Public Health Advisor David Forney, the potential danger from the dummy loads could come from a type of transformer oil containing polychloronated biphenyl (PCB), a substance known to cause liver damage in humans and animals. Fifteen samples of transformer oil will be taken from dummy load antennas in Houston, Atlanta, St. Louis, Denver, Columbus (Ohio) and Boston. Definitive findings from this study were expected by late May or ealy June.

Although amateurs should not panic, Forney urges those concerned to take precautionary measures, such as using dummy load antennas in well-ventilated rooms, and preventing the possible PCB-contaminated transformer oil from vaporizing.

— New England Report □

NASA okays 'ham in space' proposal

Victor C. Clark, W4KFC, ARRL president, and Dr. Thomas A. Clark, W3IWI, president of the Radio Amateur Satellite Corporation (AMSAT), recently announced acceptance by the National Aeronautics and Space Administration (NASA) of a proposal submitted by their two organizations to include an Amateur Radio station aboard an upcoming shuttle mission. They said that in giving its go-ahead, NASA's Associate Administrator for Manned Space Flight, Gen. James Abrahamson, has designated the STS-9/Spacelab flight to be flown this fall, as the mission on which the Amateur Radio equipment will be carried.

The space agency's approval is based on a number of conditions which both ARRL and AMSAT find entirely acceptable. Among them are that the use of the Amateur Radio equipment aboard the shuttle shall not interfere with its planned mission. Operations will be carried out on a non-interference basis during the shuttle crew's "free time." It is also understood that a special Amateur Radio transmitter and receiver will be furnished by the Amateur Radio community at no cost to NASA.

The primary mission of STS-9 is to carry the joint U.S.-European Spacelab aloft in the shuttle's cargo bay. This particular mission was selected for the amateur operation because it includes in its crew Dr. Owen Garriott, W5LFL, who will serve as the operator of the spaceborne Amateur Radio station.

Dr. Garriott has been an active radio amateur for many years and is eagerly awaiting the chance to pursue his hobby from space. He commented that Amateur Radio has been important in developing his own professional skills and those of *(please turn to page 7)*

Field Day

Look for N6WR, the **Worldradio** station, on Field Day. A special QSL card will be available for those requesting one.

AB0I wins court battle over towers

On 3 March, the 7th Judicial Court of Missouri sustained John Spencer, AB0I's right to erect Amateur Radio towers on his property and declared Clay County's Zoning Ordinance requiring Special Use Permits for towers UNCONSTITUTIONAL.

In addition, the Court issued a permanent injunction against Clay County from any further action concerning his towers.

Even though it took four years of legal battles and lots of money, John's right to erect radio towers was vindicated by the Missouri State Court. The decision will certainly set a precedent for other tower cases around the country. Listed below is a summary of the 13-page decision the Court handed down.

The Clay County Zoning Ordinance was declared unconstitutional because:

1) The FCC regulates Amateur Radio and its rules and regulations on towers preempt and preclude local ordinances.

2) Denial of a permit for AB0I's towers was a violation of John's constitutional rights under the 1st and 14th Amendments to the Constitution.

3) The ordinance unduly limited AB0I's ability to communicate and therefore violated John's freedom of speech.

4) The ordinance lacked standard height requirements and showed no correlation between height, safety and esthetics.

5) The Ordinance did not provide equal protection for commercial and private tower owners.

6) Clay County had selectively enforced the ordinance on AB0I.

7) The wording of the ordinance was vague, ambiguous, and difficult for a "reasonable" person to understand.

Needless to say, the Court decision was a stunning victory for AB0I and amateurs in general! Hopefully, more decisions around the country will be as positive as this in other similar cases concerning towers of amateurs.

— South Jersey Radio Assn., NJ □

DU ham operates from Spratly

Peter Onnigian, W6QEU

Although the March DXpedition by four German amateurs ended in the tragic death of two of them, one Filipino amateur got to this group of islands lying in the southern portion of the South China Sea, last May.

The Spratlys are claimed by Viet-Nam, Sarawak, The People's Republic of China and The Philippines. They are uninhabited, and consist of hundreds of small but beautiful tropical islands.

Chito Kintanar, DU1CK, operated as 1S1CK (Zone 26), 6-10 May 1983, from Manita Cay, making nearly 2,000 con- *(please turn to page 17)*

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July 1983 Vol. 13, No. 1

Worldradio (USPS 947000) is an international conversation. You are invited to take part. Our newspaper is written by its readers.

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 into this avocation.

Our readers are participants — an alliance of active radio amateurs who are concerned with reality, who use radio as a communications tool. We ask your cooperation in helping us develop the skill, quality and full potential of Amateur Radio.

We are positively-oriented. We print all the news of this great activity, and particularly desire an input of stories dealing with the dramatic, the personal and humanitarian uses of Amateur Radio.

Worldradio needs your help to reflect the invaluable service of Amateur Radio.

Through **Worldradio** you can make contact with other individuals who share your interests.

Worldradio is an independent newspaper. It is not affiliated with any other firm, group or organization. Its pages are open to all. Permission is hereby automatically granted to reprint from this publication. If there is something useful, we wish to share it.

Subscription rates: $9.00 per year, $17.00 for two years, $24.00 for three years and $90.00 for life; $2.00 extra per year for surface mail delivery outside the U.S. Overseas. Please remit international postal money order. IRCs and local currency will be accepted.

Second-class postage paid at Sacramento, CA.

Repeater directory

The new Henry Radio/N6BVU Southwestern U.S. Repeater Directory is now available — again for free. This edition has all the FM 10-meter repeaters in the world; 6 meters for southern California; 2 meters/220 MHz/440 MHz for Arizona, Nevada, Hawaii, Mexico and all of California. Also included are the satellite frequencies between 145.80-146.00 and 435.00-440.00 MHz, and a list of all stations worldwide that play "Westlink" — when, where and by whom.

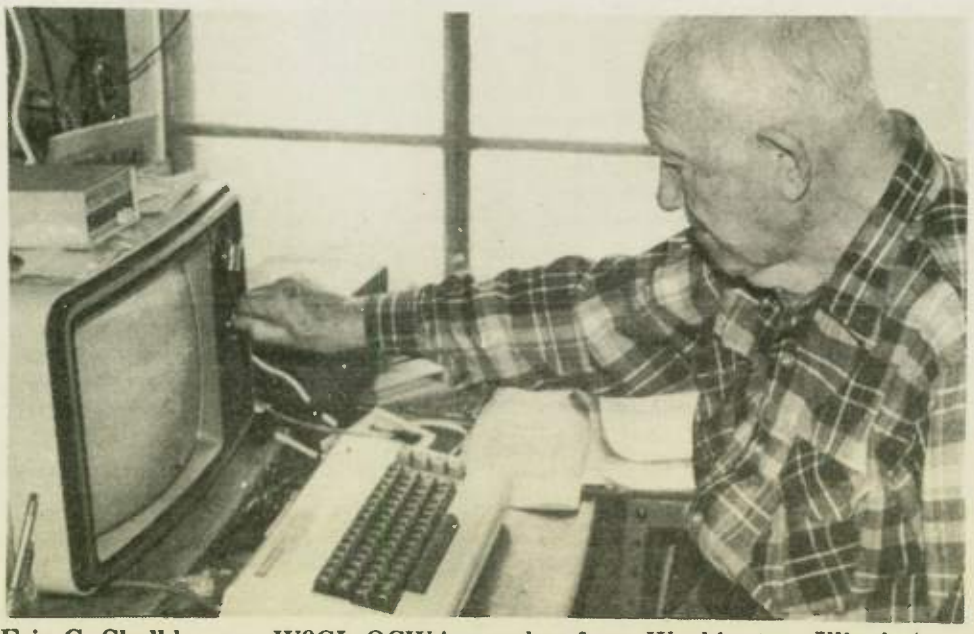
For your free 28 page copy, send SASE (10″ × 13″ manila envelope), with 54 cents postage, to: Karl Pagel, N6BVU, P.O. Box 6490, Orange, CA 92667. □

ATTN: Illinois

WANTED: Amateur Radio operators, male and female, age 17 through 35, especially high school juniors and seniors for the following positions: radio operators, radio teletype operators, wire system installers, tactical microwave operators, multi-channel VHF operators, wheel vehicle mechanics and cooks. Join the 133rd Signal Battalion, Illinois Army National Guard.

Benefits: $1500 bonus to join, minimum $80 for each weekend drill, free four-year Illinois College tuition, over $500 per month while in training, and other benefits too numerous to mention.

If interested in any of these positions, or if you need any further information, please contact: Matt Sobczak, K9MS, 4043 West 81st St., Chicago, IL 60652.
— *Hamfesters RC, Burbank, IL* □



Eric G. Shalkhauser, W9CI, QCWA member from Washington, Illinois (near Peoria) was 90 years old in early June 1983 and now is getting familiar with his VIC-20 keyboard and VDT to keep up with those guys who want to do code over 50 wpm. "Shaw" has been a radio amateur since 1909 and participated in the 1913 Presidential Relays using a spark rig. Shalkhauser does not favor the passage of a "no-code" amateur license — and why should he? He has seen ALL of the ham fads come — and go. *(KA9DYS photo)*

It's not our fault!

In the June issue of **QST**, in their coverage of the Simulated Emergency Test, was a picture with a credit line of N6WR.

The picture looked much less than good. So that people will not think we send crummy looking pictures to our friends at the League, and that they don't intentionally print such, we present this excerpt from a letter from the ARRL.

5/17/83

. . . in looking at the advance copy of June 1983 **QST**, it appears that the slide didn't come out all that well. The original slide was great, but color often doesn't agree with **QST** . . .

ROBERT HALPRIN, K1XA
Deputy Communications Mgr.

5/26/83
Dear Bob:

The best laid plans of mice and men, etc. Since you've been nice enough in the past to print three pictures of mine, you are forgiven. Hope you like the Field Day pix I'll be sending you.

ARMOND, N6WR □

Nationwide WATS Service

Communications Specialists now offers single number WATS line service throughout the entire continental United States, including California. This service gives California callers the same toll-free advantage callers from the other states have enjoyed for the past five years.

The number is (800) 854-0547. This number may be used for technical assistance as well as for sales and inquiries. □

•••

When submitting photos, please *DO NOT* write on the backs of them — they often stain the fronts of other photos, making them unusable.

CONTENTS

FEATURES

COLUMNS

Hams, officials prepare for 'next time'

On Wednesday, 11 May, the Kings ARC (central California) held a critique at the Kings County government complex. Officials from many state and local agencies, including the Federal Aviation Administration and a representative from the city manager of Coalinga attended.

"We asked for no praise," said Ken Henson, KV6W, president of the club. "Only suggestions on how we could have done a better job. The meeting lasted just two hours and was very productive."

Robert Dyruff, W6POU, Section Manager of Santa Barbara, San Louis Obispo and Ventura Counties, urged ham operators to use their skills and equipment to best advantage by insisting they be included in disaster planning.

Throughout the nation, he said, there is much misunderstanding about Amateur Radio operators, the difference between them and CBers, and the scope of the amateurs' capabilities. "You have the attention now of enough agencies . . . so you can come to grips (with the bureaucracy) and be in on the planning," said Dyruff.

He made the observation during the meeting that one of the handicaps in a disaster situation — which, he emphasized, is not the same as an "emergency" — is that it involves numerous agencies. Many of those agencies have worked under directives telling them they are not to communicate or cooperate with others. Because they function as separate entities, there is not likely to be any mechanism for linkage.

Dyruff said that as he travels around, he is dismayed that Amateur Radio operators are not better organized, "but it's amazing how people come out of the woodwork" when the chips are down.

Many of the "nuts and bolts" of coping with a disaster were provided by people like Ben Colin of San Jose, who is with the Santa Clara Red Cross disaster section. He provided suggestions, for example, on segregating radio traffic for a smoother operation.

He said that although the Red Cross doesn't function that way, it is important to get the word out as quickly as possible about who is safe. Early reassurances can cut down the flood of inquiries which jam incoming communications. Colin also emphasized the importance of advising when immediate needs for assistance have been met, to stem the tide of equipment and people heading to the area.

Chris Courtney, Kings County Emergency Services coordinator, also commented that "sometimes the best help people can give is to keep off of busy roads and check with the coordinators first." He said one of his early concerns had been with what would happen if aftershocks did damage elsewhere, when most resources had been dispatched to Coalinga.

Ben Nicholas and Will Cope, air controllers at the Fresno Airport, expressed a concern that their agency had not been called upon by an official spokesperson to fulfill a role they were prepared to handle — namely, assist with air traffic at Coalinga. Amateur Radio operators had helped fill that gap.

One of the facts readily apparent in the disaster post mortem examinations was that people with the necessary equipment and technical skills did not wait for the bureaucracy to fill in the gaps in coordination. They responded immediately and did what they could to cushion the impact of the disaster.

Ken Henson gave a brief summary of the evening of 2 May, emphasizing the necessity for preparation prior to any disaster.

He recalled the first alert to the earthquake and how it had come over the W6IYY repeater station, a homemade facility built by Jack Ebury of Coalinga and the only one that stayed on the air after the temblor.

"Those of us not in the area could act with cooler heads because our houses were not falling down around us," he said.

Dave Peden, KA6KUT, took part in emergency communications following the earthquake in Coalinga, even though he didn't leave his home in Meadow Vista, 200 miles away. Peden — a retired Army Corps of Engineers officer — was in control of the Mission Trail Net the night of Monday, 2 May, when radio operators from several states began relaying calls from concerned relatives of Coalinga residents. Peden estimates he received more than 50 calls that night. The net was closed to all calls that evening, except those concerning the earthquake.

A command post was established immediately and hams dispatched to Coalinga with hand-held units or mobile radio equipment. Within two minutes, two of the members were in a plane bound for Coalinga. Communications were set up promptly in Coalinga police station to act as a central dispatching point and contact made with disaster officials.

Tulare club members arranged to handle health and welfare messages. These were the first — and very vital — communications links, and they continued to function well into the second and third day.

In the next phase, the Kings Club placed operators at Red Cross disposal to help with assessing needs. The amateurs got even busier when the National Red Cross arrived. They were disbanded Saturday night, but were called again early Monday morning and were there till late that night.

Ebury helped get communications established. He said the earthquake did not catch Coalinga totally unaware and the city was able to respond effectively with available resources, "but plainly, our weakness was communications."

(One spokesman reported that 50 new telephone lines were installed that week, just to handle the volume of state and federal agency calls going in and out of Coalinga.)

Much of the commentary dealt with the types of equipment that would be most helpful in a situation, including Coalinga which is in a radio wave "hole." The amateurs talked of the need to have a disaster "kit" ready with specific equipment, including preparing for such short-sighted omissions as no lights to go with the generators. They recognized a need for an official identification card for faster screening at roadblocks; uniform plugs for installing mobile units in various vehicles that may need them; planes and pilots to work with the Amateur Radio people if airborne communications are needed.

"We (Kings Club) have a cassette and videotape (on VHS) of the earthquake critique and feel it could be very valuable to other communities and/or ARES groups," said Henson. "I plan to devise a preparation plan prior to disaster and a procedure plan during a disaster, taken from our experience and the critique we just had. This may be of some help for those who have not gone through a disaster."

Those interested in receiving copies of this tape can contact Ken Henson at 344 East Amber Way, Hanford, CA 93230.

— Information from Ken Henson, KV6W, and ***The Hanford Sentinel*** □

Call for papers

The 29th Annual VHF Conference will be held on Saturday, 29 October 1983, 8:00 a.m. to 5:00 p.m., with a 5:30 dinner. Location will be Kohrman Hall, Western Michigan University, Kalamazoo, Michigan.

Papers are invited for the 1983 Annual VHF Conference sponsored by the Electrical Engineering department. Principle emphasis will be placed on engineering developments applied to radio communication, design and construction on the frequencies of 30-1200 MHz.

Future trends and new ideas

Papers are solicited on from a wide range of areas including, but not necessarily limited to those listed here: Antennas and Transmission Lines, Applications of Microprocessors, Audio Frequency Equipment Used With VHF Transmitters and Receivers, Emergency Gear, Grounding and Shielding, Keying, Break-in & Control Circuits. Measurements and Test Equipment for VHF, Mobile and Portable Equipment, Modulation and Mixing, Narrow Band Voice Modulation, Noise Reduction, Phase Locked Loop Uses, Picture Transmission and Reception, Power Supplies including Switchers, Production Technology and Model Building, Propagation, Recent Equipment/New Apparatus, RTTY, Satellite and Moonbounce Topics, State-of-the-Art Semi-conductors, ICs and Filters With Applications, Transceivers.

One of the basic purposes of this conference is to provide maximum opportunity to present findings by those experimenting, designing, constructing, testing and inquiring into problems and methods applicable to VHF radio. Practicing engineers who are radio amateurs find this conference "planned for them."

This is an opportunity for beginning or mature researchers to report their findings to their peers. We especially encourage the unexperienced inquirers to obtain some experience by presenting a paper at our VHF conference.

Authors wishing to present papers should send a synopsis or abstract (typically one or two pages with diagrams) describing the paper to Dr. Cassius Hesselberth, W8FLH, Chairman, Department of Electrical Engineering, Western Michigan University, Kalamazoo, MI 49008. Foreign authors are requested to have a U.S. contact.

Deadline for submission of synopsis is 15 August 1983. Speakers will be notified of acceptance by 20 August 1983. Reproducible copy for the printed proceedings should be mailed to the chairman one month prior to the day of the conference. □

Important notice to PA amateurs

Robert Wilderman, K3SRO

House Bill No. 49 was introduced to the General Assembly on 25 January 1983 by Rep. Benjamin H. Wilson, WA3ACB, and referred to the committee on local government 26 January 1983.

The bill reads as follows:

An Act

Amending the act of 31 July 1968 (P.L. 805, No. 247), entitled, as amended,

"An act to empower cities of the second class A, and third class, boroughs, incorporated towns, townships of the first and second classes including those within a county of the second class and counties of the second class A through eighth classes, individually or jointly, to plan their development and to govern the same by zoning, subdivision and land development ordinances, planned residential development and other ordinances, by official maps, by the reservation of certain land for future public purpose and by the acquisition of such land; to promote the conservation of energy through the use of planning practices and to promote the effective utilization of renewable energy sources; providing for the establishment of planning commissions, planning departments, planning committees and zoning hearing boards, authorizing them to charge fees, make inspections and hold public hearings; providing for appropriations, appeals to courts and penalties for violations; and repealing acts and parts of acts," prohibiting zoning ordinances which exclude or restrict Amateur Radio antennas or towers.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. The act of 31 July 1968 (P.L. 805, No. 247), known as the Pennsylvania Municipalities Planning Code, is amended by adding a section to read:

Section 603.1. Ordinance Excluding Amateur Radio Antennas and Towers Prohibited. — No zoning ordinance shall exclude or restrict the erection, location or height of an amateur radio antenna, or the tower supporting such antenna. An ordinance may regulate the construction or maintenance of an antenna tower, but only to the extent as is necessary to protect life or property.

Section 2. This act shall take effect in six months.

It is important you write to your local State Representative, asking him to back up Bill #49. It is also necessary to send copies of your letter to the following local government committee members and mail to the box number and Harrisburg, PA 17120:

The Honorable Lester K. Fryer, Majority Chairman, P.O. Box 82
The Honorable Roger F. Duffy, P.O. Box 171
The Honorable John Showers, P.O. Box 9
The Honorable Ron Gamble, P.O.Box 153
The Honorable Nicholas A. Colafella, P.O. Box 76
The Honorable Roy C. Afflerbach, P.O. Box 113
The Honorable William E. Baldwin, P.O. Box 24
The Honorable Robert E. Belfonti, Jr., P.O. Box 98
The Honorable John H. Broujos, P.O. Box 99
The Honorable Tony DeLuca, P.O. Box 136
The Honorable Stanley J. Jarolin, P.O. Box 44
The Honorable David J. Mayernik, P.O. Box 119
The Honorable Ruth C. Rudy, P.O. Box 115
The Honorable John N. Wosniak, P.O. Box 133
The Honorable A. Carville Foster, Jr., Minority Chairman, P O. Box 31
The Honorable William D. Mackowski, P.O. Box 37
The Honorable Nicholas J. Micozzie, P.O. Box 40
The Honorable Joseph Levi II, P.O. Box 87
The Honorable Mario J. Civera, Jr., P.O. Box 39
The Honorable Frank J. Marmion, Jr., P.O. Box 198
The Honorable Charles F. Nahill, Jr., P.O. Box 176
The Honorable George E. Saurman, P.O. Box 158
The Honorable Terry R. Scheetz, P.O. Box 108
The Honorable Donald W. Snyder, P.O. Box 163

— Mt. Airy VHF RC, Southhampton, PA

Imlay visits NW Division

William Bingham, WA7VEH

On 26 March, the ARRL Northwestern Division had the special privilege of having Chris Imlay, N3AKD, attend the division board meeting in his capacity of ARRL Counsel.

Upon invitation by Division Director Mary Lewis, W7QGP, Imlay spoke to the board addressing near-term and long-range actions under consideration by both the FCC and ARRL Headquarters. The board considers information of this nature germane to their future planning and encourages continuation of such interfusion.

That evening, Imlay was the featured speaker at the Mike and Key Club banquet, touching on many subjects of both general and specific interest to the Amateur Radio Service. It was pointed out that the League has actively maintained an office in Washington, D.C. for the past 20 years, supporting direct coordination and communication with both the FCC and the legislature, and that mainly through the efforts of Perry Williams, W1UED, League relations with the FCC are the best ever.

The two major subjects covered were, of course, the dockets pertaining to no-code license and voluntary examiners. Imlay reviewed the history regarding the evolution of these dockets and then presented a comprehensive review of the impact they will have, as well as the most effective action line for an individual to follow in order to register his opinion with the FCC. It was apparent during the ensuing discussions that both the questions and answers were well considered and directed toward the betterment of Amateur Radio. □

Amateurs (left to right) Olive Wallace, N6EKY; John Paulsen, KA6LGK; Ken Henson, KV6W; and Jim Porter, KD6OM, were among the many amateurs who provided a vital communications link in the days following the Coalinga earthquake. Shown above are members of the Kings Amateur Radio Club handling communications for families outside the area seeking information about relatives living in Coalinga.

Coalingans

(continued from page 1)

Kings ARC president Ken Henson, KV6W, activated the ARES net, which then organized supplies and personnel to man radio posts in the quake-stricken area. (Every year, the club has an emergency training situation drill in cooperation with the Kings County Office of Emergency Services — to keep in trim for just such a disaster.)

Mike McNeil, KA6OAA, was net control on WCARS during the initial part of the emergency; Bill Schwarz, K6KZI, took over net control that evening. Coordinating 2-meter communications were Dennis Whitney, WB6WYA (Mariposa), and Larry Miller, W7CB (Fresno). Mike Cockrell, Operations Officer for the Office of Emergency Services, and Dave Baird, KA6MDE, also assisted with communications. Dave was kept busy transmitting messages between 40 and 2 meters and kept in touch with a military helicopter for several hours.

Repeaters throughout the central valley were linked to provide an informational channel. The link to W6LIO (King City), WB6QEV (Lompoc), K6GZK (San Jose) and W9TTT (Palmdale) piped information not only to amateurs but also to two Los Angeles television stations and to the San Francisco Chronicle. The Las Vegas 28/88 machine was monitoring activities the first evening, also.

On Sunday evening, following the Monday quake, telephone communications were again broken in the Coalinga area — this time by water seepage into the long-distance cable splice.

Once again, amateurs filled the void, this time by reactivating procedures to use the "autopatch" through the Kings ARC 58/18 repeater in Hanford. With this telephone service, hams relayed orders for medical and building supplies, and supplied the link for news media.

Noticing that the Red Cross base station (47.42) at the Coalinga headquarters had stopped, Telephone Pioneer Jim Losano, W6ZFN, and KARC members Tom Perdue, KA6LGL, and John Prys, K6LGN, repaired the Red Cross receiver. This restored communications among the more than 100 Red Cross volunteers and staff on duty providing assistance to families.

"Amateur Radio operators were absolutely critical to Red Cross disaster relief operations," stated Mary Lou Taylor. "Without their help, the extent of the damage wouldn't have been known, and the dispatch of proper assistance would have been delayed.

"We are deeply indebted to area hams for their help in meeting the needs of earthquake-stricken Coalinga."

— Information from American Red Cross and The Hanford Sentinel □

The inside story on TEN-TEC's CORSAIR.

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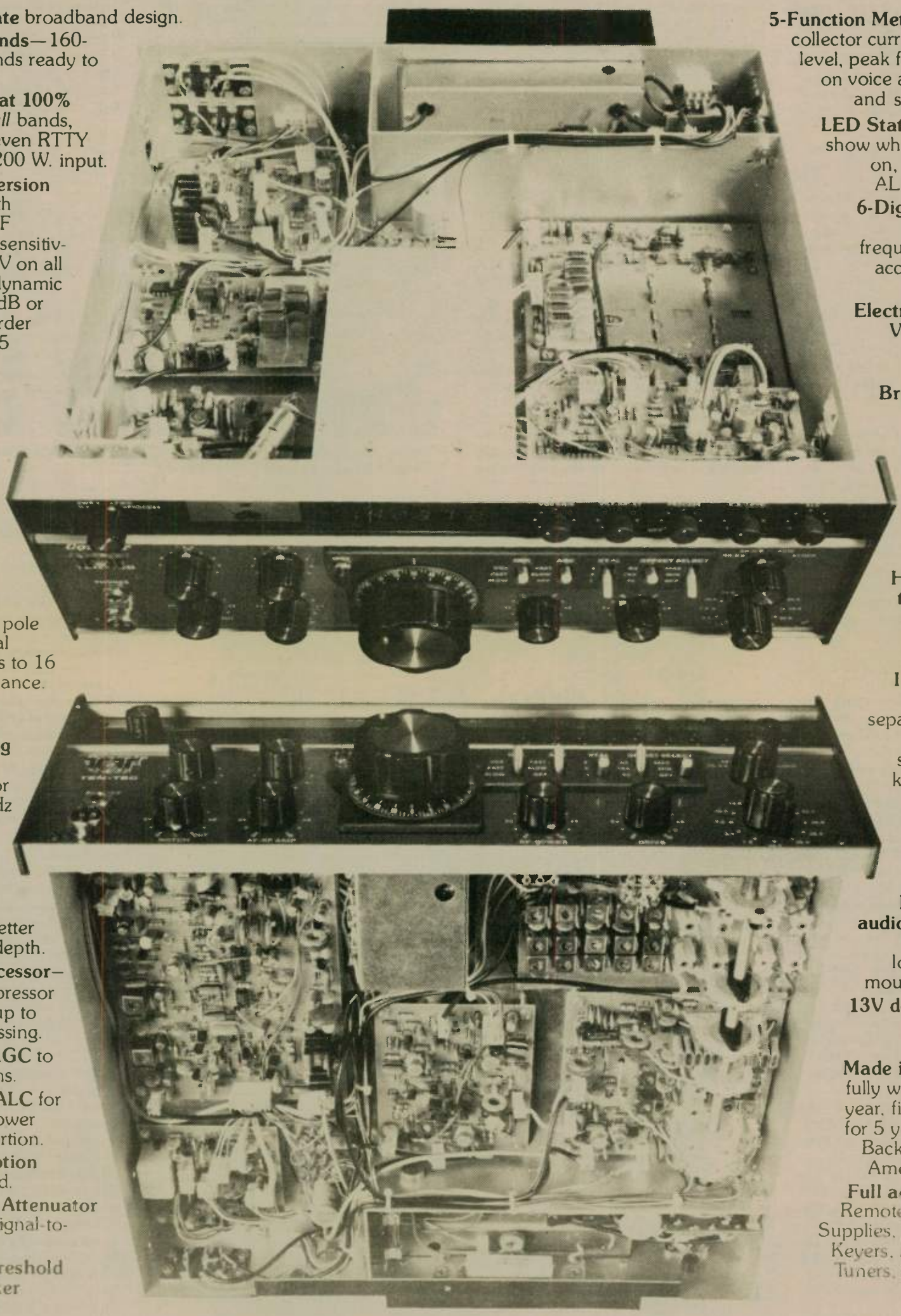

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Students gain licenses — and self-confidence

Carole Perry, WB2MGP

There is a course being offered at Intermediate School 72 in Staten Island, New York called "Introduction To Ham Radio." It is being conducted by Carole Perry, WB2MGP, who's been licensed as a Technician for five years. Carole was an executive for an electronics manufacturing company for 10 years. Last year she taught science at the school she is presently working at.

Carole Perry, WB2MGP

The program began in November of 1982 and has already accomplished several noteworthy things. The course has students from 6th, 7th and 8th grades with diverse backgrounds and abilities The new term began in January with a whopping enrollment of 300 students. Many of the children entered the program with reading skill problems and definite anxieties toward learning anything "technical." My first task was to build up a feeling of self-confidence in these children and to develop in them a love for the hobby. I assured them they were all starting out on an equal footing in learning a new language called Morse code. I kept re-enforcing that the only thing they needed was a strong desire to do it. I stressed the "3 P's — Perry's Proven Program — Practice Practice Practice."

Once the children began to see results in the mastery of the code, and to see that I really believed in them, the classroom became a feeding ground for self-confidence; and an epidemic of fierce determination broke out. Children were bringing in library books about Amateur Radio to show me, in their desire to learn more about the hobby. We also utilized many ARRL publications and license manuals in class.

The philosophy of the course is based on the premise that it should be taught as a hobby. It is a place where the children can look forward to coming to, where they can feel the positive sense of accomplishment which comes with achievement. The atmosphere was a relaxed and friendly one, yet well within the confines of proper school decorum.

Equipment was non-existent at the onset of the course. The first group of students (November to January) didn't even have the benefit of "on-the-air QSOs." Yet out of the 150 children taking the FCC Novice license exam this past January, 100 were licensed. It is a real testimony to extraordinary motivation and enthusiasm. Every day we stress the rules of courtesy on the air and to each other in class. The intelligent and responsible use of the airwaves is continually discussed.

What I began to observe was an awakened interest in geography, world affairs, foreign customs and scientific phenomena. We spoke about all these areas as they became relevant to what we were doing. The ARRL map of the world came to life when the children used it to plan their future DX contacts. We wrote letters in class to the ARRL, to electronic manufacturers, and to local repeater clubs for information.

Other teachers began to notice improvement in other subject areas. Better work and study habits, and a new enthusiasm for school was evident in many children. Discipline and behavior problems are virtually non-existent in this course. The children recognize that it is a privilege to get a license and to get on the air, and they act accordingly.

Documentation is also offered to substantiate that children with attitudinal problems were able to find a way to relate to others in the hobby.

I always zero in on the girls in the class first. I won't allow them to hide behind the excuse that they are genetically incapable of learning anything technical. "After all," I like to point out, "what am *I* — chopped liver?" No one is allowed to use the word "can't". We all try to help each other over the rough spots. Some students made up flash cards to help classmates who were having a problem with the code.

On Sunday, 6 March, 12 newly-licensed students and myself appeared on a cable television program. Larry Horne, N2NY, was the host who interviewed us. It was an enriching experience for all of us. Each child told his own reason for wanting to get licensed. I feel sure these children will contribute a great deal to our hobby.

At this point, we are using my Yaesu 207R with a 35 watt amplifier and ⅝-wavelength antenna. We are considering different ways to raise money to buy some equipment.

Even other teachers are getting caught up in the spirit of things. One teacher already passed the Novice exam.

I strongly advocate the introduction of Amateur Radio courses into the public school systems, with the goal in mind of bringing responsible new amateurs into this incredible hobby of ours. □

Four of Carole's students (left to right): Claudia Zambardi, David Maldonado, Michael Kaufman and Joyce Torres

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Book Review

Amateur Radio — an American phenomenon

Norm Brooks, K6FO

Would you like to know what has happened in Amateur Radio since Clinton B. deSoto published *Two Hundred Meters and Down* in 1936? Would you like to read a doctoral dissertation on Amateur Radio that is easy to read, yet shows intense research into hundreds of books, papers and magazines?

Fred J. Elser, KH6CZ, has prepared such a dissertation which not only covers the era of deSoto's book, but also fills in the remaining time gap. He gives attention to the motivation and American uniqueness of Amateur Radio due to our way of life, political orientation and heritage of free speech.

Fred organized his material into eight systematic chapters that are not watertight compartments. Each overlaps another where a relationship exists. His subjects are: Radio amateurs yesterday and today; Hiram Percy Maxim, the ARRL and IARU; Two basic types of radio amateurs; Ham language, ham clubs; Amateur benefits and problems; Equipment — commercial and "homebrew"; Community service and emergencies.

Besides buying the book for yourself, you may find it an excellent gift for a friend or relative (or city councilman) who knows little about Amateur Radio, and who you wish knew more.

Amateur Radio — An American Phenomenon is published by University Microfilms International, 300 North Zeeb Rd., Ann Arbor, MI 48106.

*Col. Fred Elser (USA Ret.), KH6CZ, is an old-timer. While looking over his old logbooks recently, he noted that his oldest contact is March 1923 — 60 years ago. Elser earned a Ph.D. in American Studies from the University of Hawaii in 1981. (Biography info from Katashi Nose, **KH6IJ, Honolulu Star-Bulletin, HI**)* □

NASA

(continued from page 1)

many others around the world involved in technical professions. He is especially pleased that NASA has given the nod for the operation, as he feels it will be instrumental in bringing the space program home to many people in this country and the rest of the world. He notes that the orbital track to be taken on the STS-9 mission makes it especially suitable for communicating with a large number of amateurs as it extends farther north and south than did earlier space shuttle missions.

ARRL President Vic Clark expressed his great pleasure at the NASA decision. He said that the League represents the radio amateurs of this country and, through its affiliation with the International Amateur Union (IARU), those of many countries throughout the rest of the world. Thus, the ARRL is extremely happy to play a key role in this worthwhile endeavor.

The joint ARRL/AMSAT proposal approved by NASA calls for the ARRL to furnish the special Amateur Radio equipment for use on the shuttle. The ARRL will also organize and coach earthbound amateurs in techniques and procedures for rapid and efficient communication with the orbiting astronaut. This will be done through the pages of the League's monthly magazine QST which reaches some 150,000 licensed amateurs and its affiliated clubs throughout the United States, Canada and the rest of the world.

Dr. Tom Clark (no relation), president of AMSAT, was also enthusiastic about the impending amateur operation from space. He noted that AMSAT is responsible for selecting appropriate frequencies and operating modes for the "ham in space" operation and made many of the initial contacts with NASA officials which preceded submission of the proposal. Dr. Clark noted that AMSAT is an international organization devoted to promoting amateur space involvement. Since its birth in 1969, AMSAT has been responsible for the successful orbiting of five "OSCAR" (Orbiting Satellite Carrying Amateur Radio) satellites, all of which were launched as secondary "piggyback" payloads on NASA missions. The newest OSCAR built by AMSAT is designed to provide worldwide communication among radio amateurs, and is now poised for launch on a European Ariane flight in June.

Another key organization involved in putting an amateur station aboard the shuttle is the Johnson Space Center Amateur Radio Club. This group, also known as W5RRR, numbers among its members many experts well versed in testing and preparing equipment for manned space missions. Members of this club are charged with a number of tasks to insure that the ham equipment used on the shuttle will function properly and will not disrupt other vital spacecraft functions. Included in these tasks is the adaption of an existing shuttle antenna design for use on the internationally recognized 2-meter Amateur Radio frequencies.

With the flight of STS-9 this fall, Amateur Radio will continue its long history of service. Amateur Radio will provide the first time in the history of man-in-space when the general public will be able to communicate directly with an astronaut in orbit. It is expected that tens of thousands of individuals, including elementary and secondary students, citizens of developing countries and the "man on the street," will experience the excitement of hearing the words come from space "CQ from W5LFL aboard the space shuttle."

For additional information, contact: ARRL, 225 Main St., Newington, CT 06111; (203) 666-1541; or AMSAT, 850 Sligo Ave., Silver Spring, MD 20910; (301) 589-6062. □

Winslow Township case continues

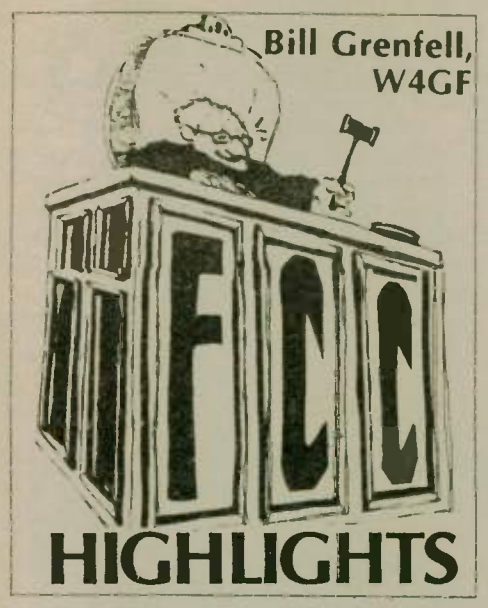
The Supreme Court of New Jersey has refused to hear Randy Bynum, WB2SZK's appeal; however, efforts to convince Winslow Township, New Jersey to appeal its anti-RFI ordinance in light of enactment of Public Law 97-259 are continuing.

With the passage of the Goldwater Amateur Radio legislation, Public Law 97-259, there is no question that matters of RFI are pre-empted by the federal government. In fact, Senator Goldwater's staff and the ARRL Headquarters and General Counsel's staff worked the following language into the conferee report with the Bynum case in mind:

"The Conferees believe that radio transmitter operators should not be subject to fines, forfeitures, or other liability imposed by any local or state authority as a result of interference appearing in home electronic equipment or systems. Rather, the Conferees intend that regulation of RFI phenomena shall be imposed only by the Commission."

— *Hamfesters RC, Burbank, IL* □

Contact Worldradio for hamfest prizes.



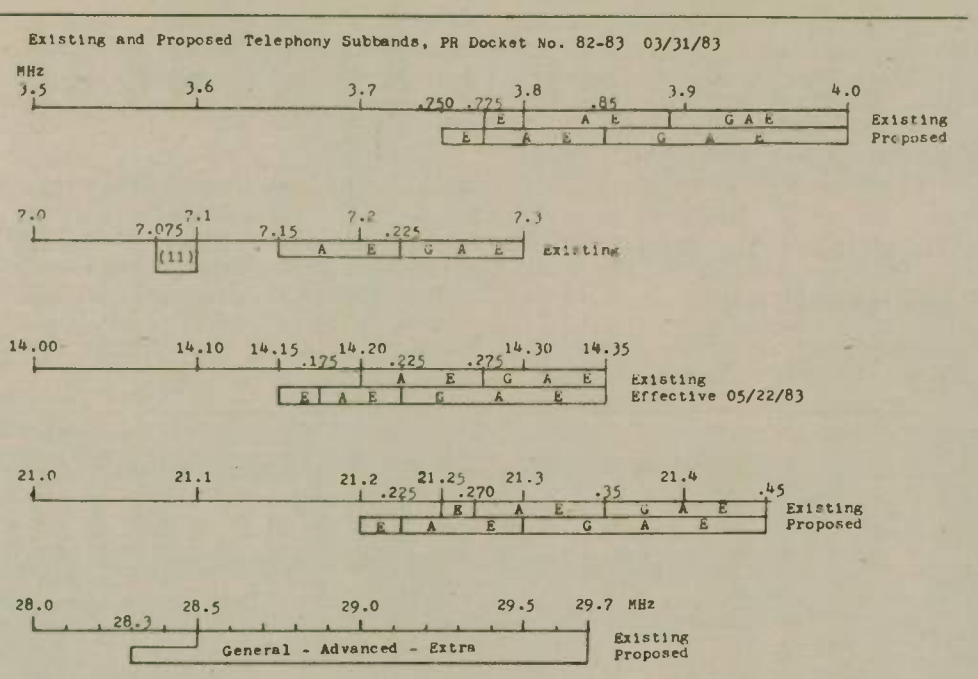
On 31 March, the FCC adopted an expansion of the amateur 20-meter phone band and proposed expansion of the 80, 15 and 10-meter phone bands. A 25 kHz-wide segment for A3 and F3 at 7,075-7,100 kHz was proposed ". . . for Amateur Radio stations located outside Region 2 and Amateur Radio stations located within Region 2, which are west of 150 degrees West longitude and south of 30 degrees North latitude." (the Hawaiian Islands).

In the 80-meter band, 3.750-3.775 MHz is proposed for Extra Class operators; 3.775-3.850 for Advanced and Extra and 3.850-4.000 for Advanced, Extra and General Class. In the 15-meter band, 21.200-21.225 MHz is proposed for Extra Class operators; 21.225-21.300 for Advanced and Extra and 21.300-21.450 for Advanced, Extra and General Class. In the 10-meter band, 28.300-29.700 MHz is proposed for Advanced, Extra and General Class telephony.

The Commission reported that several hundred comments were filed on its previous Notice, which included the proposed expansion of the 20-meter phone band as well as requesting comments on expansion of the other high frequency bands. "Virtually all of the commenters agreed that the telephony subbands for. . ." (the 3.5 and 21 MHz) ". . . bands should start at 3750 kHz and 21200 kHz, . . .

"Regarding the 28 MHz band, commenters suggested authorizing telephony operations down to frequencies as low as 28200 kHz. Authorization of such operations on frequencies as low as 28300 kHz was a common recommendation. While we are proposing to authorize telephony opeations on all frequencies from 28300 to 29700 kHz, we request comments on whether such an expansion is truly warranted in light of the sliver of spectrum that will remain for modes of operation using the International Morse Code and digital communication (radio-teleprinting).

"There was no consensus in the comments as to the best course of action for us to take regarding the 7 MHz telephony subband. Many comments suggested no change in the mode authorizations for the 7 MHz band." (Except for Hawaii) ". . . we have decided to make no proposal for



Section 97.61(b)

(11): The use of A3 and F3 in this band is limited to Amateur Radio stations located outside Region 2 (Existing) and Amateur Radio stations located within Region 2 which are west of 150 degrees West longitude and south of 30 degrees North latitude. (Proposed addition)

changes in this band at this time since there seems to be no consensus as to the actual need or the best approach. However, we invite comments as to whether some future action may be warranted and what approach would be most beneficial."

Referring to petition RM-4228, FCC proposed to authorize telephony operation from 7075 to 7100 kHz for U.S. amateur stations located west of 150 degrees West longitude and south of 30 degrees North latitude, as well as those presently authorized therein when located outside Region 2. Being adjacent to Region 3, where all operation must be below 7100 kHz and remote from other Region 2 telephony stations which operate above 7150 kHz, is the rationale presented for this exception for amateurs located on the Hawaiian Islands. Strong Asian broadcast station interference above 7100 kHz is also cited as a reason for an exception.

Interested persons may file comments on or before 1 July 1983, and reply comments on or before 1 August 1983. "Each set of comments must state on its face the proceeding to which it relates (PR Docket Number) and should be submitted to: The Secretary, Federal Communications Commission, Washington, D.C. 20554." The PR Docket for this proceeding is: No. 82-83.

The expansion of the 14 MHz phone band was made effective as of 0001 UTC on 22 May 1983. The expected implementation earlier in May was prevented by an unusual backlog of items waiting to be published in the Federal Register. Except for unusual circumstances, new rules or modifications of existing rules may not become effective until at least 30 days after publication in the Register. The 20-meter phone band expansion was: 14.150-14.175 MHz allocated to Extra Class operators; 14.175-14.225 to Advanced and Extra Class; and 14.225-14.350 to Advanced, Extra and General Class.

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On 31 March, FCC adopted a Notice of Proposed Rule Making to authorize 10-year operator and station license terms and to provide a two-year grace period for renewal of expired licenses in the Amateur Radio Service. This was in response to a petition filed by the ARRL last 30 November.

The Commission gave the following statistics as background for its action: "There are currently over 413,000 licensed Amateur Radio operators in the Amateur Radio Service. Over 56,000 amateur licenses were modified during 1982, either by change in class of operator license or by change of address of either the licensee or the station location. There were over 25,000 new and 36,000 renewed Amateur Radio licenses issued by the Commission during this same period."

FCC anticipates ". . .that adoption of the proposal would result in an annual public burden hour savings of 1,000 hours." FCC stated its belief that maintaining licensees who are no longer active on the Commission's records would not have any substantial adverse impact. However, FCC asked for comment on the following:

"While we have severe reservations as to possible confusion which may be created, we would, nevertheless, be interested in comments as to the feasibility of immediate implementation of 10-year terms by extending all current licenses by an additional five years. We inquire, therefore, whether licenses should be given a blanket, five-year extension, or whether we should phase-in 10-year licenses as they come up for renewal."

Interested persons may file comments on or before 13 June 1983, and reply comments on or before 13 July 1983. Direct your comments to PR Docket No. 83-337, and send them to: The Secretary, FCC, Washington, D.C. 20554.

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FCC has also proposed 10-year license terms for the General Mobile Radio Service (on 31 March 1983) and asked the same question it did for the Amateur Radio Service about a blanket five-year extension or a phase-in of the 10-year term.

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On 1 July 1983, the number of FCC commissioners drops from seven to five. When it was a seven-person body, not more than four could be members of a single political party. In July, a three-person majority will be the limit. A Republican, Commissioner Anne Jones, has announced she will be resigning. Republican Commissioner Sharp's term is up as of 1 July 1983, as is the term of Democrat Joseph Fogarty. This leaves two Democrats and two Republicans in office after 1 July, and of course, the president is almost certain to appoint a Republican. So far, I have not heard who are likely candidates for the vacancy.

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The Alaska 4383.8 emergency frequency on which amateurs may operate for emergency communications will be changed to one in the 5 MHz band in the near future. See Rule Section 97.107(a), footnote 3 for the conditions under which amateurs may use the present frequency. It is expected that operating limitations

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 1 May 1983.

For more information about call sign assignment in the Amateur Radio Service, see Section 97.51 of FCC Rules, or write to the FCC, Consumer Assistance Branch, Gettysburg, PA 17325.

Radio District	Group A Am. Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	KW0Z	KD0FG	N0EQM	KA0QHJ
1	KR1J*	KB1HQ	N1CQX	KA1KIK
2	NA2I	KC2ZA	N2EHI	KA2SFF
3	KN3Y	KC3HL	N3DKJ	KA3KZV
4	WO4Y	KF4XV	N4IRK	KB4FEG
5	NG5K	KD5ZM	N5FXF	KA5QXY
6	KW6Z	KF6TS	N6IPC	KB6AFU
7	NC7K	KD7JP	N7FEQ	KA7QCI
8	ND8G*	KD8GR	N8EXF	KA8SIM
9	KT9A	KD9AJ	N9DXO	KA9PQU
N. Mariana Is.	AH0C	AH0AB	KH0AE	WH0AAG
Canton Is.	AH1A			
Guam	AH2R	AH2AT	KH2BD	WH2ADP
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	WH6H	AH6EU	KH6XH*	WH6AWJ
Kure Is.			KH7AA	
Amer. Samoa	A[illegible]8B	AH8AB	KH8AC	WH8AAO
Wake Wilkes Peale		AH9AA	KH9AB	WH9AAA
Alaska	WL7T	AL7EY	NL7AU	WL7AZN
Virgin Is.	KP2J	KP2AQ	NP2AU	WP2ADI
Puerto Rico	NP4T	KP4GV	NP4IK	WP4CUU

*The computer missed the following call signs and they are loaded in the following sequence: **After KR1Z is issued KQ1A-KQ1Z will be issued. After ND8Z is issued NB8A-NB8Z will be issued. After KH6XZ is issued KH6VA-KH6VZ will be issued.** □

on use of the new frequency will be less restrictive.

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In addition to NASA permission to operate a 2-meter station on board a spacecraft in space, certain FCC amateur rules requirements in sub-part D of Part 97 are applicable. For example, Section 97.407 limits eligiblity for space operation to stations of Amateur Extra Class operators. FCC's Private Radio Bureau must be first notified of such proposed operation at least 27 months prior to initiating space operation (97.423(b)(1)). Other notifications are required.

Also, Section 97.95(b) applies to operation outside the continental limits of the United States, and Section 97.101 to an amateur mobile station operated on board an aircraft.

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The conditions for amateur use of the 1900-2000 kHz and 220-225, 420-430 and 2310-2390 MHz bands are "at issue" in FCC's Docket 80-739 proceeding. "Generally supportive of the FCC proposals, the ARRL nevertheless had certain grave concerns about 'those proposals that appear to be in conflict with the U.S. proposals to WARC-79, and which go beyond those proposals in restricting the Amateur Service.' "

See May 1983 **QST**, pages 56 and 57 for further details.

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"On 15 April, the FCC released a Public Notice updating the Amateur Radio station call sign assignment system.

"The notice says the Commission does not intend to reissue unassigned call signs in the forseeable future. It extends to two years the time in which an expired call sign can be renewed, and during which an expired secondary call sign can be transferred to a primary license. Finally, it sets forth a new prefix block, KP5, for Desecheo Island, formerly KP4 along with nearby Puerto Rico." (from the *ARRL Letter*, 26 April 1983)

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Senator Goldwater has been quoted in the 1 May 1983 *W5YI Report* as having written the editor that after a conversation with FCC officials, ". . .they've agreed to postpone action on this (no-code) docket for 18 months." The editor (W5YI) also quotes a telephone conversation with Jim McKinney, Chief of FCC's Private Radio Bureau as follows:

"I am not aware of what he is talking about, Fred. Certainly I am not the official he was talking to. To my knowledge there is no delay. I have not been asked to reconsider, nor have I been told of a conversation with Senator Goldwater.

"If we had intentions of delaying this for 18 months, I would not have given just a 60-day comment extension. This is taking me completely by surprise."

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Contrary to reports in other publications David Hildebrand, N6BHU, has not been "absolved" from his used of indecent language via his Amateur Radio station. Last month, I reported that the Review Board had dismissed the Judge's Order to revoke and suspend his amateur station and operator licenses. I repeat: The Commissioners *can* overturn the Review Board's action. At the time this was written, there was no indication that the Commission had yet acted on the staff's request for a review of the Board's action.

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A Notice of Apparent Liability proposing a $550 fine for operation in excess of 250 watts in the 40-meter Novice band has been sent to an Extra Class amateur operator by FCC. The licensee, Eugene Sykes, W4OO/W4BRB, has responded to the Notice, but FCC had not announced any further action by the time this month's 'Highlights' was written. Deliberate interference was alleged by a nearby amateur but not included in the notice to Sykes.

This does raise an interesting pont in that it appears that a considerable percentage of active amateurs apparently are not aware that the 250 watt level is a blanket limit applicable to all classes of operators when operating within the Novice bands!

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At least two cases of apparent "purloined" club station call signs have come to FCC's attention recently and are under investigation. It appears that an alleged change of club name was filed with FCC and the long-time club holder of the call suddenly discovered another group was now assigned their call! □

Seeing double?

If you should receive duplicate issues some month, and one of them has only your name, call and address, and no computer number, you have been selected to pass the extra copy on to a ham who may be interested in seeing the paper. Pass it on.

Special Events...

Centennial

The Livingston County Amateur Radio Club will operate K9ENM from 1600Z to 2400Z, 2-3 July, in celebration of the 100th anniversary of the town of Emington, Illinois.

Frequencies: 3.960, 7.290, 14.330 and 21.430. *Novice:* 20 kHz up from bottom; also 146.640 and 146.520.

Send SASE to K9ENM, 504 East Washington, Pontiac, IL 61764. □

Floral City Festival

The Monroe County Radio Communications Association will operate WA8MTX from the Floral City Festival at Monroe, Michigan on 8-9 July, 1200Z-2400Z. Frequencies will be 10 kHz (±) QRM above the lower edge of the General band SSB and CW frequencies, 10-80 meters.

Certificate for QSL and business-size SASE. Help us to put Monroe on the air for our first attempt. QSL to Bob Keenan, KA8LAQ, 3083-6th St. D.B., Monroe, MI 48161. □

Silverfest

The Tri-Town Radio Amateur Club W9VT will operate in the General portions of the 40, 20 and 15-meter bands in celebration of Silverfest, Country Club Hills 25th birthday, starting at 2300Z, 15 July, and ending at 0300Z, 17 July. Radio procedures and operations will be done in full view of the public in order to promote and create interest in Amateur Radio.

For a beautiful certificate, mail SASE to Tri-Town RAC, Box 302, Hazelcrest, IL 60429. □

Lincoln Boyhood Memorial

The Pike County ARC will operate station W9CZH from the Lincoln Boyhood Memorial, Lincoln City, Indiana from 1700Z, 30 July to 1700Z, 31 July.

Frequencies: *Phone* — 3.925, 7.265, 14.305, 21.395; *RTTY* — 14.090; *FM* — 146.52; *CW* — 7.133.

Special QSLs will be issued for your QSL and SASE to Richard Bailey, KC9VH, Box 311, RR 1, Winslow, IN 47598. □

Neil Armstrong and Celina Lake Festival

The Reservoir Amateur Radio Association will operate K8QYL from 1400Z, 16 July to 0400Z, 17 July, and 1400-1900Z, 17 July, from the hometown of astronaut Neil Armstrong.

Frequencies: *Phone* — 7.260 and 14.285 MHz (±) QRM. Certificate for QSL and large SASE to: K8QYL, P.O. Box 268, Celina, OH 45822.

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On 30 July, the Reservoir ARA will operate KR8M from 1330Z to 1900Z, from the courthouse steps during the Celina Lake Festival.

Frequency: 7.260 (±) QRM. Certificate for QSL and large SASE to: KR8M, P.O. Box 268, Celina, OH 45822. □

Yacht race

The Eastern Michigan ARC, K8EPV will commemorate the annual Port Huron to Mackinac Island Yacht Race, 16-17 July.

Operation will last from 10:00 a.m. EST (1500Z) to 10:00 p.m. EST (0300Z) on Saturday and Sunday. **Frequencies:** *Phone* — 3.910, 7.235 and 14.285; *CW* — 3.710, 7.110 and 21.110.

An attractive certificate is available for a legal-size SASE to K8EPV, 654 Georgia, Marysville, MI 48040. □

WW II submarine

Once again, members of the Northern Ohio Amateur Radio Society (NOARS) will be radiating radio signals from the WW II submarine, *USS Cod.* Operations started on Memorial Day weekend and run daily through Labor Day weekend. Look for operations in the lower portion of the General band, 10-80 meters. Special Novice operations will be held 9-10 July and 20-21 August, in the middle of the Novice bands.

QSL cards picturing the *USS Cod* will be sent out confirming all contacts. A special 8″ x 11″ certificate will be available upon request with QSL, confirming the two-way contact and $1 for handling and postage. Send all QSLs to Don Winner, WD8RZG, 8927 Torrance Ave., Brooklyn, OH 44144.

The *USS Cod* is on permanent display at the port of Cleveland, located between East 9th Stret Pier and Burke Lakefront Airport. Guided tours of the submarine by WW II sub vets are given daily. So come on down for a historic visit into the past for an adventure to remember. □

Detroit Arsenal

The Tank-Automotive Command ARC will operate W8JPW on 30 July, 1300-2000Z, to commemorate the 42nd year of the Detroit Arsenal, home of the nation's first defense plant and the U.S. Army Tank-Automotive Command.

Frequencies: *Phone* — 7.250-7.274, 21.400 and 146.49 MHz; *CW* — 7.055 from 1500-1700Z. Put our QSO number and frequency in upper left corner of outer envelope.

Send 9″ × 12″ SASE for unfolded certificate; otherwise SASE to: W8JPW, U.S. Army Communications Command, ATTN: CCNC-TAC-M, 28251 Van Dyke, Warren, MI 48090. □

Bix Biederbeck

The Davenport RAC will operate WØBXR to commemorate the great jazz player Bix Biederbeck and the city of Davenport during the Bix Biederbeck Memorial Jazz Festival, from 1600Z, 30 July to 0300Z, 31 July, and from 1600Z to 2300Z on 31 July.

Operation on phone and CW, all bands about 10 kHz up from lower end of General Class band edges. Certificate for large SASE to DRAC, c/o WBØFBP, 2131 Myrtle St., Davenport, IA 52804. □

Mini-DXpeditions are fun

Herb Clark, K9DCX

We have often read of amateurs who take off on an extended trip halfway around the world to an exotic island where they set up portable and work the multitudes. Many of us have worked these DXpeditions and maybe even dreamed of someday doing something along these lines. However, it takes a bundle of cash and much time and travel to undertake such a trip.

Do not despair! You too can work off some of that restless spirit and become part of a DXpedition, and never really get too far from the home QTH. How? you ask. By forming, or at least joining, a Mini-Fun DXpedition. These can be a barrel of fun, economical, and a big boost to Amateur Radio.

Now, it is true that you may not have the tremendous pile-ups on the band that you'd have if you were camped with a transceiver on a coral reef just off Nielander Sorenduz Island, but you should have contacts galore and fun. What more can you ask for?

Back in 1981, after some discussion on ways to breathe new life into a lethargic, if not dead, radio club, the newly-formed Kokomo (Indiana) Amateur Radio Emergency Service Net (KARES) discussed with eagerness the possibility of our club forming and producing a Mini-Fun-DXpedition. Under the capable and energetic guidance of Woody Booher, KJ9G, we began searching the Indiana maps and atlases for "foreign"-sounding names within its borders. It was with some surprise that we found possibly 25 cities, towns or post offices with DX appeal. Some of these are China, Poland, Mexico, Canaan, Bethlehem, Siberia and Shanghai. Wouldn't it be fun to take a caravan along on a weekend trip there, set up portable operation and work the world?

So, with help from a modest treasury, and much donation of food, time and energy, and with KJ9G being a printer of QSL cards and certificates, we got the first Mini organized and on the road. Since Shanghai was just down the road a little way, we picked it as our initial trial run.

Golly! What a success that Shanghai Mini-Fun-DXpedition turned out to be! With an approximate number of 30 amateurs and some XYLs helping, we made over 300 contacts, even though a severe weather watch and lightning storm plagued us as well as several band closings. The contacts were great, but the very best result of our Mini was the fellowship and fun had by all who took part in it.

Hurrah! If Shanghai was such a winner, could China, Poland or Siberia be anything but? Naturally we found ourselves planning and taking trips to China, Poland and then — on 2-3 October — to the lovely hills of Siberia, Indiana for the Siberian Mini-Fun-DXpedition. Our number of contacts has increased each different location we have operated from, and Siberia boasted 630 contacts with most anxiously awaiting the big colorful Siberian Certificate and QSL.

John Lane, N9BLN, is now Mini Operations Manager with Woody still in there slugging as advisor and coordinator. Woody and John — as well as all the participating Kokomo, Indiana amateurs — can tell you it's a lot of hard work to put on a Mini-Fun-DXpedition, but the camaraderie, the response met over the air and the hoped-for boost it may give to Amateur Radio is surely worth all the effort.

Try it at your club . . . we think you'll like it. See you on the air from Mexico, Warsaw, Dublin and a dozen more exciting-sounding places. □

Westlink — news service for hams

This is the last in a series of six articles we've run on the history and function of Westlink Radio Network — a worldwide "on-the-air" news service started in 1977 by Jim Hendershot, WA6VQP, and Bill Pasternak, WA6ITF. Bill — author of the series — is currently producer of the Los Angeles, California-based network. As mentioned in last month's article, the only cost of this news service is a phone call to one of the following numbers: Pacific — (213) 768-7333, (213) 465-5550; Midwest — (513) 275-9991; NY-NJ-CT area — (212) 224-1555.

For those of you interested in a bit of the technical side of our production, here goes. Once a script is ready to be recorded, it takes one of two routes. If it will be recorded locally in Los Angeles (L.A.), we utilize donated studio time at one of several such facilities.

The master tape is recorded on Scully 280 full-track machines through a Rupert Nieve mixing console, using either Senheisser or Neuiman mics. Sound bites that constitute the "actuality content" of a given newscast are transferred from the original interview cassettes to open-reel tape, as well — usually from a Norelco/Phillips recorder/reproducer through a UERI graphic equalizer onto the Scully. All recording is at 7½ IPS using only Scotch-3M type 206 or 250 tape stock.

Next, the two reels are intercut to provide the completed newscast; it's then timed and re-edited to fit our 10-minute time frame. This latter job is done either by Bill Orenstein, KH6QX or myself. Once completed, two duplicate masters are dubbed through a UERI compression amplifier or equivalent. Bill takes one of these to dub to cart at his place; Burt does the same with the other.

At Burt's location, the old Collins equipment is still in use, while at Bill's office a McCarta 105 and RCA RT-27 are available. These are "Broadcast Cartridge Tape Machines" and use tape packs that look a lot like the 8-track tapes used for home entertainment. The difference is that they are built to more rugged specifications than the latter, and cost a fortune.

Bill makes the final dub to cart off an RCA R-7 studio recorder into the RCA RT-27, while Burt uses a Teac 6800 into the Collins. I take the master tape and dub an 8-track cartridge along with a double-up cassette, which is shipped to New York. On a bi-weekly basis, a cassette is sent to Radio Netherlands in Holland for use on their Media Network program.

When Jim Davis is anchoring, it's a bit more complex. Jim will call at a predetermined hour. I have already read the script onto a cassette, and I "roll it down the phone" to him where he records, retypes and re-records the anchor track onto a Scully 280 recorder through an Auditronics mixing board using a Senheisser mic. He then pre-edits the tape to take out any flubs, dubs off a cassette for safety and ships the tape to my home via Federal Express. When it arrives, I intercut the actualities and do the final editing here at home on a Sony TC-155SAR player modified to full-track operation.

To match levels, regardless of where the master tape is recorded, a 1 kHz at 0dB tone is recorded at the head end of each anchor and actuality tape reel. This takes the guesswork out of knowing reference amplitude levels. Whether Jim records in Charleston; Alan, Burt or Kevin in Hollywood; or someone else here in my home studio, levels are easily matched. Anyhow, from here on, the situation is the same as recorded in Los Angeles, except that the dubs are made onto full-track modified Wollensak T-1500's rather than Scully 280's. Distribution is the same. About 10 hours a week go into each 10-minute newscast.

There you have our story to date, except for this. The only reason the Westlink Radio Network is around is because you have given it your personal vote of confidence in two ways. First, by listening to it and providing material for it. You have also contributed to the fund administered by Dr. Norm Chalfin, K6PGX, which helps defray part of our approximately $700-a-month operating expense. I want to take this opportunity to say thanks to all of you for this support, It is you who make it all worthwhile.

Addendum

Anyone wishing to contribute to the Westlink Support Fund can do so through Dr. Norm Chalfin, K6PGX, P.O. Box 463, Pasadena, CA 91102. Please make checks payable to The Westlink Radio Network. Also, those who wish to provide story information can reach the producer Bill Pasternak, WA6ITF, at 28197 Robin Ave., Saugus, CA 91350; (805) 251-7180.

Finally, it should be noted that the subscription news service known as *The Westlink Report* is a separate entity from the Westlink Radio Network. The latter is owned by Poco Press Inc., and has been granted permission to use the Westlink name. Poco Press provides no remuneration to the Westlink Radio Network for this license. Bill Pasternak, WA6ITF, also serves as editor of *Westlink Report*, but is not salaried. □

AMATEUR RADIO IN PUBLIC SERVICE

New York couple takes part in 'saga'

Arthur Greenberg, W2LH

Amateur Radio as a hobby is great. When it is used for service or emergencies, it is exciting and rewarding. Madeline W2EEO, and I, W2LH, have been involved in many events utilizing our ham station to help people in many ways.

A few months ago, a neighbor's son here in Wading River, New York — with whom we were not acquainted — knocked on the door. He had learned we were radio amateurs and asked if we would be able to handle radio communications for a ship that was to sail out of Cape Verde Island, Africa to Newport, Rhode Island. We do have a good station and equipment, and said we would be glad to help, provided the ship had adequate Amateur Radio equipment. We showed him our station and bid him "adieu."

Some weeks later, a phone call came through from Maureen Feissner, AI3R, of Pennsylvania, saying that Julio Vera Cruz, D44BC, wanted to speak to me on the 20-meter ham band. Julio is an amateur in Cape Verde Island, and he told us that Ted (our neighbor's son) was in his station.

That was the beginning of a "saga."

The two-masted schooner, *Ernestina* (originally *Effie M. Morrissey),* was being prepared to sail to Newport, Rhode Island within a couple of days. Michael Platzer, an American United Nations representative on African Affairs, had to be contacted to arrange for shipment of emergency supplies. The schooner was to sail on 7 July with eight Cape Verdians and eight Americans as the crew.

It turned out that the *Ernestina* was a gift from the Cape Verde government to the United States, with its final destination being New Bedford, Massachusetts. It was interesting to learn of the strong ties between the two governments. The population of the Cape Verde Islands is of Portuguese background, and many of them had emigrated to the United States, with many settling in New Bedford.

The voyage started on 7 July 1982, with a projected arrival time in Newport of approximately 25 days. Stephen Platzer, the Amateur Radio operator, was licensed by the Cape Verde government as D4BI. He had secured an old Amateur Radio transmitter-receiver from the United Nations — a Yaesu FT101 of about 100 watts power. A wire antenna was strung between the masts, and the unit worked.

I was in daily constant touch with the *Ernestina* with cooperation of Julio D44BC in Cape Verde, who was able to speak to Capt. Alberto Lopes in Portuguese, and with Maureen AI3R in Pennsylvania who was able to supply the daily weather reports in the area of the ship. When one of the operators was not able to be heard, relay stations were used — Red Counsell, W1BNS, in Massachusetts and Bob Cross, K1RSZ, the New Bedford anchor advising the Arrival Committee. When I was out of hearing contact with the *Ernestina,* Bing W4IB, of Tamarack, Florida, acted as relay to me. I was in continuous contact with the United Nations as to the latitude, longitude and daily progress of the ship. Contact was held daily at 3:00 p.m. EST to conserve the battery on the ship. It must be understood that the only electricity on the ship was the battery used for the riding lights and Amateur Radio equipment.

The United Nations, parents and relatives were constantly being advised of the condition of the crew and progress of the ship. Julio, in Cape Verde, kept his government and the families of Captain Lopes and the eight crew members likewise advised. It was an inspiration to speak to members of the families with such personal information.

Since there was no refrigeration on the *Ernestina,* the food provisions were basically four pigs, 15 chickens and whatever fish could be caught. These items were used at the disposal of the chef and really did not sit well with the American crew. The *Ernestina* had no engine on board. The voyage took 39 days, instead of the anticipated 25 days. It is difficult to imagine the anxiety of the parents and families of the crew when the projected arrival kept being delayed by calm weather.

Built as the *Effie M. Morrissey* in Gloucester in 1894, the *Ernestina* sailed as a fishing schooner for three decades before becoming the flagship of Capt. Robert Bartlett, an Arctic explorer who had been a member of Adm. Robert Peary's North Pole Expedition. In 1926, the *Morrisey* sailed on a Greenland expedition under the auspices of the American Museum of Natural History. Amateur Radio equipment was on board and operated by Ed Manley, 8FJ. In Greenland, a land-operated station DG1XL was handled by Paul 2AZA. On numerous expeditions to the North Pole, the *Morrissey* used Amateur Radio for constant communications back to the United States.

In 1947, the *Morrissey,* renamed the *Ernestina,* began a third career as a passenger and cargo vessel in trans-Atlantic voyages to and from the Cape Verde Islands. At least 12 of those voyages originated from New Bedford.

Madeline and I were invited to meet the *Ernestina* upon its arrival at Newport, Rhode Island. A boat was chartered to meet her between Montauk and Block Island; what a thrill it was to have it come into view with all sails unfurled heading toward Newport!

When we arrived at the dock to greet the ship, I was calling "Stephen! Stephen!" to locate the radio operator. What excitement when the American crew ran over to me, embraced me and expressed recognition of my voice. They had all been locked in the tiny radio room, hearing news of their families — their only touch with the outside world, saying that my voice would always be remembered. □

Stephen Platzer, D4BI, was the *Ernestina*'s Amateur Radio operator during the boat's voyage across the Atlantic Ocean.

The schooner, *Ernestina,* sailed from Cape Verde Island, Africa to Newport, Rhode Island in 39 days.

Storm alert!

Reynolds Davis, K0GND

The Lancaster County (Nebraska) ARES responded to the posting of a "severe thunderstorm warning" at 4:00 p.m. on Friday, 6 May by alerting participants through our auto-call tone alert, and then dispatching respondents to our pre-assigned storm watch (spotter) points. Although no damaging conditions developed, the storm front did pass through the area with a 51 mph gust front.

The net was secured at 6:30 p.m. Eighteen amateurs participated in the alert. □

Repeater club efforts appreciated

On Tuesday night, 12 April, at 9:53 p.m., a nightshift worker suffered flash burns and a broken leg when fire broke out inside the Heraeus-Midland Processing Company, Pomona, New York, in Rockland County.

A tremendous explosion and fire at this chemical/film recycling plant caused the local police and county sheriff's deputies to evacuate nearly 250 homes near the plant because of the fear of toxic fumes from the burning acids and chemicals used at the plant. Approximately 400 people were evacuated.

The Rockland Repeater Association (147.165 MHz) was called into service by the Rockland Department of Emergency Services and the American Red Cross in order to establish rapid and effective communications between the emergency shelters. The shelters were set up at two separate firehouses and a mobile communications van brought to the disaster site. A 2-meter rig that had been permanently mounted alongside the police and fire radios in the Rockland County Sheriff's communications van maintained a very effective and efficient flow of information between all the agencies involved in the disaster.

Obtaining an emergency supply of insulin for an elderly diabetic evacuee, locating missing persons for concerned relatives, obtaining cots and blankets for the shelters, and helping to feed the evacuees and over 200 emergency workers, as well as the frequent use of the autopatch, were just some of the activities the amateurs of the 147.165 MHz, Rockland Repeater Association, were involved with.

A very special thanks goes to Alan Horowitz, WA2ONQ; Morty Leifer, K2ML; Gary Roebuck, WA2ZRX; and John Samuels, K2CIB, who spent all night Tuesday and until 3:30 a.m. Wednesday morning providing a community service. □

Marathon Safety

Letters to the Editor
Ventura, Star Free Press

Our local radio club, The Poinsettia ARC, is to be commended for their volunteer work during the 17 April Heart/CAAN Run. Unbeknownst to most runners and spectators, three medical emergencies occurred on the marathon course, about seven miles from the finish line.

Quick thinking by these radio amateurs enabled news of the disabled runners to be radio-relayed to the medical staff at the finish line. One emergency was serious enough to require an ambulance to be dispatched to the scene. All three runners are reported in good condition.

I think that others who ran in this event should know that their health and safety was being watched by these dedicated radio people, without whose assistance this event would not have been possible.

— Poinsettia ARC, Ventura, CA □

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Boat missing!

Douglas Smith, WA6GON

On Friday afternoon, 15 April, at 2103Z (1:03 p.m. PST), Amateur Radio played yet another vital role in a maritime emergency. This was the day the *Good Intention* was lost and the day Amateur Radio helped bring her home.

Doug Smith, WA6GON, was listening in on the Maritime Mobile Net on 14.313 MHz at 2103Z. Very few stations on the net had strong signals, since at the time (according to WWV), the HF bands were experiencing a severe ionospheric disturbance. A weak, fading four-by-three signal was heard, "Break break break — priority traffic!" Net Control did not hear this station, as evidenced by the station's successive attempts to attract attention. Hearing no response to the urgent call and unable to raise Net Control himself, WA6GON called the breaker directly and established contact.

The distant voice was that of Archie Kelley, KD6PH/MM2, the "Ham Hero" of this event. Archie was aboard his sailing vessel, the *Shary Lee,* just off the coast of Mexico near Turtle Bay. Archie began relaying the plight of the 33 ft. white-hulled Yorktown sloop, the *Good Intention.*

Archie said he had joined a marine search that two other vessels had initiated 16 hours prior to his arrival, for the vessel *Good Intention.* None of the searchers had been able to contact shore stations for assistance on marine radio circuits; therefore, WA6GON was requested to contact the nearest Coast Guard Search and Rescue headquarters.

Archie advised that the *Good Intention* had established VHF marine radio contact with another vessel — the *Timberwolf* — at 0530Z, 15 April. The *Good Intention* reported she had lost her mast in a 35-knot wind; further, that she had rigged a makeshift sail, since she had no auxiliary engine. The *Good Intention* and *Timberwolf* arranged a rendezvous so that *Timberwolf* could tow *Good Intention* into Turtle Bay. Her two male passengers — both in their 50's — were not injured.

The *Good Intention* proceeded downwind at 0530Z from her last reported position of 115° 5′ West, 27° 40′ North, 5 miles off Rompiente Point. Winds at the time were 30 to 35 knots at 300° magnetic and her course was 150° magnetic.

The *Timberwolf* later arrived at the rendezvous point near Turtle Bay, but the *Good Intention* never arrived. *Good Intention* had reported that her battery was becoming weak and evidently lost the use of her marine VHF radio as *Timberwolf* was not able to reestablish radio contact. *Timberwolf* began a systematic search along with another vessel that had volunteered to assist, the vessel *Darkstar. Timberwolf*'s fear was that the *Good Intention* had been swept into open sea, unable to navigate.

Timberwolf and *Darkstar* searched up and down the coastline all evening and early into the next morning; at 1535Z, the *Shary Lee* — with KD6PH/MM2 on board — arrived in the Turtle Bay area. *Timberwolf* relayed to Archie the plight of the *Good Intention* and Archie in turn to WA6GON in Concord, California.

Over a period of about four hours from 2103Z, WA6GON relayed pertinent information to and from Lt. De Young at Coast Guard Search and Rescue Headquarters in Long Beach, California by telephone.

Archie not only provided the Coast Guard with the first notice of this missing vessel, but was able to plot a course for the drifting *Good Intention* based on his knowledge of local currents and winds. KD6PH/MM2 also took it upon himself to dock at Turtle Bay and notify Mexican authorities there. The Militia at Turtle Bay in turn began a notification to all local vessels to be on the lookout for the crippled sloop. No search and rescue service was available at Turtle Bay, so it was up to boat captains to keep a watchful eye.

The Coast Guard broadcast an Urgent Notice to mariners, based on the information Archie was able to provide. The Coast Guard was ready to dispatch a C-130 aircraft from Sacramento, California to conduct an air search for the *Good Intention* the next morning if their inquiries through other official channels proved unfruitful.

After about 0100Z, Archie and WA6GON had really done all they could. The Coast Guard had obtained from Archie as much information as they needed, and all appropriate authorities had been notified. Archie tied up at Turtle Bay to make repairs and spend the night. GON went to work one hour late. All that could be done now was to wait.

At 1711Z (9:11 a.m. PST) on Saturday, WA6GON received a welcome phone call from Lt. De Young who said he had received a late night telephone call from a Florida amateur, Dr. Ernest Lavine (call sign not available), who said the *Good Intention* had been found and towed to safety at Turtle Bay. This information was verified for Lt. De Young a few hours later by his Amateur Radio contact in Sherman Oaks, California — Bill Jones, K6IKI — through the Manana Net (meets 1900Z 14.340 MHz, Monday through Saturday). A happy ending to what could have been a very sad story.

Amateurs participating in the effort to save the *Good Intention* as recorded at WA6GON were: KD6PH/MM2; Bill Parkinson, K6IMV (Big-Gun relay and moral support for GON); Frank Popovics, W4EZI (relay); K6IKI; and WA6GON. A round of applause also goes to the patient stations who were listening on the net frequency during the time the critical traffic was being passed.

At this writing, it is unknown if the *Good Intention* was located as a direct result of Amateur Radio participation; however, the efforts of all amateurs involved did not go unnoticed by the Coast Guard. Lt. De Young passed on, "Job well done!" That's all that really matters.

Transceivers trick trashers

Lenore Jensen, W6NAZ

A new project for AREST — Amateur Radio Emergency Surveillance (or Support or Service, depending) Team — of the Los Angeles Police Department (LAPD) has dealt successfully with illegal trash-dumpers.

The beautiful Mulholland Drive scenic highway atop the Santa Monica Mountains has lately been subject to ugly heaps of trash left by unknowns. Residents have complained loudly, and LAPD set about correcting the situation.

Not only have heaps of rubbish and old cars been dropped down the steep slopes from the road, but often large objects — such as a water heater — have been left on the highway itself, creating serious hazards to unsuspecting motorists.

The Amateur Radio operators were called by Officer Frank Pettinato, WB6ELR, who coordinates their efforts out of the West Los Angeles Division. He asked AREST volunteers to station themselves at certain points and watch for illegal dumpers. Upon seeing such lawbreakers, the amateurs were to advise two patrol cars in the area who carried amateur operators.

Very alert "ears and eyes" spotted a good many tossing objects from pickup trucks, large trucks or ordinary vehicles. Seven arrests were made in one evening. The possible fine is $500 and/or six months in jail! It is expected that such surveillance activities will soon correct the situation, saving the city huge amounts of money in clean-up.

A couple of the offenders were driving commercial trash trucks and apparently decided to get rid of their loads "the easy way" rather than deliver to the official dump location.

Channels 7 and 13 in Los Angeles carried news of the event — a nice bonus for Amateur Radio. □

Should we be prepared?

Gary Hills, KA4KJI

Living on the East Coast in central North Carolina, where no catastrophic events occur (a river may top its bank or a tornado warning be announced), should we feel the need to be prepared?

The answer to that question was answered on 15 February — a cold, icy day in Alamance County, when three high school students on their way to school in a car driven by one of them, skidded and slid into the Haw River.

The driver, a young lady, managed to escape with the help of the vice principal, who was there due to another slight accident. But the other two were less fortunate. One young girl was trapped in the submerging car, and a boy of 16 was swept away by river currents.

The first call went out for emergency rescue units in the surrounding counties, but after several days of unsuccessful searches for the young boy, an all-out effort was decided for the weekend of 19-20 February. Dave Cauble, head of Emergency Managment, put a request to Billy Mitchell, WB4SGA — our Emergency Coordinator — to alert and request all ARES members able to help provide communications at various search and command areas.

Billy Mitchell, WB4SGA, made an appeal and started things forming on the local repeater net on Friday, 18 February, and set up net control for Saturday and Sunday at the state emergency mobile communications van, manned with the help of Mark McIntyre, WA4FFW; John Hurdle, N4IEY; and Jeff Felshaw, WB4BHQ.

John Robinson, K4NV, agreed to act as secondary net control on the 146.07-.67 repeater Saturday and Sunday to help keep track of personnel and any such other duties as became necessary. A simplex frequency of 146.52 was selected to handle the bulk of communications between assigned areas.

At 7:00 a.m. each day at the high school, a staging area was set up for all personnel to check in and await assignments. All ARES teams were utilized in two half-day shifts each. Manning staging area communications were Hank Harrington, K4DWX, and his XYL, Babe K4DWY, with Edwin Baldwin, K4FHB, and Danny Poole, WD4OSG.

A boat landing area was set up, where some 20 boats were launched and manned by local rescue personnel and personnel from nine counties and Special Forces divers from Ft. Bragg, North Carolina, along with a diver from Danville, Virginia. Admirably covering communication tasks here were Chip Groome, WD4JFG, and Mike Chockley, WB4GSN, with relief by Matt Maggio, N4GSV; Gary Hills, KA4KJI; and Ralph Cody Jr., N4BJD.

A search area was set up on Sunday, 20 February, near the Glencoe Dam, with Ted Hogan, K4VAA; Charles Smith, WA4TYJ; and Bill Landolina, NJ4M, handling communications.

The search on Sunday proved successful when, at around 2:00 p.m., the boy was found about a mile and a quarter downstream from where the accident occurred.

A total of 34 ARES members participated throughout the weekend on site, with many more standing by.

Praise and recognition from several of the rescue units and a letter of commendation from the County Commissioners were satisfactory proof that: Yes, we are willing, able, and — above all — prepared for emergencies. □

Blizzard brings amateur assistance

Margaret Bevan, N3BMB

The "Blizzard of '83" will not soon be forgotten in Anne Arundel County, Maryland. The snow began in earnest on Friday morning, 11 February. Schools were kept closed. Workers, excused early, struggled to get home. By the next morning, 23 inches had fallen, blown into much higher drifts by a blizzard-like wind. The county was virtually "closed down."

The Anne Arundel ARES declared full emergency status at 1600 on 11 February, and for 60 continuous hours thereafter, the repeaters of the Anne Arundel Radio Club (W3VPR) and of the Maryland Mobileers Amateur Club (WA3PJQ) were used to provide communications for the National Guard, the Red Cross and the local hospitals and nursing homes. Four-wheeled vehicles were dispatched to transport medical personnel from their snowbound homes into hospitals and nursing homes, to deliver medicines, to carry patients to the kidney dialysis center, etc.

Primus Richardson, Director of the Office of Emergency Management, and Kurt Fritsch, WA3TOY, Emergency Coordinator of Anne Arundel County and Assistant Radio Officer of OEM, were on duty 60 and 70 hours, respectively. In addition, 30 amateurs who left their warm houses to serve in the emergency logged a total of 334 man hours. They worked in central control, and drove or rode along in emergency vehicles to provide constant communications with headquarters. Nineteen vehicles — belonging to the Maryland National Guard, amateurs and other local volunteers — made 110 transports. The 30 radio amateurs taking part made over 650 radio transmissions. The average service time per man was 12 hours.

On Friday morning, Ken Stuart, W3VVN, prior to full emergency status, manned WA3PJQ from 1000 to 1600 on priority alert status.

Amateurs who gave outstanding service, in addition to WA3TOY and W3VVN, were: Al Jeweler, N3BIN; John Trickey. KB0IW; Don Kadron, W3WTU; Ted Pyle, N3BGB; Bill Hill, K3INT; Bob Anderson, W3HEI; and George Fritsch Jr., WA3TOX. □

Leak, evacuation — and Amateur Radio

Shortly before noon on 26 January, a leaking valve caused a rupture in the feedline to a chemical storage tank resulting in the spilling of 5,000 gallons of sulfuric acid and muriatic acid. This occurred on the far east side of Indianapolis, Indiana.

There was one serious injury. About 2,500 residents, workers and school children were evacuated. The American Red Cross was requested to set up shelters. Craig Widener, the Chapter Administrator for Emergency Services, contacted Malcolm Malette, WA9BVS, and others in the Chapter's Amateur Radio Club to provide emergency communications services for the operation. The members responded immediately, establishing operations of the center at the chapter house, WA9LGQ, shelters at the Police Academy and a local high school. Initial mobile operations were conducted on the 146.16/76 repeater. As soon as the equipment was established at the shelters, the frequency was moved to 147.42 simplex.

The ARC Amateur Radio Club operators at the two shelters passed traffic between the center at the chapter house and the shelter coordinators at the shelters.

It was after 5:00 p.m. before officials determined it was safe to close down the operation. The members of the ARC Radio Club stayed on the job until the conclusion of the emergency. In addition to their task as operators, they provided transportation for volunteers, helped with reports, carried supplies and any other services they were called on to perform.

The total Red Cross operation was very successful and received personal thanks from William H. Hudnut III, mayor of Indianapolis. Craig Widener, the Administrator of Emergency Services, Indianapolis Area Chapter, sent a copy of the mayor's letter and a personal letter of thanks to each radio club member who participated.

The ARC Amateur Radio Club is to be congratulated for a fine job. The many hours of practice and training these members participate in paid off. Each participant knew what to do, how to do it, and how to operate the equipment. Club members participating included: Jerry Prestel, KA9BSD; Malcolm Malette, WA9BVS; John Carmichael, N9CKU; Richard Emmeiman, WD9CYI; Harold Worth, KB9HH; Philip Pash, WD9ICY; Jerry Edgerton, W9LWY; Robert Droker, W9MOY; M Galloway, K9OXA; and Arthur Hopkins, WA9VQO.

— *Indianapolis Repeater Assn., IN* □

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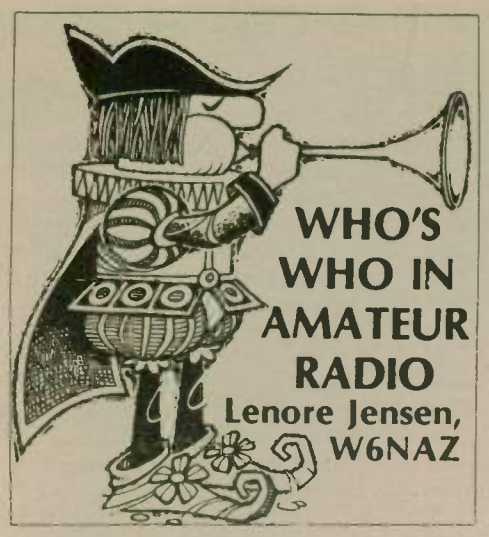


The new challenge to DXCCers, SMOM through IA0KM, is largely due to the efforts of Italian attorney Mario Gallavotti, I0MGM.

In 1980, he and four others responded to an urgent request to establish a ham station for INCORA (International Committee for Amateur Radio for UNICEF) at the time of the disastrous earthquake in southern Italy. Modern antennas and rigs went into a 17th century building in the mid-Rome four-acre enclave of the Sovereign Military Order of Malta (SMOM).

"We acted as an official 'post office,'" explains Mario, "handling 2,800 health and welfare messages in less than five days from those in the stricken area to their friends and families around the world, as well as in Italy. Later, we received much praise from public authorities."

SMOM is probably the world's smallest country but has knights (members) all over the globe. Mario continues, "We exchange ambassadors and have diplomatic relations with 40 countries, we have our own guards, passports and our stamps from our post office are highly prized by collectors. SMOM is dedicated to providing assistance to charitable and social needs and especially to its many hospitals all over the world. For instance, I believe we were the only European country assisting the United States in Saigon where our hospital tended many Americans."

"SMOM is a worldwide organization whose history dates back to 1099. Originally, it was on the island of Rhodes, and when displaced by foreign armies, moved to Malta. When forced to leave, SMOM established itself in the midst of Rome on its own extra-territorial area."

Honored by being made a Knight of Malta, Mario spent many months collecting historical data and corresponding with ARRL until SMOM was named an official DX country. He's now the QSL manager — no small task. Twice a year, IA0KM operates formally for DX purposes. One can imagine the pileups!

His research found an interesting treaty between SMOM and the United States dated only four years following our independence. "At that time, the SMOM government had a much stronger fleet than that of the States. The treaty gave reciprocal help against pirates, particularly to American ships trading in the Mediterranean."

The other operators are Al Porretta, I0AMU; Tony Privitera, I0IJ; and Tony Vernucci. I0JX; and Mario Monaco, I0MXM, who is chairman of INCORA.

Mario Gallavotti's home station boasts an antenna — "the highest in Rome" — atop a 60-foot tower on an eight-story

apartment building high on a hill. He's a busy man but does his best to find time, such as early mornings, to chase DX. He's also an avid contester with many awards.

He was 14 when he earned his first license, the *Patente,* which only permits operation at another amateur's station. Two years later, he earned the higher grade *Licenza* and the right to his own transmitter. (Now the minimum age is 18.)

His excellent English is due, in part, "to my QSOs with English-speaking hams. Amateur Radio is a wonderful way to learn!" Another help was during his military service with the Italian Air Force, working in Intelligence, and the opportunity to make friends with Americans in NATO programs.

Indeed, he is a friend of Americans. As a prominent attorney (with the firm Fini, Ferraro and Gallavotti), Mario travels extensively to offices in many parts of the world. Recently he opened one in Los Angeles, as well as New York City, to handle corporate or probate matters in Italian law.

He's the chairman of the Roman Bar, Young Lawyers section, which he represented at the American Bar Association; he has an honorary membership in the American counterpart of his section.

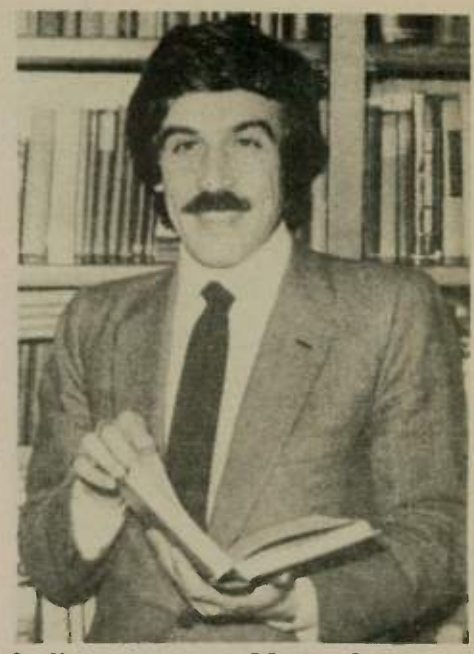
One of his interesting assignments in Rome was to act as liaison and interpreter of Italian law for CBS News during the well-publicized trial of the man who attempted to assassinate the Pope.

Mario speaks several languages, especially French. His education included Greek and classical Greek literature. But his pride is in the new DX status of the Knights of Malta station. He's also proud of the *CER Emergenza Radio* public service networks conducted by Italian amateurs. "We have a beautiful net of repeaters on the mountains up and down our country. We have regular drills." The tragedy of the earthquake is not forgotten.

"There are now so many more hams than the 4,000 when I was licensed in 1966. Today we are approximately 60,000!"

Now they have a no-code license on the higher bands and the general character of the hobby is somewhat changed.

Asked if he has ambitions for his



Italian attorney, Mario Gallavotti, I0MGM ***(Photo by Bob Jensen, W6VGQ)***

future, Mario smiles and replies, "Just to be a happy father of the family, to be a good lawyer and, of course, to have a good ham station!" He and his wife, Caterina, have two small, bright sons.

We're proud he's one of us. □

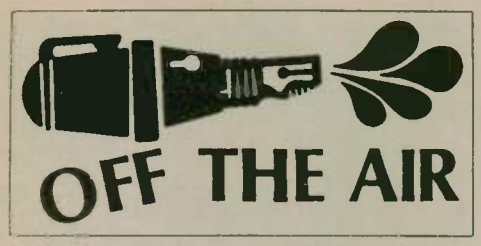
DU ham

(continued from page 1)

tacts, using wire dipoles and a gas-driven generator for power. Cito was transported to the islands on a Philippines Air Force C-130 aircraft. While the brass went fishing, Chito went hamming!

His contacts were spread geographically throughout the world, as propagation was fair to good. Operating virtually on a 24-hour basis, Chito had very little sleep or rest. He doesn't know when his next trip might be, if ever, but he recommends all DXpeditions take at least one tribander, two transceivers and three operators!

Those who made the Spratly contact should send the required to DU1CK, 10-12 Avenue, Cubao, Quezon City 3008, PHILIPPINES, with green stamps, as IRCs are unknown in the Philippines. □



Call Sign _____

Name _____

QTH _____

UTC Start ____ Stop _____

RST-His _____ Mine _____

Freq. _____

QSOing easy with this stamp

With Field Day approaching, here's an idea someone might be able to use. It's not new, but a great help nevertheless.

I had a rubber stamp made (pictured here) and stamped a bunch of scrap paper for logs when a scribe isn't available. It allows me to work many QSOs without stopping, which I then log at my leisure. I have used it for a couple of years, and it works great. Of course, Xeroxing would be easier, but not all of us have that capability.

A.G. CHAPMAN, KA6EZH
Temple City, California □

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Amateurs make their opinions known

The no-code license idea throws salt in the eyes of those amateur operators who put forth efforts to obtain their licenses. A greater appreciation of Amateur Radio is brought about by having a standard set high to obtain a license.

I have a lot of respect for anyone who is willing to work for something. You will find many looking for something free and a small percentage willing to work for it.

Who will be satisfied with the no-code license? Not the fellow who's willing to work for what he gets. Let's keep the integrity of Amateur Radio — not destroy it. We would be better off to raise the requirements than lower them.

What has happened to our thinking these days, fellows? Should everything decay like a log in the forest? I urge fellow hams to speak out; make known your convictions on this no-code license.

DEL ROSS, W5OQA
Grove, Oklahoma □

●●●

The Honorable Jack Brooks
House of Representatives
Washington, D.C.

Dear Jack:

Thanks for your assistance in our difficulty with the FCC in NPRM 83-28.

We note that Mr. McKinney, head of the personal and Amateur Radio services, stated they "only planned to place the new no-code licensees above 30 MHz," where code is seldom used. This is just the "foot in the door" we are trying to prevent. At the World Administrative Radio Conference in Geneva 1979, he disregarded instructions and asked for abolition of code on all amateur frequencies. This vote surprised the other nations of the world at this conference. However, the suggestion by McKinney was voted down.

The present FCC and Mr. McKinney are stating that Canada and Japan have a "no-code" amateur license. This is true — in Canada there are very few licensees and enforcement of the law is strict; the same holds true in Japan where there is even greater enforcement of the laws.

What they do not tell is that England has had, since 1967, a license similar to the FCC proposed "no-code license" and the situation there on similiar frequencies has become chaotic. It brought in a new breed of radio people that have no respect for rules and regulations and the licensing authority, the government post office (the radio licensing authority), has given up on enforcement. *Like our FCC did on its creation*, CB service.

One British amateur said all their emergency communication networks (amateur) and their repeater stations were jammed most of the time. He further stated that profanity and obscenity is so bad that most British amateurs do not use these frequencies in their homes where their wives and children are able to hear this trash.

This is why we, the Amateur Radio community, are writing to you to ask that you take a firm hand with the FCC and Mr. McKinney, so as to prevent this from happening here. Mr. McKinney is and has been pushing the no-code idea for some time. Seems almost like a personal crusade.

The FCC and Mr. McKinney could not enforce the CB service rules when they had better funding and manpower. How do they expect to enforce the rules and protect us *now that they have to cut back on their services? Now is not the time to start a new type license,* with all the new problems it can create.

I must point out again that no FCC commissioner nor Mr. McKinney have an Amateur Radio license, and their knowledge is, to me, very minimal so they can not really justify their "Big Brother knows best" attitude. Unless you operate an Amateur Radio station, you can't know the facts. The Commission says surveys indicate a need for a "no-code Amateur Radio license." The question is, whom did they survey and when? How large? We have roughly 400,000 Amateur Radio operators licensed now, and most of our clubs have ongoing training classes. We now have severe crowding and we strive for quality technical people.

I note that commissioner Ann Jones has resigned. May I suggest that in approving a new commissioner to fill that post, it be filled with a person who has had radio experience in communications, military electronics and plenty of practical experience. The FCC can be a very vital bureau *if adequately funded and staffed by qualified people.*

Please take a little of your valuable time to take a hard look at what the FCC and Mr. McKinney is trying to force down our throats, and do what you can to have them abandon this NPRM 83-28 idea. *We the taxpayers don't want our standards lowered by some "idealistic bureau and bureaucrat" no matter how good the intent.*

ARTHUR P. KAY JR., W5APX
Port Arthur, Texas

●●●

The contention that the Morse code requirement for an Amateur Radio license has served as a barrier to the bright, young computer-oriented people who might otherwise enhance the Amateur Radio Service is without foundation. A test which has been passed by a 7-year-old child could hardly be considered a barrier to people who could qualify for MENSA membership.

People don't appreciate unearned privileges, and a good example is the 11-meter citizens band. Monitoring these channels will yield much crud and little communication. However, the tone of the Commission seems to be the intention to ride roughshod over the wishes of the amateur community, and that the only question is what form the no-code license will take.

An approach that would do the least violence to the established structure would be to set up an experimenter's license limited to digital communication in bands above 50 MHz with A2 or F2 the only modes involved. Communication between computers does not involve blabbering on phone, and with no phone privileges such a license would be more acceptable to the amateur community.

DEAN STRAND, KA0KKZ
Davenport, Iowa □

Share your knowledge with your fellow amateur and Worldradio reader . . .

Former CBer warns against no-code

I thought I would fire off a broadside about the proposed rule making, concerning the "No-code" amateur band. I cannot understand why they would even call a no-code band an amateur band. In the first place, CW has been a vital part of radio communications since the earliest days of Amateur Radio.

Some background on me:

In 1954, I was introduced to Amateur Radio through an old Majestic Monarch of the air — floor model AM receiver. It had an "international and police band" up to about 18 MHz. (It's been a long time since the PD was down there, and on AM at that, but down there they were.) The police broadcasts were just above the broadcast bands at that time, in several cities.

In 1960, I became one of the first CBers. (Incidentally, I was very legal.) I used the CB for personal business, (believe it or not); *NO* DX chasing at all. It seems I was one of the very few who did that. Also had a legal license.

I got interested in electronics through a local TV shop, when I went to work there part-time. I took an NRI course in complete communications, but still had little interest in hamming. I dropped CB because of the garbage on it.

Twelve years ago, I went to work for the U.S. Army, doing repair work on military equipment. I was working beside two hams, and they lead me to become interested in Amateur Radio.

I decided to get my ticket in 1979. I knew I would have no trouble with the theory because of my electronics background. I began to study the code for only about 2½ hours a week, and within four months had my General license. I never was a Novice. The next year I got my Advanced, and am now interested in the Extra ticket. CW never was any hold-up; neither was theory. I simply was not interested enough to get a ticket.

My interest in Amateur Radio came from association with other amateurs, and what little electronics I have comes from schools, (six of them), and my operating techniques come from the military.

One final statement: I did *NOT* get any electronics knowledge from the CB. I did not get operating expertise from the CB. CB did nothing for me at all, and the proposed codeless band will do nothing for anybody but encourage the same chaos and garbage that ran me off the CB.

CHARLES BENNETT, N5CFN
Rt. 3, Box 50-B
Hattiesburg, MS 39401

(I did not know what I was missing by not being a ham all these years, and I have some old 807 tubes in good condition, if someone wants them — absolutely *FREE.)* □

May letter brings heated response

I've read several pros and cons on the no-code Amateur "Ham" Radio license, but when I read the comments of the Albatross Club in San Diego, California, in your May issue (page 3), I had to respond.

It looks like the whole country is getting lazy; those who want a no-code license confirm this belief. I received my Technician license in 1978 and have tried to upgrade a few times since then. I

(*please turn to page 20*)

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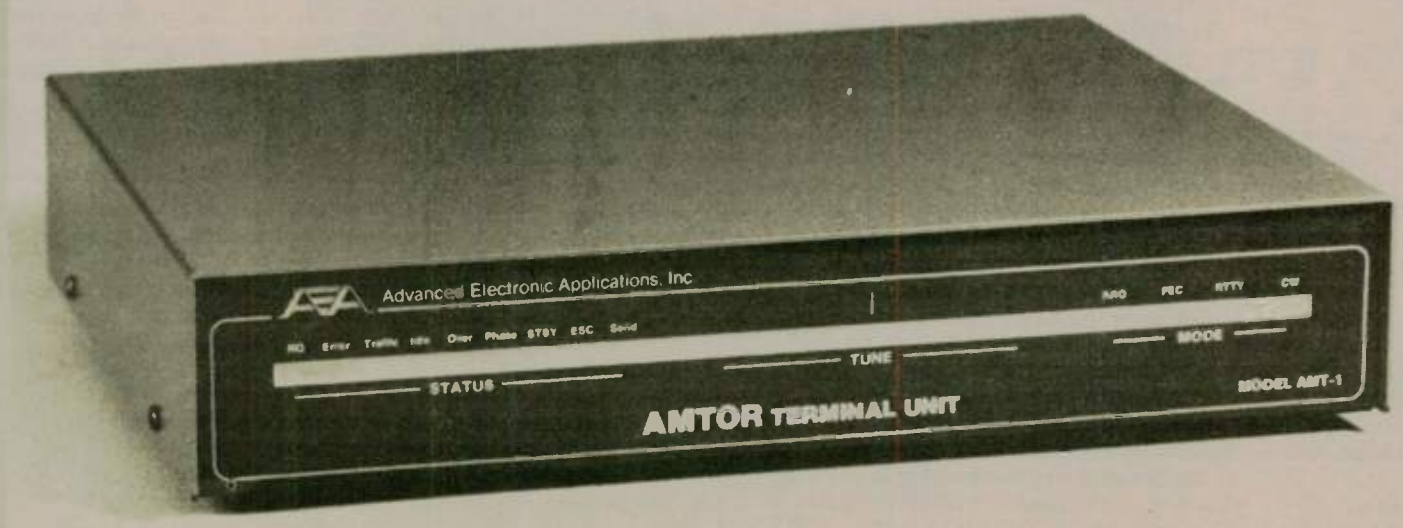

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AMTOR is the system of error correcting RTTY which has been rapidly overtaking conventional RTTY in Europe, just as its marine equivalent, SITOR, has been taking over in ship to shore communications.

It was originated by Peter Martinez, G3PLX (see June 1981 QST, p. 25). He first interpreted the international marine CCIR 476-1 specification for amateur use. Virtually all of the 400+ stations presently on AMTOR world wide are using software/hardware designs originated by Peter. The AMT-1 is a proven product which represents his latest and most highly refined design. It represents the culmination of over three years of development and on the air testing, and sets the standard against which all future AMTOR implementations will be judged.

Not only does it incorporate the latest AMTOR specification, but it gives superlative performance on normal RTTY, ASCII and CW (transmit only). As well as some fairly incredible real time microprocessor software, the AMT-1 boasts a four pole active receive filter, a discriminator type demodulator, a crystal controlled transmit tone generator, and a 16 LED frequency analyzer type tuning indicator, which is very easy to use.

Driven from a 12 volt supply, the AMT-1 connects to the speaker, microphone and PTT lines of an HF transceiver and to the RS-232 serial interface of a personal computer or ASCII terminal. All mode control is via ESCAPE and CONTROL codes from the keyboard (or computer program).

It used to be that C.W. was the ultimate mode for "getting through" when QRM and fading were at their worst. That's no longer true — AMTOR will get through with perfect error-free copy when all other conventional transmission modes become useless.

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Off the Air

(*continued from page 18*)

operate CW and learned to like it very much. However, I *do not* agree with the Albatross Club that: 1) They may give no-code tests to each other, and that tests consists of 10 questions on how to operate a radio. 2) Should the no-code pass, new no-code hams be allowed to take 50 percent of the bands that hams use every day for CW, phone, etc. 3) The no-code license be permanent.

If new co-code hams were allowed on HF (below 30 MHz) and take half (or any) of the frequency bands that we have, it would be like stealing! By International Radio Regulations, a person *must* prove that he/she is able to copy whatever speed is necessary for the license they are trying to upgrade to. If he/she fails to pass the required code test and talk by voice on HF via ham radio, it's illegal! And how about the thousands of hams who have struggled with code, got their license and work CW or phone every day because they were able to pass code tests, and feel like they have accomplished something? Wouldn't it be unfair to them? The FCC hasn't seen havoc until it gets thousands of no-code hams on the air. Regulation would be almost impossible, if not impossible.

I have heard about and read about cases in which some very intelligent people cannot learn code, but I believe this is only a small minority. I truly believe that 95 percent of people who try can learn code; all it takes is some discipline, concentration and some practice.

Yes, I'm just a Technician Class, I've not quite mastered my 13 wpm yet because of a physical handicap. I'm not deaf or blind, I just can't copy code well because of some neuromuscular impairment, and I'll be John Brown if somebody says they're going to get a code-free license to talk below 30 MHz (other than CB) and take away half of the operating bands of frequencies just because they want it; I've wanted it for the last five years!

LEE GROCE, N4AAD
Yadkinville, North Carolina □

Correction

Thank you for your article on the Coalinga earthquake. *One correction:* I was monitoring our Kings Amateur Radio Club repeater, W6IYY, 147.33 in Coalinga, which remained functional during the whole episode.

Jack Ebury, W6IYY, Don McNeece, K6VWF, and other Coalinga hams were on the air within minutes of the quake to give damage reports and request emergency services. Our local ARES manager, Ken Henson, KV6W, in Hanford, soon assumed net control and we were well underway.

I was able to pass some traffic from 2 meters to HF on WCARS that evening.

TED CARLSON, KD6YQ
Avenal, California □

STATION APPEARANCE

Billy N. Stokes, N6AFN, wins the Station Appearance for this month. The letter accompanying his photo follows:

"Before dismantling the shack here in California, I thought I would take a picture of it for 'memories' and at the same time submit it to you for your 'Shack Appearances' article.

"Luckily, I've been able to devote one of the bedrooms to a complete 'audio' room for both my ham shack and my hi-fi equipment. The ham station has been very comfortable for working toward the many awards through the years. The only major one remaining for me is the WAZ, which I had hoped to win before leaving California.

"I'm moving to the state of Virginia this spring and am furiously trying to upgrade from Advanced to Extra so I can put in for a new 4-land call at the same time.

"The equipment pictured is predominantly Kenwood. The transceiver is the TS820S and remote VFO, the monitor is the SM220. The 2-meter rig is the 7850 with its power supply. On the lower left of the console is an RCA 5-inch B&W TV/radio AM and FM. Above the 820 is a tape deck that is wired so as to record all combinations of activity, including my own transmissions when in QSO.

"In the upper center of the console is the switching section for antennas and various toggles for controlling the RTTY signals from the HF or VHF rigs to drive the Flesher 170 TU shown on the upper right side of the console. Next to the TU is the Curtiss keyer, and at the far lower right of the bench is the Clipperton L amplifier. The remaining rigs in the center portion of the console are an old Knight shortwave receiver and the Heath station console for timer, bridge, wattmeter, phone patch and Zulu clock.

Billy N. Stokes, N6AFN, of Staunton, Virginia, had this picture taken of his station in Canyon Country, California, before dismantling it for his move this spring. *(Photo by Eddie Costello)*

"Not shown in the picture is a Model 28 ASR teletype machine.

"For the HF bands, I get out from a Hy-Gain 3-element tri-bander atop the 70-foot Rohn sectional tower. At the 60-foot level, there is a stand-off for an inverted Vee for 40 and 80 meters. Also on the tower is a 4-element beam for 2 meters.

"Canyon Country is an ideal location — the natural elevation is quite a bit higher than the Los Angeles basin, and my house is on a mesa which rises above the local area. The Santa Ana winds are a concern this close to the Mojave Desert, so the tower is well guyed with sets at both the 30 and 60-foot heights. (In case you can't locate Canyon Country, we are about 40 miles north of Los Angeles, near the cities of Newhall and Saugus.)

"I try to keep a sensible balance in my ham activities — a bit of DXing when the bands are open, and a bit of ragchewing with the locals. I try to make at least a couple of contacts on RTTY each week, to keep my speed up on the green keys! As for CW, I have to admit it is probably the least of the modes I run; I've recently been on the key more in the past few weeks only because of the upcoming Extra exam.

"Once a month, I operate as one of the volunteers at the wireless room aboard the *Queen Mary* in Long Beach. That station is very well equipped, and we really look forward to standing the morning watch on our assigned Saturday.

"I'm going to miss the many friends here in California and the several organizations I've been associated with for the five years I've been a ham. Currently belong to the Santa Clarita Ham Club, the Southern DX Club, and the SCATS Teletype Group. Still, I'm looking forward to working 'the other half' of the world from the East once I get a new station set up in Virginia." □

American Radio Relay League

J.A. "Doc" Gmelin, W6ZRJ
Past Director, Pacific Division
ARRL Honorary Vice-President

With the exception of the matter of the proposed "codeless" Amateur Radio license, the 1983 "annual" meeting of the ARRL Board of Directors was somewhat uneventful.

Much of the time at meetings and in discussions at the Board's gathering in Hartford during the week of 17 April, was spent in deciding the action to be taken in the matter of FCC's proposal on a "codeless" license in Docket 83-28. The result was a resolution which summarizes the Board's position and which was transmitted with comments to radio amateurs by W1AW in ARRL Bulletin No. 32, dated 22 April.

Preliminary comments in the bulletin point out that "The League registered opposition to the concept of a codeless license when it was first raised," that "Following the issuance of Docket 83-28 and up to the time of the Board Meeting, ARRL has maintained an essentially neutral stance," but that "Membership opinion continues to be overwhelmingly opposed to dropping the code requirement."

The comments further point out that Board discussion led to conclusions that "No satisfactory compromise formula for a codeless license can be established in the foreseeable future."

A final statement says, "The Board is keenly aware of the desirability of encouraging more people, particularly young persons, to join the ranks of Amateur Radio."

The resolutions put the League on record as completely opposing the proposal in Docket 83-28. Thus, the League has maintained its long-standing support of amateur licenses, requiring at least a demonstration of knowledge of the Morse code.

Interestingly enough, my own contacts with operators in the Citizen Radio Service suggest that CB operators are not interested in the proposed codeless license because it does not go far enough in their view.

Most express a desire to have a "codeless" license for operation on the amateur HF bands from 160 to 10 meters, and not a license for the VHF/UHF bands. In fact, one CBer I know said that what he wants is a license to operate on all the amateur bands, requiring no test at all — codeless or otherwise.

I must point out that this CBer operates on the frequencies between the top end of the 27 MHz Citizen Band and the bottom of the amateur 28 MHz band, an operation which is not legal. In fact, this particular CBer admitted that he has often operated in portions of the amateur 28 MHz band, and plans to continue doing so until the FCC "comes to its senses and gives every citizen the 'rights' he should have to operate on the radio spectrum."

Some League members I know have chided the Board for taking such a strong stand against "no-code" without giving an alternative. If we are going to have no-code, why not establish it on some amateur band away from the major amateur operation?

I wonder why the Board did not start a letter-writing campaign, as was done some years ago when a Class E CB was proposed for some or all of the amateur 220 MHz band. That particular campaign, during which each Director sent a personal letter to each member of his division requesting support, was highly successful. If the Board feels as strongly about its stand on Docket 83-28, why not have a similar action now?

It remains to be seen how effective the League's resolution on Docket 83-28 will be. There is some feeling that what some Commissioners really desire is a codeless license for the amateur HF bands.

Of course, such cannot be established unless the FCC chooses not to abide by the provisions of the treaty signed in support of the results of the World Administrative Radio Conference (WARC-79) which was adopted with a worldwide code requirement for operation on the amateur bands below 30 MHz.

In establishing the U.S. position at the conference, the FCC did not support the code requirement, and in fact, proposed that it be eliminated. The International Amateur Radio Union, which is headquartered at ARRL Headquarters, successfully opposed this position.

U.S. amateurs who support the League's stand in Docket 83-28 should write to the FCC and Congress defining the reasons for their opposition to the proposed "codeless" license.

In other matters taken up at the April Board Meeting, the Directors voted to reaffirm its support of the HF phone band expansion proposed by the FCC for 80, 15 and 10 meters, and directed that favorable comments be filed in the matter of the establishment of a 10-year license term and two-year grace period. The latter has already gone into effect.

The Board also approved a revitalization plan for the Intruder Watch, which monitors the amateur bands for any unauthorized operations by stations in other radio services in the amateur bands. This is difficult in the amateur bands which are shared, but by careful monitoring it will be possible to protest operation by such unauthorized stations in the amateur-only frequencies.

The Board also adopted the recommendations of the VRAC that 2-meter splinter repeater channels be upright east of the Continental Divide to be phased in over a five-year period. They made plans for a more continuous Washington, D.C. presence.

The Directors then voted for the eventual autonomy of the CRRL in Canada over a five-year period.

The Board faces other problems that have plagued the amateur ranks in recent years, including the many cases of "malicious" interference on the amateur bands, especially on 40-meter phone and amateur VHF repeaters. Thus far, no easy solution to this problem has been found.

The Board will hold its second meeting of the year in the fall, when further consideration of these and other matters will be discussed and voted on.

It is important for League members to make known their desires and feelings about matters affecting the League and Amateur Radio to their Division Director before Board meetings.

Some Directors attempt to evaluate the views of their membership with surveys which are sent to their members, as well as by personal membership contact at club meetings and other Amateur Radio events. Surveys at the national level could reveal how amateurs feel about various issues, such as the "no-code" license, sooner than the "wait and see" attitude, which is more reactive than leading. The League should do its best to represent the interests of the ARRL and all radio amateurs. □

DX WORLD

John F.W. Minke III, N6JM
6230 Rio Bonito Drive Carmichael, CA 95608

Activities Calendar

25-26 June	ARRL Field Day
02-03 July	Venezuelan Contest (SSB)
09-10 July	IARU Radiosport
16-17 July	SEANet Contest (CW)
16-17 July	Colombian Contest
23-24 July	Venezuelan Contest (CW)
13-14 August	DARC European DX Contest (CW)
13-14 August	SEANet Contest (SSB)
20-21 August	SARTG RTTY Contest
27-28 August	JARL All Asia Contest (CW)
10-11 September	DARC European DX Contest (SSB)

For details of the above activities, refer to "Contest Calendar" by Frank Anzalone, W1WY, in the latest issue of CQ Magazine. Most activities are also covered in the appropriate section of QST. The European DX and All Asia Contests will be listed in the August issue of Worldradio.

W-100-N

202. JR7ICN	Toshiyuki "Tom" Kommo
203. WA7NXL	Arthur M. Phillips III (all CW)
204. W3GVR	Melmore Zugermayer
205. KI2G	Robert T. Hines
206. N0BZE	Charles "Vel" Turner
207. KN0L	Steven P. Hutchinson

I am still receiving a few applications with the QSL cards. Sending of the QSL cards is no longer required, although you must have your list of contacts certified by at least two licensed radio amateurs, (General Class or higher), that you have the required QSL cards (or other form of written confirmation) in your possession. The fee is now $5. Arrange your list of contacts in alphabetical order by prefix.

Malpelo (HK0)

To celebrate the 50th anniversary of the LCRA (Liga Colombiana de Radioaficionados), a DXpedition to Malpelo Island is being planned. The DXpedition, sponsored by the LCRA in coordination with the Colombian Navy, will consist of society members only (HK types), for five days during the month of October 1983.

The call HK0TU has been selected for the operation with operation scheduled on all bands 10 through 160 meters, both SSB and CW. On CW they will be found on 1.825, 3.505, 7.005, 14.025, 21.025 and 28.025 MHz, (±) 5 kHz. For SSB operation, listen on 1.825, 3.795, 7.085, 14.185, 21.295 and 28.595 MHz, (±) 5 kHz. Experiments will be conducted on 146.460 MHz, plus satellite operation.

Fred Laun, K3ZO, presently residing in Colombia, made the official announcement at the Visalia DX Convention that the Colombian amateurs most likely to go would include Herman Olarte, HKIQQ; Bill Elasmar, HK3RQ; HK3BAU; Mauricio Arango, HK3TF; and Francisco Velez, HK0BKX. They hope to set up four stations, two of which are to be airlifted to the top of the mountain. This should be of help to the West Coast DXers.

Malpelo Island is located at 3°59′07″N, 81°34′27″W and is among the top 10 on the most wanted list. All QSL cards are to be sent via Edilberto Rojas M., HK3DDD, Apto 25827, Bogota, COLOMBIA.

Albania (ZA)

Two Albanians were to be in Finland this spring for some basic training in Amateur Radio, with OH5NW and OH2BH doing the teaching. It is hoped the Albanians will accept some amateur gear as a donation to one of their educational institutes. Following that, a group of Finns will go to Tirana for further indoctrination, as reported by Martti Laine, OH2BH, via *The DX Bulletin*.

Perhaps the Albanians will come on the air with their own as with the Chinese, no outside operators.

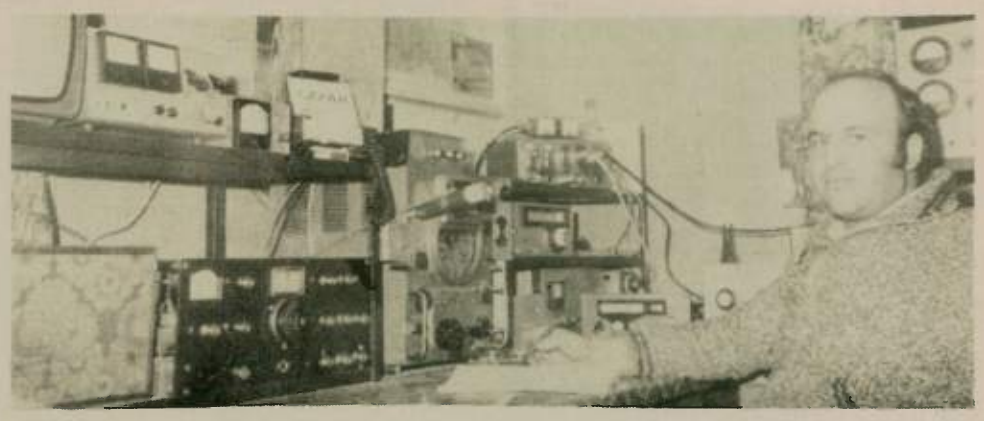
French St. Martin (FS7)

The North Jersey DX Association was to again activate FG0DDV/FS from French St. Martin on 23 June and operate for two weeks. The group planned an all-band affair, 6 through 160 meters, both SSB and CW, plus 30 meters. They will be found on the usual DX frequencies. All QSL cards for this operation go to David Beckwith, W2QM, 151 Whitney Ave., Pompton Lakes, NJ 07442.

Spratly Island (1S)

A station signing 1S1CK was active recently from the Spratly group, operated by Chito Kintanar, DU1CK. He had permission from the Philippine government and operated from Danger Reef, which is occupied by Philippine personnel. As to whether this will count for DXCC credit, it is not known at present. Speculation has it that it will not.

It was reported in one newsletter that the German DXpedition that met in disaster last April was not fired on by the Vietnamese, but by Chinese troops. Bob Schenck, N2OO, who was one of the DXpedition team members for the 1979 1S1DX operation, reports that as far as he knows, none of the six German amateurs approached any of the 1979 Spratly DXpedition team.



Kristo Andonov, LZ2AB, with his homebrew equipment. Kristo resides in Provadia and is on the lookout for the deserving DXer. ***(LZ2AB photo)***

Homebrew station

Last fall I worked Kristo, LZ2AB, on 40 meters, and, as this was my first 7 MHz contact with that country, I sent off a direct QSL. Recently, I received confirmation for the contact along with the following letter.

"Excuse me that I've not answered you immediately, but I haven't had a suitable photo to send you.

"My apparatuses is homemade. I've made it myself. Also, I have power amplifier 1kW. I use the following antennas which are also done from me:

80-meter band —	Delta loop
40-meter band —	2 el. Delta loop; Dipole
20-meter band —	2 el. Quad, 20 meters up
15-meter band —	2 el. Quad, 20 meters in height
	2 el. Quad, 10 meters in height
	Dipole, 15 meters in height
10-meter band —	2 el. Quad, 10 meters in height
	6 el. Quad, 20 meters in height

"I like to work for DX stations, and I am active after coming back from my job and in the small hours of the morning.

"I should be kind to inform you about the radio amateur's life in Bulgaria. Will be very glad if you send me one copy of your magazine, too.

"73's! Wish you all the best! See you soon on the band! Kristo LZ2AB."

Botswana (A2)

A new prefix has surfaced in Botswana for Novice stations. The new Novice operators will be assigned the A24 prefix and must make at least 100 contacts on CW only before they can upgrade.

Non-Novice station A22BW has been busy working the deserving and has been found on 28.542 MHz around 1400 UTC. QSL cards for this station should be sent to Wolfgang Daub, DK3KD, Solingerstr. 79 D 4018, Langenfeld, WEST GERMANY.

Nauru (C2)

Look for C21RK near 14.240 MHz from 1230 UTC. This station has also been working into Europe list-style near 21.257 MHz from 1400 UTC.

Other stations from Nauru include C21NI, who has been reported on 14.213 MHz around 1900 UTC, C21BD on 14.224 MHz from 1100 UTC and again on the YL Open House Net on 14.332 MHz from 1030 UTC, Tuesdays and Thursdays.

Svalbard (JW)

Mathias Bjerrang, LA5NM, is back in Svalbard and will be there through 1985, signing JW5NM. Math is also QSL manager for several other Svalbard stations that include JW5IJ, JW7FD, JW8KT, JW5SB and JW0A.

Also active from Svalbard is JW5VAA, found daily near 14.050 MHz between 2100 and 2400 UTC. He also works SSB in the lower portion of 20 meters.

JW0A has been worked on 40 meters near 7.002 MHz after 2300 UTC on the East Coast, and later on 20 meters on 14.024 MHz at 1400 UTC into the central regions of North America.

Jordan (JY)

Need this one? Take a listen for JY9CL, who has been busy working Europeans on 28.476 MHz around 1100 UTC. Colin is also busy on Thursdays around 1800 UTC until after sunrise in Jordan, working 40 and 80 meters. Look for him above 3.790 MHz; he should be in Jordan through the end of the year. He is attempting to obtain a permit to operate 160 meters.

Also found on the bands from this country is JY9CO, who has been reported on 28.066 MHz around 1200 UTC. JY9RC is another station reported on 14.215 MHz from 2300 UTC.

Bangladesh (S2)

Look for Peter S2BTF, who has been checking into the SEANet several days a week on 14.320 MHz at 1230 UTC. Peter plans to be there through mid-July. Two different QSL routes have been given in two different DX publications. One gives LA5NM and the other W5RU. Stateside stations should select the latter.

The Japanese DXpedition to Bangladesh bombed out as they could not get their equipment through customs.

DX News Sheet reports that Grenfell, VE3JKD, will be at the Canadian Embassy for two years from July and hopes to obtain a license to operate.

IOTA

Island hunters should look for ED1ILT from Ilas la Toja, found near 14.196 MHz around 1000 UTC. The Island of Coll (Inner Hebrides) was to have been activated by GM3DIE in May and again in July by G4LPP.

Geoff Watts, fomer editor of *DX News Sheet*, still handles the IOTA (Islands on the Air) awards program and has assigned IOTA reference designations to two new groups: EU81 to Hopen Island (part of Svalbard), and OC79 to Belep Island (the FK8DH/p operation in March). Designation EU8O for Ship Island has been deleted because the scheduled operation never took place.

If you are looking for Hong Kong Island, the following stations are on the island in Hong Kong: VS6CT, VS6DX, VS6GI, VS6GW, VS6HH, VS6IW and VS6JK.

Out on the islands in French Polynesia, FO8JE has been busy from Hao Atoll (OC66), and found on 14.126 MHz around 0630 UTC. From Bora Bora (OC67), FO8JP has been busy around 0700 UTC on 14.068 MHz.

Visalia DX Convention

The Visalia DX Convention is now

history and was considered by many as the best ever. DX Editors from several of the DX bulletins and major amateur magazines were there, including Chod Harris, VP2ML, of 73; Ellen White, W1YL, of QST; Harvey McCoy, W2IYX, of *The Long Island DX Bulletin;* Don Field, G3XTT, and Martin Atherton, G3ZAY, of RSGB's *DX News Sheet;* and the DX staff of **Worldradio**. Jim Cain, K1TN, of *The DX Bulletin* says he was there in spirit.

Perhaps the best compliment to the hard-working team that put on the convention is this: "NCDXC put on a fine convention, and they'll get no argument from Southern Cal on that. Our thanks and congratulations to Jan and Jay O'Brien, and everyone else who worked so hard." Thanks to Mike Hudgens, W6YQ, Editor of Southern California DX Club's *Bulletin* for that report. Watch out, Northern California DX Club in 1984!

Northwest DX Convention

Mark your calendars for 29-31 July. This is the weekend of the Annual Pacific Northwest DX Convention, hosted this year by the Western Washington DX Club at the Doubletree Plaza Hotel, located near the South Center Shopping Mall and the Seattle Tacoma Airport. Chairman Ray Foote, N7AIF, reports there are four price plans, with the following pre-registration prices. The pre-registration cutoff date is 10 July.

Plan A	Admission	$ 9.00
	Banquet	18.50
	Breakfast	7.50
	(Total)	$35.00
Plan B	Admission	$ 9.00
	Banquet	18.50
	(Total)	$27.50
Plan C	Admission	$ 9.00
	Breakfast	7.50
	(Total)	$16.50
Plan D	Admission	$ 9.00

Each plan included a $5 raffle ticket, except that of Plan A, which includes a second raffle ticket of the same value. Registration on 29, 30 or 31 July is $10 for admission, with no change to other parts of the plans. Send registrations to Ruth Bennett, WB7RVA, 6729 Beach Drive SW, Seattle, WA 98116. Jim Hadlock, K7WA, president of the WWDXC, is busy preparing the program, which had not been finalized as of this writing.

You will have to arrange your own hotel or motel accommodations. The Doubletree Plaza Hotel is expensive, ($65 per night for a single, $75 per night for a double), and is considerably less than what they advertise. The rates given here are for attendees to the convention. At the Doubletree Inn, the rates are $20 less. Expensive? Yes, but then you can't expect to hold a DX convention at Motel 6.

Make your reservations for either of the above hotels to Doubletree, 16500 Southcenter Parkway, Seattle, WA 98188. Be sure to mention Western Washington DX Club. Other less expensive motels are in the area.

Amboyna Cay, 31 March 1979. This is the view of the island as seen by the 1S1DX team (K4SMX, K1MM, VK2BJL, N2OO, N4WW and KV4KV). Four cannon shots were fired at the team from the island shortly after this photo was taken. This is also the island reported to have been extremely hostile to the German team. ***(Photo courtesy of N2OO)***

CW operating

Anyone who has listened to pile-up or contest-style CW operation will have noticed that it tends to differ from the format for CW QSOs set out in the ARRL Handbook and elsewhere. The differences are mainly due to the need to save time, but can be confusing to those unfamiliar with such operating. Even the "Q" codes are regarded as too long, so that the final over in a QSO may well be simply "R TU," TU standing for "Thank You." It is to be regretted that "K" is often used where "KN" is more appropriate, (i.e., where the preceding transmission is intended for a specific station), and on some occasions there is no indication, other than a pause, that a transmission has ended.

With full break-in things are, of course, a lot easier, but few transceivers have this facility. Common courtesy demands that before taking a channel, even in contests, you should check that it is clear. "QRL?" is all that is required, but this seems to be too much for some, or else they omit the question mark and so transmit precisely the opposite of what they intended. When calling in pile-ups, a short call that is required, not the incessant calling which is typical of European operating (UK included), and which serves, as often as not, simply to drive the DX station off the band. Accurate, medium-speed operating is usually far more effective than high-speed operating with mistakes and requests for repeats.

Thanks to the editors of *DX News Sheet* — Martin Atherton, G3ZAY, and Don Field, G3XTT, — for the above editorial.

Argentine Antarctic stations

There are no call areas in Argentina. The prefix has no meaning as to the determination of the province where the station is located. The first letter of the suffix of the amateur call determines the

province. Therefore, LU1HFI and LU5HFI would both be located in Cordoba province.

Therefore, Argentine stations with the letter "Z" as the first letter of suffix would be assigned to the Antarctic territories, regardless of the digit in the prefix. But this covers a wide area and can include several DXCC countries. The following list was submitted, although the originator is unknown. I suspect the credit goes to the Frankford Radio Club. Stations in the Argentine Antarctic Territories are identifiable by the last letter of the suffix. Remember, this applies only to Argentine calls where the first letter of the suffix begins with "Z".

A	South Orkney Islands
B	Melchior
C	South Shetland Islands
D	San Martin
E	Brown
F	Esperanza
G	South Orkney Islands
H	Melchior
I	South Shetland Islands
J	San Martin
K	Brown
L	Esperanza
M	South Orkney Islands
N	Melchior
O	South Shetland Islands
P	San Martin
Q	Brown
R	Dunley
S	South Shetland Islands
T	South Shetland Islands
U	Esperanza
V	Esperanza
W	Belgrano
X	Belgrano
Y	South Sandwich Islands

Other prefixes

The Italian prefix IA1 is for the Ligurian Islands of Palmaria, Tino and Tinetto in the La Spezia province, and Gallinara and Bergeggi in the province of Savona. The location is given as 44°N 10°E. For IOTA (Islands on the Air) purposes, they will be credited as a new island group as soon as they are activated.

The KP5 prefix has now been assigned to Desecheo Island by the FCC, as there was no special prefix for this spot. The 1981 DXpedition to Desecheo was that of KP2A, or KP2A/D, depending how you took it.

A station signing 4T5N has been operating from the Lines of Nazca with the last day of operation on or about 20 June. QSL this one via OA9K, P.O. Box 538, Lima, PERU.

From now through the end of the year, several stations are operating from Liberia with the special "A8" prefix. These include the calls A81LC, A82LC, A85LC, A87LC, A88LC and A89LC, with the suffix letters standing for Leprosy Control. Each of those stations are located in a different county. The A83LC, A84LC or A86LC calls have not been activated as there are no amateurs in these counties to place the call on the air. All QSL cards go via Bo Johansson, SM4CWY, P.O. Box 134, 67101 Arvika, SWEDEN, along with 5 IRCs. Any profits will be donated to the Leprosy Control Project.

Five French amateurs in the town of Annonay will be using the special HW83 prefix during the month of June to celebrate the bicentennial of the first hot air balloon flight by Montgolfier brothers, Etienne and Joseph, on 4 June 1783. The subject amateurs are Anselme Contois, F3BZ; Alex Cholat, F3CO; Jean Mathieu, F5MO; Denis Rama, F6ADV; and Jean Roche, F6BFI. A special QSL card is being designed. No QSL information was given, but I suspect they will go to the individual calls, (i.e. HW83BZ goes to F3BZ).

Some more World Communications Year prefixes have surfaced. PF1 through PF0 plus PG4 are being used by various amateurs in The Netherlands. Cards for PF3WCY go via A.T.G. Willeboordse, PA0ATG, Wilgenlaan 86, 4871 VE Etten-Leur, NETHERLANDS; and PF5WCY go via H. Vollema, PA0LVB, A Veer Hof 15, 3413 NE, Jaarsveld, NETHERLANDS.

WAPY Award (second series)

This award is available to all licensed radio amateurs and is offered by the Brazilian magazine **Electronica Popular**. All contacts must have been made since 15 May 1981, the 25th anniversary of the magazine.

Brazilian Amateur Radio prefixes

To qualify for this award, you must work and confirm a contact with a Brazilian Amateur Radio station in the call areas PY1 through PY9. The Brazilian prefixes such as PP1, PP2, PR7, PS8, etc., do not count for this award. All contacts must have been made from the same call area or, where no call area exists, from the same state or county.

Send a certified list of confirmed contacts to: Antenna Editorial Group, Caixa Postal 1131, 20001 Rio de Janeiro, RJ BRAZIL. There is no fee for this award, but it is suggested that 5 IRCs be included to help defray costs.

There are special stickers for this award, such as QRP (less than 10 watts input), SSB or CW. Credit is also available for one PY0 worked.

Visitors to 4U1ITU

Those visiting Geneva, holding valid Amateur Radio licenses, and wishing to operate the ITU station, 4U1ITU, should give advance notice — in writing — to: The Station Manager, 4U1ITU, P.O. Box 6, Place des Nationas, 1211 Geneva 20 SWITZERLAND.

Anyone wishing to operate the station over a weekend must also contact the station manager beforehand, to be shown details of the station and procedures. While any licensed amateur may operate the station under the authority of the station manager, operators are reminded that most of the equipment has been donated by manufacturers and well-wishers and that it should be used with care.

Clubs

The FRA (Foroyskir Radioamatorar) has elected a new set of officers as follows: Otto Rubeksen, OY9R, President; Arne Arnskov, OY1A, Vice President; Jakup Apol, OY2A, Treasurer; Poul J. Vitalis, OY3PJ, Secretary; and Alif Hansen, OY5A, Traffic Manager. For the past 18 years, OY2H had been president of the Faroe Islands society.

The Israelis also held an election for new officers for their national society, the Israel Amateur Radio Club. New officers of the IARC elected at the 3 March meeting were: Naftali Balaban, 4Z4RM, President; Aryeh Orgad, 4X6NFD; Yoram Kiesler, 4X6DI, Secretary; and David Pintchuk, 4X6NJQ, Treasurer.

And over in Malta, the Malta Amateur Radio League chose Carmel Fenech, 9H1AQ, as President; Walter A. Gatt, 9H1DU, Honorable Secretary, and Tony Vella, 9H1FG, Treasurer.

Antique QSL Department

Here is another one of those gems submitted by Reg Tibbetts, W6ITH. The call NY2AE was assigned to the U.S. Submarine Base at Coco Solo in the Canal Zone. The card indicates a "fone" contact back in 1936 with a comment on the back that reads: "Tnx fer FB crd OM — Believe I used to wk u on 160 meter fone from National City Calif. I was W6HSV Fritts — Remember?"

The NY2 prefix must have been a special prefix assigned to Navy stations, as the K5 prefix was then in use in the Canal Zone.

One thing I have learned these last few years as DX Editor is not to refer to a Lithuanian as a Latvian. I received two letters in response to the May issue where an old LY1S QSL card was reproduced. In fact, one reader was a little upset over the whole matter and went into detail on how much Lithuania contributed to this country.

To set the record straight, the error was mine, not Reg Tibbets, W6ITH, who provided the card. This is the second time a Lithuanian card has been used, (LY1AA was reproduced along with one from Estonia, ES5D, in the August 1979 issue). About a year later, a card from Latvia was reproduced, that one being YL2CM. So, prior to the Soviet takeover of these Baltic states, the prefixes for Estonia, Lithuania and Latvia were ES, LY and YL, respectively. My apologies to any Latvians I may have insulted.

The Antique QSL Department is always on the lookout for older cards. I have been asked what can I use, or what hasn't been used. This is hard to answer as I have often used some over again, although with different calls. What may have been used a couple of years ago is meaningless to a new reader. Pre-war QSL cards are most desirable, but we have often used QSL cards from the 1950's. Send your cards to me, and I will have copies made and return the originals to you. If you can have a good-quality photocopy made, that will be fine.

Reader comments

Chuck Kerney, W6ONX, a recent subscriber to **Worldradio** inquires about some of the calls found on the DX bands. In March, Chuck worked N6YK/V2A, but missed the island the station was located on due to the heavy QRN. This station was located on Antigua, which was assigned the V2A prefix after its independence. The former prefix was VP2A. QSL cards for this station go to N0DH. The following month, Chuck worked W2DJY/MM who claimed to be near Ankros Island. Chuck wants to know if anyone knows where this island is as he cannot find it in his geographical dictionary. Chuck says, "I retired last year from the railroad and able to get on the air more. It's just like discovering ham radio all over again." Chuck has been an amateur since 1937.

Bill Crews, WB2CPV, reports a new station operating from Guantanamo Bay with the call KG4DX, operated by Garry Murphy. He is down there with his wife who is stationed at the Naval Hospital. She holds the call KG4KM, (for Kathy Murphy). Garry, whose stateside call is KF4S, hopes to be active on all bands, 160 through 10 meters. His equipment con-

Propagation

Maximum Usable Frequency from Burbank, CA
(courtesy of W6LS)

The numbers listed in each column are the Maximum Usable Frequency (in MegaHertz) for contacting five major areas of the world (Nairobi, Tokyo, Melbourne, Frankfurt, Rio de Janeiro) for low fire angle antennas.

You can get a free *complete* set of these predictions for both high and low angle antennas, Maximum Usable Freqency (MUF) and Frequency of Optimum Transmission (FOT). Requests should be sent to W6LS, 2814 Empire, Burbank, CA 91504. Each request should be accompanied by a self-addressed stamped (28¢) envelope at least 9″ × 11½″.

AUGUST 1983

UTC	AFRI	ASIA	OCEA	EURO	SOAM
0100	17.6	21.4	26.7	13.0	22.2
0200	15.0	21.8	26.6	12.2	22.2
0300	14.2	22.2	26.5	11.9	21.2
0400	17.6	21.5	26.2	12.3	19.3
0500	16.2	19.8	25.2	13.2	18.2
0600	14.6	18.2	23.0	14.2	16.6
0700	12.9	17.4	21.0	13.1	14.1
0800	11.1	16.8	19.0	11.8	12.1
0900	10.0	16.0	17.1	11.6	12.9
1000	9.8	14.9	15.6	11.3	15.2
1100	10.7	13.6	14.8	11.6	14.5
1200	12.3	12.7	14.8	12.7	14.9
1300	14.4	12.8	14.9	14.7	17.1
1400	16.6	14.7	15.0	17.3	19.8
1500	18.1	16.4	15.1	19.3	21.1
1600	18.8	15.8	14.4	19.5	21.1
1700	19.1	15.7	12.8	19.7	21.5
1800	19.4	16.0	11.5	20.2	23.1
1900	19.6	17.0	12.7	20.6	25.1
2000	19.6	19.0	16.7	20.3	26.4
2100	19.5	21.4	21.3	19.1	26.8
2200	19.8	22.7	24.5	17.4	25.9
2300	20.1	22.5	26.0	15.9	23.8
2400	19.2	21.8	26.5	14.9	22.4

sists of a Kenwood TS-820, ICOM IC-740 (smart man! Ed.), Heathkit SB-200 and a KLM KT34XA on a 50-foot crankup tower. Occasionally, Garry can be found on the W7PHO Family Hour, the Pacific Caribbean Net or the Maritime Mobile Net. Bill WB2CPV, who is Garry's QSL manager, has a weekly schedule with him on 40 meters to discuss logs and other items. QSL cards for KG4DX should to to Bill with an SASE to 5561 Gable Lane, Jacksonville, FL 32211.

Allan Dodson, ZK1DA, from Rarotonga in the Cook Islands, writes that he is interested in contacting more members of the Northern California DX Club on 80 meters, SSB or CW. Allan says, "I am using a TS930 S into an inverted V at 45 feet. I wish at times for greater power than 100 watts, when propagation is bad. as I have no local QSOs. I'm a technician at Rarotonga Airport and will be here till September 1984. We, my wife and three children will then return to New Zealand. I hope to get my Grade 1 license while here and work other frequencies, but I am strictly 80 meters until then. Kia Orana and 73's from the Cook Islands."

Look for Allan on this band. I worked him on SSB around 0900 UTC on 3.799 MHz. His daughter is a stamp collector and is pressing Allan for more stamps from the USA.

Jim Kimball, K9JXW, and I am sure there must be others, is unfamiliar with the term "Slim." This term is used to classify any bootlegged call or pirate operation. Who came up with this term? Probably Hugh Cassidy, WA6AUD. In his now defunct *West Coast DX Bulletin*, Cass listed Slim quite often, including his cousins. Slim can be one or more persons and is often referred to by other unprintable names. Incidentally, Cass is still active in DX writing; look for him in CQ Magazine.

QSL routes

A22BW	—DK3KD
A35EL	—OE2DYL
AP2KD	—JJ1TBB
C53CJ	—KB8KS
CE0AE	—WA3HUP
CN8AD	— F8JL
CN8CO	—WB3KGY
CO7AM	—WB6QPG
CP6EL	—WB1DQC
CQ3BX	—CT3BX
CR9AT	—JN1WAT
CR9EL	—OE2DYL
CR9WW	—JH1AGU
CX5RV	—G5RV
DJ5PX/3A	—DJ5PX
DL1BA/3A	—DL1BA
DL1HLN/DU2	—DL1HLN
DL2GAC/DU6	—DB2GO
DL9ZAX/TT8	—DJ5RT
DU7RLC	—VE2FGS
EA8ZI	—SM5IWC
ED1ILT	—EA1MC
ED3SCB	—EA3BOX
EK9D/1	—UK9CAA
EK9E/0	—UK9CAE
EL2BA	—WA2DHF
EL6A	—K4SE
FG0DDV/FS	—W2QM
FM0GA	—N6ZV
FM0HOR	—K6YRA
FO8BI	—K0LSI
FO8JP	—F1BBD
FP0HWT	—AE6D
FY0ESE	—DJ5KQ
HC8GI	—W3HNK
HH2CQ	—W4MGX
HH2VP	—W1FJ
HK7UL	—N7RO
HK0COP	—W9UCW
J87LTA	—K4LTA
JW5IE	—SP5KEY
JW0A	—LA5NM
JY8JP	—K1JPQ
JY9CL	—G3MUL
JY9CO	—SM5ASI
K2BS/C6A	—W2GHK
KC4AAA	—K9AUB
KC4AAC	—W6MAB
KC6CO	—WD5HQC
KG4AW	—KA4TAY
KH0AC	—K7LA
KJ8G/J6L	—KJ8G
KJ8G/6Y5	—KJ8G
KN8M/C6A	—K8CW
KP4A	—DJ9ZB
LA2EX/3X1	—LA2EX
LA8UX/OD5	—LA8UX
LU2MM	—K1MM
LU4MDR/Z	—LU7MAY
N5RM/SU	—N5RM
N6YK/V2A	—N0DH
OX3XR	—OZ3PZ
OX5JM	—WL7M
PA0FRI/OD	—PA0FRI
PT7SD	—WB8SSR
S2BTF	—LA5NM
SJ9WL	—SM0BMG
SM6HCX/OX	—SM6HCX
SM0GMG/CT3	—SM3CXS
T30CH	—W9SLT
T30DB	—G8LGB
TG9XLG	—KA4SAE
TI2BEV	—W4ZD
TV6ICE	—F2YT
TZ6FIC	—F6CRS
V2AMK	—N0DH
V2AXA	—K4LTA
V3CH	—WB0MIV
VE9VE	—VE2JV
VK6AHI	—K8CW
VP2KBD	—K1IJV
VP5FX	—K4UEE
VP5KMX	—WB9TIY
VP8AOC	—K0JW
VS5RB	—G4EFE
VS5YY	—K5YY
VS6CT	—K7LA
4K1F	—UQ2GDW
4N9WC	—YU4GYZ
4S7TZG	—ON6TZ
4X4MS/5N0	—DL8MAE
4X6DF	—KC2MS
5H3DM	—G3NXR
5J3LR	—HK3DDD
5K0LR	—HK3SO
5N6PDC	—K6EDV
5N8GM	—I8XIU
5U7AN	—W4OS
5W1DD	—OE2DYL
5W1DO	—OE2DYL
5X5BB	—DL2BB
5Z4CL	—W5BCB
5Z4MN	—VE7DLM
6W8HL	—WA4VDE
6W8JB	—F6FIO
6Y5DA	—VE4JK
7X2HM	—I8YCP
8P6EZ	—W1RED
8Q7JA	—JA8MWU
9G2XX	—AK3F
9J2MY	—JN1POM
9K2BE	—G4GIR
9L1EX	—LA2EX
9N1MM	—*(See Note 1)*

A92Z	—P.O. Box 26855, BAHREIN
C21RK	—P.O. Box 139, NAURU
G4ABI/ST2	—D. Radley, c/o P.O. Box 974, Khartoum, SUDAN
H44CF	—P.O. Box 498, Honiara, SOLOMON ISLANDS
HZ1AT	—P.O. Box 1208, Riyadh, SAUDI ARABIA
J28DM	—G. Rauary, B.P. 2417, DJIBOUTI
TA8BE	—P.O. Box 252, Gaziantep, TURKEY
TI5TP	—P.O. Box 125, Grecia, COSTA RICA
VK9NC	—P.O. Box 27, Norfolk Island, AUSTRALIA
VP8ML	—Charlie McKenzie, Port Stanley, FALKLAND ISLANDS
WB7PSH/J7	—1263 Bay Street, Portsmouth, DOMINICA
XT2BM	—P.O. Box 140, Ouagadougou, VOLTAIC REPUBLIC
ZK2RS	—P.O. Box 37, Niue Island
4T5N	—P.O. Box 538, Lima, PERU
5V7WI	—P.O. Box 1499, Lome, TOGO
5Z4DJ	—N. Bedford, 39 Hamilton Road, Bridlington, North Humberside, ENGLAND
5Z4DP	—I. Sherer, 18 Malham Avenue, Anlaby Road, Hull, North Humberside, ENGLAND
7Z2AP	—P.O. Box 2537, Riyadh, SAUDI ARABIA
9L1DR	—P.M.B. 502, Freetown, SIERRA LEONE
9L1YL	—P.O. Box 992, Freetown, SIERRA LEONE
9X5MH	—P.O. Box 491, Kigali, RWANDA

NOTES
1. Any operations by YU2DX should go to him directly. All other contacts for 9N1MM go to N7EB.

Contributors for this month include LZ2AB, ZK1DA, W1DDO, WB2CPV, N2OO, W2QM, W6ITH, W6ONX, N7AIF, WB7BRK, K9JXW, Kansas DX Association, Kansas City DX Club, Redwood Empire DX Association, Southern California DX Club, Western Washington DX Club, IRAU Region 1 News, Grupo Argentino de CW, Liga Colombiana de Radioaficionados, Antenna Edicoes Tecnicas, *The DX Bulletin*, *The Long Island DX Bulletin* and *DX News Sheet*.

Most of you who know me know that I always get a plug in for my daughter's singing. She is on tour right now singing the national anthem for eight major league clubs up through the beginning of August. As you read this, she will have already done two of them — the Giants and the Twins. The other games will be the Cubs on 28 June, the Brewers on 30 June, the Reds on 10 July, the Braves on 20 July, the Pirates on 23 July and then out for the Mariners on 2 August. She will also be in Nashville for a minor league game on 13 July.

I will be staying home and meeting them in Seattle when I again go up to the Northwest DX Convention. So, if you see a Toyota with N6JM plates on it, don't blow your horn as I'm not there, (except Seattle). Looks like I can stay up late as I please now with the XYL gone East. 73 de John, N6JM. □

Field Day trains hams for emergencies

By now, everyone knows about Coalinga. The chief lesson learned, according to the Daily Breeze, was that emergency communications were "woefully inadequate." True, "official" communications — and certainly telephone lines — aren't adequate. Yet, on the day of the quake, at least one television station (Channel 2) quoted Amateur Radio operators on the scene as a source of its news. The Palos Verdes Peninsula News also reported on the usefulness of Amateur Radio in providing the needed communication: Coalinga hams, to stronger stations in Fresno, to military networks — without Amateur Radio, Coalinga would truly have been cut off.

This is what Field Day is for. Sure, it's a contest, but it's also training to work under the kind of pressure a real disaster brings. Have you had your training lately?

— TRW Systems Group ARC, Redondo Beach, CA □

Colvins in Kuwait

Dear Friends,

This is a report on the Yasme DXpeditions to HZ1AB, Saudi Arabia, and 9K2QL, Kuwait. We visited HZ1TA and HZ1TC in the capital city of Riyadh, which is a large modern city. It is unusual in that it is not uncommon to see stores closed, but many items they sell are left in front of the store unguarded. Also, stores can occasionally be found open with no attendant present. One reason for this is that the people are very religious, and, secondly, if a thief is caught, his hand is cut off!

We also visited HZ1AB in Dhahran. There are 30 operators there, and they agreed to let us make a Yasme DXpedition for the two days of the ARRL International CW DX Contest — 19 and 20 February 1983. We made some 1,500 QSOs in that period, with four of the regular operators helping. All QSLs for HZ1AB for these two days go to Yasme.

Next we went to Kuwait, where we were extremely fortunate to receive the special call 9K2QL. This is the only special call issued to visiting amateurs in a long while. The first few days we stayed at the Marriott Hotel, which is a ship like the *Queen Mary* in California. The problem of operating there was that the portholes could not be opened and there was no way to get the coax line into the stateroom. We finally moved to one of the chalets nearby. We convinced the manager that our 3-element beam would be a desirable addition to the swimming pool and garden area of his 5-star hotel! We made 6,500 QSOs with amateurs in 125 countries from 9K2QL.

Iris W6QL and Lloyd Colvin, who operated as 9K2QL in Kuwait, talk to 9K2HE — His Excellency Ahmad Hamed Al Atiyah, ambassador from Qatar to Kuwait.

Our last operation before returning to the USA will be from Jordan, using Lloyd's call sign, JY8KG.

73 es 88,
LLOYD & IRIS COLVIN,
W6KG/W6QL
Kuwait, Persian Gulf □

The amateurs

There's something about them you've got to admire.
They work for the love of the task, not for hire.
Everyone of them's blessed with the heart of a boy!
What's a job to the drudge unto them is a joy.
While we to our regular schedules are keeping,
The amateurs do without eating or sleeping.
They worry their wives — since so short is the day —
They don't get to bed when they should but they stay
Sending calls on the air; catching calls from afar
And I think as I hear them how patient they are!
How much better we'd work here if only we knew it,
In that amateur spirit of wanting to do it!

Professionals weary sometimes and they shirk,
Since they're paid to perform they look on it as work.
They begin with reluctance; they're glad when it's done —
And they measure in money whatever they do.
But the amateur never begrudges a minute,
He goes to the job for the joy that is in it.
So here's to the amateurs, brave hearted throng;
Though short be their waves, may their lives all be long;
Make up for the nights when they go without sleep;
And may we, in their spirit and deep understanding
Of work and its joy, keep our amateur standing!

— Edgar A. Guest

— Greater Cincinnati ARA, OH □

IC-720A + IC-R70

The "plus" is the New IC-7072 Transceiver Unit

Now you can add ICOM's most versatile HF general coverage receiver to your IC-720(A). Combine the portability and operating convenience of the IC-720(A), with its long list of standard features...and the IC-R70, ICOM's latest general coverage receiver, into one transceiver by using the new IC-7072 transceiver unit.

Check ths list of features that will be added to your IC-720(A) receiving system:

Audio Monitor. Monitor your own transmitted audio and check SSB audio quality/CW keying characteristics.

Selectable AGC With Off Position. Perfect for use with transverters.

2 Position Noise Blanker. Very effective, virtually eliminates impulse noise.

500Hz CW Filter Standard. 250Hz (FL63) optional 8-pole filter.

3 Stage Preamp/Off (Direct)/Attenuator Control. Controls input to ICOM's Direct Feed Mixer receiving system.

Squelch Control. Effective in all modes allowing only signals above a certain strength to be heard.

Audio Tone Control. For easier listening/less fatigue.

Record Jack. Allows connection of a tape recorder to record both sides of a QSO. Unaffected by the volume or monitor control. Also may be used to drive an RTTY decoder.

Notch Filter. Deep IF notch eliminates annoying hetrodynes from interfering adjacent signals.

Large Front Mount Speaker. Full 3 watts of audio.

Expanded Range Pass Band Tuning. For greater adjacent signal rejection in the AM mode.

Option for FM Reception. Useful for 10 meter FM.

Excellent, Clear Reception. With the R70's advance receiving system with the first IF at 70MHz, and with the lowest synthesizer noise level available — better than receivers costing much more.


IC-7072
Transceiver Unit

Bring all of these advanced features to your IC-720(A) shack with the R70 and the IC-7072 transceiver unit. The plug-in IC-7072 transceiver unit slaves the CPU of the IC-720(A) to the IC-R70 microprocessor. This allows the tuning knob and selector buttons of the IC-R70 to control the IC-720(A).

Included with the IC-7072 are cables for the mute line control on the IC-R70 and a coax line to patch the IC-720(A) antenna into the IC-R70. An accessory connector on the IC-7072 is provided for attachment of "ICOM System" accessories such as the IC-2KL linear amplifier or IC-AT500 automatic antenna tuner or both.

Now your base station can have the most advanced ham/general coverage receiver available and the crisp transmitted audio of the IC-720(A) with RF speech processor. And yet, the 12 volt operated IC-720(A) may be taken mobile or portable for the ultimate in a ham band transceiver...and you still have general coverage reception...at both places!

ICOM

The World System

ICOM America, Inc., 2112-116th Ave NE, Bellevue, WA 98004 **(206)454-8155**/3331 Towerwood Drive, Suite 307, Dallas, TX 75234 **(214)620-2780.**

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ICOM's Go-Anywhere HF Rig for Everyone's Pocketbook

Compact.

Only 3.7 in (H) x 9.5 in (W) x 10.8 in (D) will fit into most mobile operations (compact car, airplane, boat, or suitcase)

Affordable.

Priced right to meet your budget as your main HF rig or as a second rig for mobile/portable operation.

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- Electronic dial lock, deactivates tuning knob for lock on, stay on frequency operation.
- One memory per band, for storage of your favorite frequency on each band.
- Dual VFO system built in standard at no extra cost.

Full Featured.

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- Digital readout • Receives WWV • Selectable AGC
- Up/down tuning from optional microphone
- Handheld microphone standard (no extra cost)
- Optional mobile mount available

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All stated specifications are approximate and subject to change without notice or obligation. All ICOM radios significantly exceed FCC regulations limiting spurious emissions.

The ART of Contesting

Some thoughts on contesting and DXCC

Yardley Beers, W0JF

(Excerpts from a letter to the ARRL Contest and DX Advisory Committees)

Introduction

During the past year, I have become increasingly distressed by the trivial nature of many QSOs, especially in contests, and by the obsession of many amateurs to establish communication with barren islands and sandbars — places that are of trivial concern in human affairs. Because of this trivality, the Amateur Radio Service is not carrying out its obligations to the public. Therefore, steps must be taken to reverse these trends and to cause amateurs to adopt a higher set of values.

Amateur Radio legally is called a "service," and as such it has obligations. In my opinion, these are as follows — not necessarily in order of importance:

1) To provide communication, especially when no other means is available, and most especially in emergencies.

2) To provide training in operating radio stations.

3) To acquire and disseminate information concerning: a) electronic technology as applied to telecommunications, and b) propagation of radio waves.

4) To promote better understanding between the peoples of the world. In earlier times Amateur Radio was not such a victim of triviality. The Appendix at the end of this letter contains some historical notes concerning the earlier situation.

DX operation and contests are intimately related. For one thing, DX has been called "An ever-continuing contest," which it is. For another thing, QSL cards obtained on the basis of contest QSOs commonly are submitted for the basis of awards, such as WAS and DXCC. For another thing, the multipliers in DX contests are based upon DXCC countries. Therefore, it is appropriate that (DX and contests be discussed together).

An example of triviality: some sample QSOs

The following are some consecutive transmissions that might have taken place in the 1982 ARRL CW DX Contest if the DX station QQ1A and the USA stations WXB1C and KDY6R had existed.

CQ TEST DE QQ1A K
DE KDY6R K
KDY6R 599KW K
TKS K
DE W0JF K
W0JF 599KW K
599 COLO K
TKS K
DE WXB1C K
WXB1C 599KW K
599 MASS K
TKS K

Except for the call letters of the station to whom QQ1A replied, every bit of these transmissions could have been predicted from previous transmissions these stations make. Since all of this infomation could have been predicted, it could have been programmed into a memory keyer. Had I had at the time of the contest the memory keyer that I now have, I could have obtained a sizable score by doing nothing during the contest but pushing the buttons to give "DE W0JF K" and "599 COLO." I could have loaded them into the buffers at slow speed and transmitted them at a much higher speed with perfect spacing, without the vagaries of my individual fist. On receiving, I had hardly more than to recognize a couple of calls, which I could do at a much higher speed than I could copy unpredictable text. Not a very crucial test of my operating ability.

In the phone contest, an identical set of exchanges could have taken place except that 599 would be replaced by 59. Had I wished to save my voice, I could have had two tape recorders on, with a tape repeating "59 Colorado" and the other with a tape repeating my call letters. Instead of pushing buttons on a memory keyer, I would have pushed the buttons on these recorders.

From the point of view of those whose objective is to make the greatest number of contacts in a given time, the format of these QSOs is very efficient; well, on second thought, not completely efficient. What is the purpose of the 599? Why not leave it out?

From another point of view, it is very inefficient. To establish the winner's supremacy, he has to make several thousand QSOs. Would it not be more efficient if he could do it in a few hundred, and those who have to check the logs would have fewer pages to check through? A more elaborate format would cause him to make fewer contacts but would still leave him a winner. Another provision could be to cut down the number of contacts he could make with each multiplier area — a provision I choose to call a "birth control clause." In the Appendix, I cite some of the history of birth control clauses, discuss the reasons for and against, but make no recommendation.

Before I leave the discussion of these sample QSOs, let me concede that they are not contrary to public interest. The fact that they take place at all is some indication of station performance and operator ability. Also, if on a vacation trip, WBX1K should appear on QQ1A's doorstep bearing his QSL card, it is likely that the card would serve as an introduction to a meaningful relationship.

However, I contend that these contributions to public interest are minimal, and that public interest would be served better with QSOs that are less trivial.

The proper format for a QSO

For credit toward a contest score for an award, a contact should meet the following requirements:

1) There should be no shadow of a doubt that the two stations that think they are in contact with each other, are in contact.

2) There should be a demonstration of a capability of two-way transmission of information which cannot be predicted in advance.

To meet the first requirement, it is essential that each station transmit both sets of call letters at least once during the contact (even if not required by law). No doubt at least 99.5 percent of the time, stations following the format given earlier in this article are actually in contact, but this is not beyond the shadow a doubt. Several times I have sent "DE W0JF" and found myself answered by some station I had not heard before, while the station I thought I was calling answered someone else. What is far more serious is that on phone, QQ1A — if he followed the practice of some DX stations — might not have given my whole call but might have replied merely to "Juliette Foxtrot."

Now I know that at least N4JF, W1JF and W9JF are active in DX work, and sometimes I have found myself in the same pile-up with one of them. Furthermore, there is possible confusion with other calls with other suffixes.

In addition, a station that makes a rapid succession of contacts while giving his call only once in 10 minutes is imposing on his listeners and causing needless QRM. On hearing such a pile-up, one has no alternative but to get in it and call. After calling for eight minutes, he may find it is a station he has worked before, and he has wasted his time and caused QRM. Also, if he knew the call letters of the station he was calling, he could aim his beam in the optimum direction sooner.

What should be done to meet the second objective of demonstrating a capability of exchanging unpredictable information deserves discussion by others. My suggestion is that each station should transmit six alpha-numeric characters. The first two should be an "honest" RS report. Stations giving routine 59 reports should be disqualified. I would abandon the "T" report on CW as being superfluous with modern equipment.

The remaining part of the exchange would be a cipher of four characters, changed with each QSO and selected out of a set of at least five ciphers prepared in advance of the contest. To prevent everyone using the same set of ciphers (I could imagine entrepeneurs selling printed lists of ciphers), I suggest that the set of ciphers be derived from the operator's name, as suggested here: yardleybeersyardleybeersyardleybeers

A cipher can be derived by choosing any four characters in order from this sequence such as YBEE, SYAR or LEYB. In this way, five or more ciphers could be selected, and the key connecting them to the operator's name would be given in the log.

Such a scheme might seem complicated at first, but in practice it should be easy to use. A sample log sheet can be drawn up in advance, with the ciphers to be transmitted entered on the sheet in some quasi-random order, and an adequate number of photocopies of this sheet can then be made.

As I say, there may be better ways of accomplishing the above objectives, and I welcome the ideas of others.

Automation

Already I have mentioned the use of memory keyers and tape recorders. In the future more sophisticated types of automation will undoubtedly be applied to Amateur Radio. It can be supposed in time that there will be advanced type of keyers that can supply ciphers according to some key supplied by the sender but indiscernible to the receiving operator, but such will be only a prelude to what is likely to come.

Some of my VHF friends are concerned with packet radio, in which a chain of automated repeaters can be used to send a message automatically from one point to a distant point. These can be programmed to select a route that is optimum under the given traffic load. I understand that the same technology can be applied to HF stations. With proper programming, stations in a contest would automatically scan a band for intercepting signals, exchange ciphers, record them and signal strengths in memories, discard duplicate contacts, and compute and print out the scores. Outside a contest, the same technology can be applied to make contacts with different countries, and when 100 is reached, it would ring a bell and punch out cards that can be sent for QSL cards.

Such technology, I understand, already exists in principle, and it is only a matter of time before the details will be worked out. It is not clear, however, whether the cost of a complete system will lie within the means of most amateurs; therefore it may be some time, if ever, before such completely automated stations will be on the air.

As a group of people dedicated to technological progress, amateurs properly should be involved in the development of automation. But as a group dedicated to providing communication in emergencies, when automated equipment may not be available, they should also know how to operate without it. I remember in a physics examination I administered, a student left soon after it began because the battery of his calculator went dead and he could not multiply and divide either by hand or with a slide rule.

Therefore, the ARRL should sponsor contests and awards both with and without electronic automation, and in establishing rules, what automation is or is not allowed should be explicity stated. The needs will not be met by having a single contest with separate awards for the two classes, as the two are not compatible, since the automated transmissions take place at much higher speeds.

(concluded next month)

NJ QCWA chapter's Elmer Award

Named in honor of all the "Elmers" who, since Marconi, have given of their time and talents to help others become Amateur Radio operators, the Northern New Jersey Chapter of QCWA has established its Elmer Award.

The award will recognize as "Elmer-of-the-Year" the radio amateur in northern New Jersey who has done the most to pass on the knowledge he or she has gained over the years to the next generation of Amateur Radio operators.

The award will consist of two appropriately engraved plaques. The first will carry the name of each year's winner and rotate annually; the second will carry the name of the current year's winner and may be kept permanently.

The winner will be selected by a panel of five judges, three of whom shall be members of the Northern New Jersey Chapter of QCWA; two will be prominent local amateurs.

Presentation of the award will be made to the 1983 winner at the Chapter's Annual Meeting, the evening of Friday, 18 November at the Burns Country Inn, Clifton, New Jersey.

Rules

1) Nominations for the award may be made by any licensed Amateur Radio operator in northern New Jersey.

2) Nominees must be licensed Amateur Radio operators who reside in northern New Jersey.

3) Each nomination shall be accompanied by a statement (of 500 words or less) detailing the reasons the nominee is deemed worthy of the award.

4) **All nominations must be received on or before 1 September 1983 by the Chairman of the Chapter's "Elmer Award" Committee.**

Please direct all communications to: Gordon S. Gregory, N2IN, 8 Winding Way, Denville, NJ 07834; phone (201) 627-4426. □

You *can* make Extra

Terry Shoemaker, WB9RIP

The idea of upgrading to Extra Class never really crossed my mind until last November when I decided to give it a try. I felt that the main obstacle to the Extra Class license is the 20 wpm code requirement . . . and since I've made only six or seven CW contacts in the last four years, I expected quite a challenge.

My plan of attack dictated that I work on the code every day for the next 3½ months. I used the 73 magazine 20+ wpm code tape very extensively. It took me the whole month of December just to separate the characters on the tape . . . let alone copy them! Some nights I would work on the tape for an hour or so. For variety I would tune around on the low end of 40 meters and try to copy the really fast CW. This helped my mind distinguish the characters at high speeds. This routine lasted for 20 minutes to an hour and a half each night.

By the end of January, I was having three or four of these sessions each day. Three weeks before FCC came to town, I carried the 73 tape with me in the car and listened to it every chance I had. On the day I took the test, I had absolutely no trouble copying 20 wpm . . . but as I copied the FCC CW, I began to realize that I was going to make it. This got me so excited that I lost track and missed a few facts! But not enough to flunk.

So now I'm an Extra Class amateur . . . something I never thought I'd be. Looking back, it's obvious to me that the thing that made it for me was, first, the fact that I made up my mind I wanted it, and second, I was willing to work at getting it.

I believe you can copy 20 wpm if you really want to. It takes time . . . and it takes work. I know that if I can do it, you can!

— *Fort Wayne RC, IN* □

Two more Extras

Lou Ryan, WA4VRP, has recently upgraded to Extra Class, and is now WN4B. He sure was happy, but not as happy as when his wife — Ruth N4HZY — became a Novice on 15 October 1982. Then on 28 April 1983, she upgraded to Extra Class, making her his Extra wife! □

AMSAT OSCAR

Dr. Norman L. Chalfin, K6PGX

Launch of Phase IIIB still delayed

As this is being prepared in mid-May, the ESA has announced a delay in the launch of the Ariane L-6, which had been scheduled for 3 June 1983. Thus Phase IIIB, which was one of L-6's payloads, along with ECS-1 are delayed anywhere from two to six weeks. By the time you read this, a launch may have occurred or we may still be waiting.

The dual mission, injection of two spacecraft into geosynchronous orbits (Phase IIIB will only go part of the way towards the geosynchronous orbit) will be accomplished by a launch system known as SYLDA. The delay was occasioned by a desire on the part of the launching agency to be certain all was in readiness in view of the failure of L-5 due to a turbopump problem.

New versions of the turbopump gearing and lubrication system have been developed and tested and have eliminated the problems encountered in L-5. The detailed review process to which the new equipment is being subjected is responsible for the delay. Also updated are the inertial platform system and the third-stage feed and pressurization system.

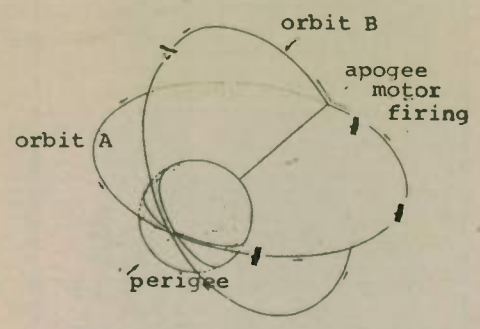


Figure 1 — Phase IIIB reorientation and operation

When launched, the Phase IIIB spacecraft will go into a series of orbital injection maneuvers as shown in *Figure 1.*

At launch of the spacecraft from the Ariane, it is injected into the orbit A. At the appropriate point in this orbit, the apogee motor is fired, injecting the spacecraft into the orbit B. Conceivably, this can require a couple of steps along the way. Orbit B is the Phase IIIB operating orbit.

The Phase IIIB spacecraft will include two transponders. The U-transponder is a linear converter with a linear bandwidth of 150 kHz from 435.025 to 435.175 MHz on the uplink, and from 145.825 to 145.975 MHz on the downlink. It also includes two beacons. The general — or G-Beacon — is at 145.810 MHz. This has information which it transmits for general users of the spacecraft. The engineering — or E-beacon — at 145.987 MHz transmits phase-shift keyed (PSK) data at 400 bits per second concerning the condition of the spacecraft's internal systems. The maximum power output of the U-transponder on its 2-meter downlink is 50W PEP. Its average output is 10-12W.

To access the uplink receiver of the U-transponder, a 21.5dBW EIRP should be used at the 435 MHz uplink band. This corresponds to a transmitter power of 10W into a 12dBi antenna.

Receiving the 2-meter downlink requires a 10dBi gain antenna. The receiver noise figure of 5dB and bandwidth of 2.4 kHz is assumed. You should be able to receive the downlink at a signal-to-noise ratio of 17dB.

If you are a member of AMSAT, you will have received your copy of *ORBIT* magazine #13. In it is a complete detailed description of the spacecraft's systems.

The second transponder aboard the Phase IIIB is the L-transponder, which differs markedly from any prior transponders in amateur spacecraft. It has an 800 kHz bandwidth from 1269.05 to 1269.85 MHz, on the uplink. The downlink extends from 436.15 to 436.95 MHz. There is a general beacon at 436.05 MHz and an engineering beacon at 436.02 MHz. The ERP of the transponder output is 50W. To access the receiver of the L-transponder, you will need an EIRP of 28.8dBW. A 3W transmitter at a dBi of 24 or a 50W transmitter with an antenna dBi of 12 will do.

Receiving the L-band downlink is a 13.5dBi antenna, and a 2.4 kHz bandwidth 3dB noise figure receiver will pick up the spacecraft transmitter.

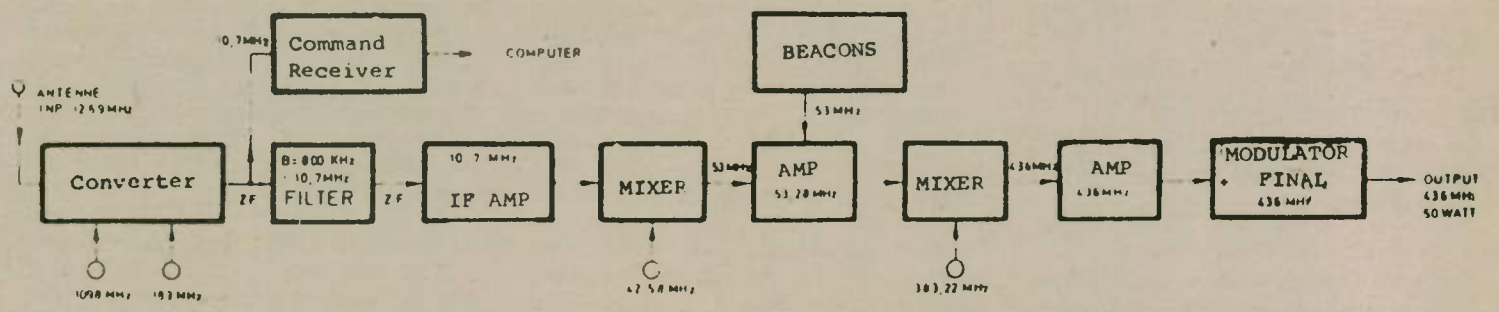


Figure 2 — Simplified block diagram of the L-transponder

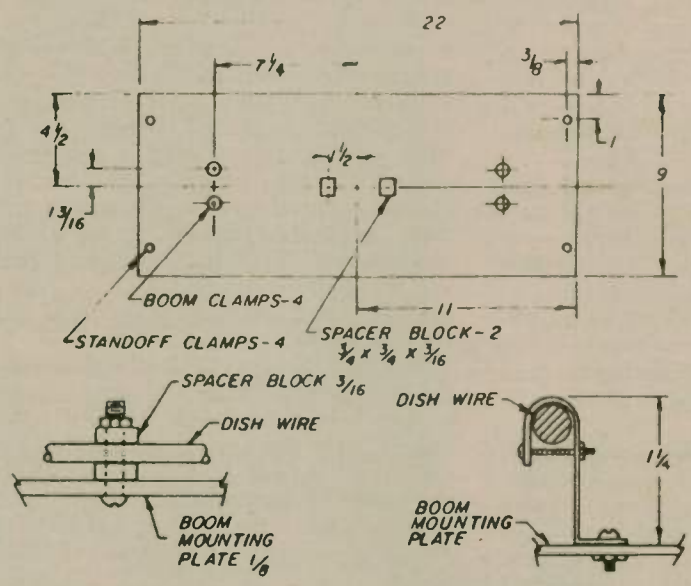


Figure 3 — Dish mounting plate clamps and spacers; dimensions in inches

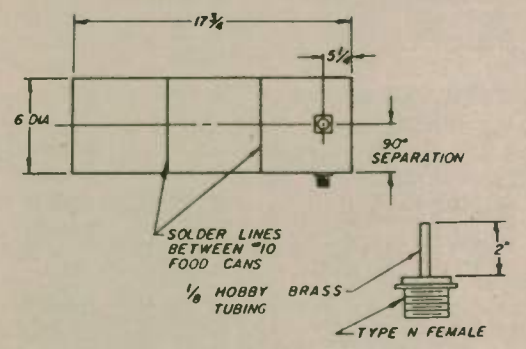
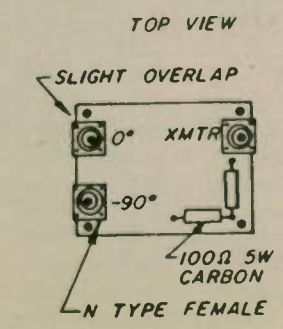


Figure 4 — Feed horn and radiator probes; dimensions in inches



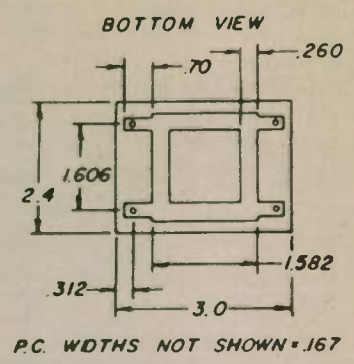


Figure 5 — 1270 MHz quad hybrid; dimensions in inches

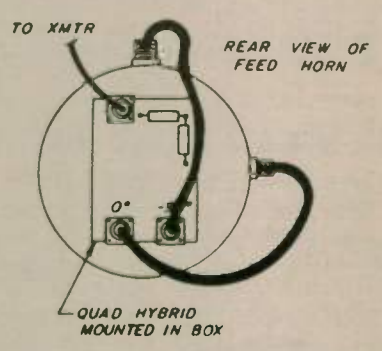


Figure 6 — Wiring for right-hand circular polarization

A block diagram of the L-transponder is shown in *Figure 2.*

Those who are seeking the best possible antenna installation for use with the Phase IIIB spacecraft operations may want to look into the article, "Simple Dish for Mode-L," by Dr. John L. DuBois, W1HDX, in *ORBIT* #13, page 4.

The DuBois antenna uses a 48-inch diameter dish with an 18-inch focal length. It was obtained from Montgomery Ward Catalog No. 63A19293R priced at $39.95. The feed horn is made from three #10 food cans soldered together. We are reproducing here the drawings from the March/April 1983 issue of *ORBIT.* For the rest of the details, it is recommended you read the article.

•

It is with a great deal of sadness that we report the passing of one of AMSAT's greatest and most active supporters. Fred Siebert, K3PNL, was the respondent whenever technical questions regarding AMSAT projects were raised. He succumbed to cancer. Fred's ready and willing handling of answers to questions will be sorely missed by the AMSAT office personnel. □

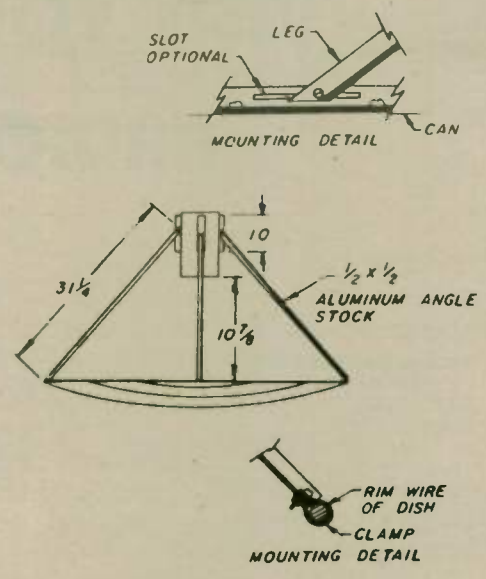
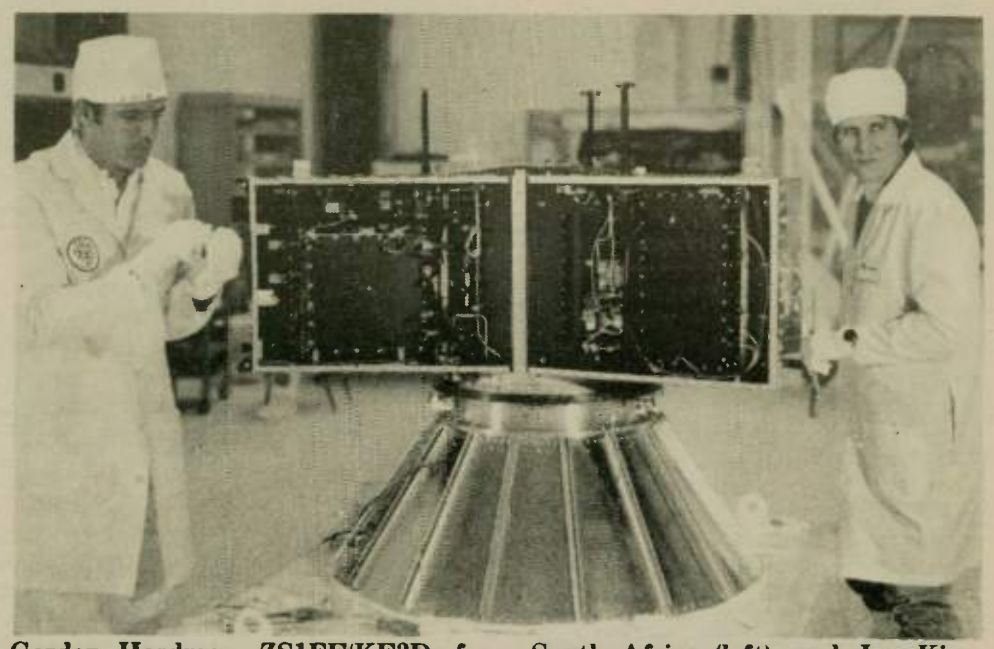


Figure 7 — Tripod mounting leg dimensions; dimensions in inches



Gordon Hardman, ZS1FE/KE3D, from South Africa (left), and Jan King, W3GEY, make adjustments to the Phase IIIB at Kourou, French Guiana during integration with the Ariane. The module at left is the propulsion control. The one at the right is the transmitter module.

SSTV on shuttle

David Sumner, K1ZZ
c/o ARRL
225 Main
Newington, CT 06111

Dear David,

Congratulations to the League for obtaining permission from NASA for Owen Garriott's (W5LFL) two-way space communications via 2-meter Amateur Radio this fall on the STS-9 Columbia project! All amateurs are certainly looking forward to the event.

We have an idea and a proposal that would involve Amateur Television operators, would be of little trouble to Astronaut Garriott and at absolutely "no cost" to NASA. Your past experiences in the specialized communications mode of SSTV will give you a better understanding on just how unique and exciting this additional experiment would be to video enthusiasts in the United States and the world.

Proposal

Provide Astronaut/radio amateur Garriott with a "pre-programmed" 10-15 minute audio cassette, which would contain various Slow-Scan Television (A5) pictures (audio tone generated) that could be inserted into the already on-board Columbia cassette tape system, and by use of W5LFL's 2-meter handi-talkie unit being placed near the tape system's speaker output, transmit still-frame pictures to awaiting earth station SSTV operators. This "audio fed" method has proven to be quite successful for HF "mobile" SSTV operation with CCTV P-5 pictures received as far away as South Africa (see **A5 Magazine,** April Volume 12-4 issue) and eliminates the need, trouble and expense of a regular SSTV digital converter. The "handi-talkie" unit would have to be placed approximately 1 inch from the recorder's speaker output and with proper audio levels should produce quality SSTV framed pictures. Such emissions would become the first Amateur Television pictures ever transmitted from space aboard a U.S. spacecraft!

We discussed this idea recently (Dayton) at the Friday night SSTV Experimenter's meeting and it met with great enthusiasm. Ideas on programming material ranged from NASA symbols, pictures of the Space Shuttle Columbia, Astronaut Garriott and the other crew members aboard the spacecraft, views of Earth, and many types of regularly viewed SSTV pictures. Experiments could be conducted on different frame rates, high-resolution and even color SSTV. The tape could be audio narrated in between video picture sequences (on the tape) to tell what is being transmitted. Astronaut Garriott may indeed wish to take part in the programming and narration himself. I can even envision a "contest" type of thing among SSTVers to submit pictures to be used on the STS-9 project. We have "volunteers" to choose the pictures and record them on the tapes (backup copies) — all subject, of course, to ARRL and NASA viewing. No commercial pictures regarding SSTV gear, etc. would be included.

It would be a crude method of transmitting SSTV pictures, but considering the alternative of also placing an onboard digital SSTV converter and camera system that would take up more room than the handi-talkie itself, it is an alternative and acceptable method. Perhaps in future missions where a radio amateur/astronaut is involved, additional ATV experiments can be conducted such as live "FSTV" transmissions using the shuttle's onboard cameras?

Please let us know the League's feelings on our proposed additional USATVS/SSTV experiment and its possibilities. Upon acceptance of this proposal, we shall immediately set in operation the audio-tape selection and programming process. Our idea and proposal is covered to our membership (now standing at 1,341) in our latest June issue of **A5 ATV MAGAZINE** Volume #13-6 (copy coming to you shortly). We anxiously await your reply.

MIKE STONE, WB0QCD
Lowden, Iowa □

Space shuttle audio retranmissions

J.M. Lumsden, WA6MYJ

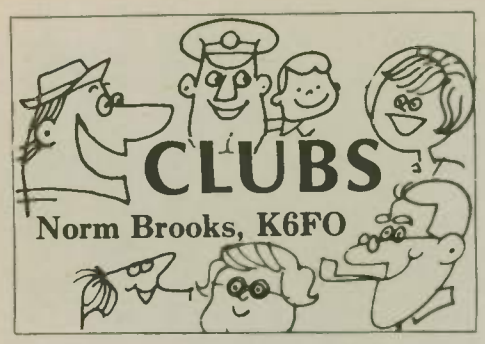
The space shuttle air-to-ground audio retransmissions on the Amateur Radio Service were authorized by a Temporary Waiver from the FCC. The Temporary Waiver to Paragraph 97.113 of the Amateur Radio Service Rules and the extension to the original waiver expired on 6 May 1983.

In accordance with Paragraph 4 of the extension to the Temporary Waiver, the Jet Propulsion Laboratory and the Johnson Space Center ARCs, W6VIO and W5RRR, ". . . understand that this extension to the original waiver grant (was) the final extension grant."

Commemorative and other shuttle-related Amateur Radio activities will continue without including the air-to-ground audio.

The JPL and JSC ARCs wish to express their gratitude to the FCC and to the Amateur Radio community for making the live space shuttle audio activity such a fantastic success. □

..... DON'T FORGET .....
INCLUDE FIRST AND LAST NAMES with call signs.



Repeater and classes

Lynn Crook, WA9GBB

For the last three years, the Piatt County Radio Club (Illinois) has furnished communications for the Sage City 10,000-meter race and for the 26-mile marathon held at Allerton Park near Monticello, Illinois.

Two winters ago, our club held a Novice class and turned out four new hams. We held another class last winter and have five more new hams. One of the graduates of this class is my great-grandson Eric Lynn Hamilton. His call is KA9PDW. Eric passed his CW test 13 January 1983. Eric is only 10 years old, so he had the help and support of all the members of the club. I think Don Sprinkle and Stan Hankins, who were the teachers of this class, were as proud of Eric as I am.

Our club is in the process of putting a repeater on the air. The Illinois Gulf Railroad recently made a donation which included a transmitter, receiver and associated equipment, with the understanding that it would be used to assist in any disaster in the area. Roy Clevens — owner of the FM radio station, WVLJ, at Monticello, Illinois — has given us permission to install our antenna at about the 200 ft. level on their tower, furnish a place for the repeater, and also the power to operate it.

Eric Lynn Hamilton, KA9PDW

Our Piatt County EDSA office has installed a 2-meter radio and assigned an amateur to operate it, as well as the State frequency and the County Sheriff's frequency.

The residents of Piatt County are well aware of the times spent and the effort put into keeping the citizens in this area well informed during severe weather. Many tell us they keep their scanners programmed into our frequency.

When our new repeater is in operation, we will have much better communication between our mobile units that cover the county.

We have 24 dedicated amateurs in our club, so when traveling through central Illinois, give a call on 146.325-146.925, and I am sure you will hear a friendly voice come back to you. □

New Shrine Club in Arizona

Dean Figgins, WA7EPU

The El Zaribah Temple of Phoenix, Arizona has organized a new Shrine Club. The name of this club is RADCOM, and its function is to supply communications at Shrine activities and other events where the Shrine is involved. Club officers are: President Wilhelm Amstutz Jr., WB7AGR; First Vice President Cecil Armstrong, W7VKO; Second Vice President Howard Hecht, WB3LQQ; Secretary Donald Camren, K7ET; and Treasurer W7ISH.

Membership consists of Technician or higher class licensed amateurs who are members of El Zaribah. Associate members are any Shriners who are licensed or interested in obtaining licenses.

To date, RADCOM has assisted with the Clothe-A-Child parades at Apache Junction, Wickenburg and Maryvale. Several more parades, the Shrine Circus in September, and the ceremonial at Yuma will keep RADCOM very active. □

Here are six of the 60 who attended the 4-H Radio Club's charter party in Bridgeton, New Jersey. Also celebrated at the party was the opening of the club Novice station, K2UQK. From left to right: Ted Wood, N2CER, who gave a talk on traffic handling; Bob Westcott, W2MAS, leader of the 4-H Radio Club; Richie Van Meter, KA2BPZ, club secretary; Horace Crane, club member; Chris Meyers, KA2MSX, club president; and Hugh Turnbull, W3ABC, ARRL Atlantic Division Director, who gave a talk on the ARRL.

VISIT YOUR LOCAL RADIO CLUB.

ALASKA

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

Borealis Amateur Radio Club
Mission Road
P.O. Box O
North Pole, AK 99705

ARIZONA

Tuscon Repeater Association
P.O. Box 40371, Tucson, AZ 85719
2nd Sat/monthly — 7:30 p.m., Pima Co. Bldg.
Net Thurs 7:30 p.m. 146.22/82 (146.28/88 & 147.69/09)
(602) 747-8903 or 899-4776

CALIFORNIA

Amador County Amateur Radio Club
PO Box 598, Pioneer, CA 95666
Pioneer Elementary School, Pioneer, CA 95666
1st Thursday/monthly - 7:30 p.m.
Talk-in 146.235/146.835

Antelope Valley Amateur Radio Club, K6OX
Lancaster School Board
44711 N. Cedar Ave., Lancaster, CA 93534
4th Wed/monthly-7:00 p.m.

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

East Bay Amateur Radio Club
P.O. Box 6017, Albany CA 94706
Salvation Army Bldg., 36th & Rheem,
Richmond (415) 525-6200
2nd Friday/monthly — 7:30 p.m.

Fresno Amateur Radio Club, Inc.
P.O. Box 783, Fresno, CA 93712
Meets: 2nd Friday/monthly - 8:00 p.m.
Wawoha Middle School; 4524 N.
Thorne; Fresno. W6TO/R 146.34/94

Gabilan Amateur Radio Club
Monterey Savings & Loan Public Room
Corner First & Westwood
Gilroy, CA 95020
2nd Thursday/monthly - 7:30 p.m.

Livermore Amateur Radio Klub
2441 Heatherlark Cr., Pleasanton, CA 94566
Meets: Valley Memorial Hospital
Multi-purpose room, Livermore, CA
2nd Saturday/monthly - 9:30 a.m.

MT. Wilson Repeater Association
P.O. Box 977
Yorba Linda, CA 92686
WA6KOS Repeater — input 146.40 output 147.435
Amateur Radio QST Net — Monday at 7:00 p.m.

North Hills Radio Club
P.O. Box 41635, Sacramento, CA 95841
Meets: Gethsemane Lutheran Church
4706 Arden Way, Carmichael, CA 95608
3rd Tuesday/monthly

Sacramento Amateur Radio Club, Inc.
Contact: Chet Almond, N6DRU, (916) 967-4295
Meets: MARS Building, Sacramento Army Depot
Troop gate, Florin-Perkins Road
2nd Wednesday/monthly - 7:30 p.m.

San Fernando Valley ARC (W6SD)
Red Cross Building
14717 Sherman Way
Van Nuys, CA 91704
3rd Friday/monthly - 7:30 p.m.

San Gabriel Valley ARC
Bowling Green Clubhouse
405 S. Santa Anita Avenue
Arcadia, CA 91006
1st Tuesday/monthly - 7:30 p.m.

S. Counties Amateur Teleprinter Society (SCATS)
2nd Sat/monthly — alternates in L.A. & Orange Counties.
60 WPM RTTY Net, Wed. 8 p.m. on 146.10/.70 W6IWO/RPT.
For info. call Jean Carter, KA6HJK, (714) 523-9519

Sierra Foothills ARC
PO Box 3262, Auburn, CA 95604
Office of Education Bldg.
360 Nevada St., Auburn CA 95603
2nd Friday/monthly — 1930

Simi Settlers ARC (SSARC)
PO Box 3035, Simi Valley, CA 93063
3rd Thursday/monthly - 7:30 p.m.
Bank of A. Levy (across Larwin Sq.)
K3HZP/R 147.165/.765 Simplex 147.48

Six Meter Club of Chicago, Inc.
Land of Lincoln Savings
6655 W. Cermak Rd.
Berwyn, IL 60402
2nd Friday/monthly — 8:00 p.m.

Sonoma County Radio Amateurs, Inc.
Box 116, Santa Rosa, CA 95402
Hank Davis, W6DTV (707) 823-7885
County Office of Emergency Service
1st Wednesday/monthly - 7:30 p.m. rpter 146.13/73

South Bay Amateur Association
P.O. Box 91 • Fremont, CA 94536
Fremont School, 40230 Laiolo Rd
3rd Wednesday — 7:30 p.m.

Stockton Amateur Radio Club
U. of Pacific, Rm. 122
Kensington & Mendocino Sts.
2nd Wednesday/monthly - 7:30 p.m.
Rptr. roll call: Wed. 8 p.m. - 147.165/765

Tri-County Amateur Radio Association
Pomona First Federal Savings and Loan
399 N. Garey Ave., Pomona
Talk-in 146.625/025 For info. call (714) 985-8184
2nd Monday/monthly - 7:30 p.m.

Valley of The Moon Amateur Radio Club
558 Patten St., Sonoma, CA 95476
Darrel Jones, WD6BOR (707) 938-8086 For Info.
Meets: odd months, 2nd Tuesday, 7:30 p.m., Sonoma
Police Dept.; even mo., 2nd Sun., 11 a.m., bkfst.

Ventura County Amateur Radio Club
Oxnard Community Center
Camarillo Room
900 Hobson Way, Oxnard, CA
2nd Friday - 7:30 p.m.

CONNECTICUT

Tri-City ARC, Inc.
P.O. Box 686, Groton, CT 06340
Meets: Groton Public Library
Rt. 117, Groton, CT
2nd Tuesday/monthly - 7:30 p.m.

FLORIDA

Fort Myers Amateur Radio Club, Inc. W4LX
Jeff Beals, WB2OUK, President, (813) 334-4004
Meets 1st Wednesday/monthly-7:30 p.m.
First Federal Savings and Loan of Ft. Myers
121-Pondella Rd., North Fort Myers, FL

Indian River Amateur Radio Club
PO Box Five, Cocoa, FL 32922
1st National Bank, Merritt Island
Cor. SR 3 and SR 520, Merritt Island
4th Tuesday/monthly - 7:30 p.m.

Platinum Coast Amateur Radio Society, Inc.
American Red Cross Building
1150 S. Hickory • Melbourne, FL 32901
Dan Yelverton WA4RGK President
Call-in 25/85 Rptr. • Meets 2nd Mon/monthly 7:30 p.m.

HAWAII

Big Island Amateur Radio Club
Helco Auditorium
1200 Kilauea Avenue, Hilo
Call-in 146.28/88
2nd Tuesday/monthly - 7:30 p.m.

For information on how to get your club listed in this column, plus receive many other benefits, write to Dave Tykol, WA6RVZ, Club Liaison, Worldradio, 2120-28th Street, Sacramento, CA 95818.

ILLINOIS

Chicago Suburban Radio Association (CSRA)
Clyde Federal Savings & Loan Assn.
7222 West Cermak Road
North Rivrside, IL 60546
2nd Wednesday/monthly - 8:00 p.m.

Fox River Radio League
Valley National Bank, Lower Level
Northgate Shopping Ctr. & RT. 31, Aurora, IL
(312) 898-2779 for more information
2nd Tuesday/monthly - 7:30 p.m.

Radio Amateur Megacycle Society
Irvingwood Acacia Church
3900 N. Plainfield, Chicago, IL 60634
(312) 625-2879
3rd Friday/monthly - 8:00 p.m.

Tri-Town Radio Amateur Club
PO Box 302, Hazelcrest, IL 60429
Above Hazelcrest Police Station
1st & 3rd Friday/monthly - 8 p.m. (except July & Aug)
Net every Wed. 8 p.m./146.49 MHz

INDIANA

Indianapolis Repeater Assoc.
4th Monday/odd numbered months
Carson Manufacturing
5154 N. Rural St., Indianapolis
146.10/70 147.12/72

Northeastern Indiana ARC
John E. Zumbaugh, WD9CVI
507 E. Quincy St., Garrett, IN 46738
Daily 6 p.m. net on 147.96/.36
2nd Tuesday/monthly - 7:30 p.m.

IOWA

Muscatine Amateur Radio Club
Info: Jere Yanek, KA0KPO (319) 264-5490
Meets: Basement Meet. Rm., Public Safety Bldg.
Muscatine, IA
1st Monday/monthly - 7:30 p.m.

RSCB (Radio Society of Council Bluffs)
Richard Swig, WA0ZQG, Secretary
104A Jennings Road
Council Bluffs, IA 51501
2nd Tuesday/monthly - 7:30 p.m.

Sooland Repeater Association (SRA)
KD Stockyards Station
2001 Leech, Sioux City, IA
Classes Thursdays 7-9:30 p.m., Sept-May
Club meets 3rd Tue. 7:30 p.m.

MARYLAND

Frederick Amateur Radio Club
Frederic Electronics
Orville C. Bowersox, N3AGM
(301) 662-4550
2nd Tuesday/monthly — 2000

MICHIGAN

The Eastern Mich. ARC (EMARC)
St. Clair County Comm. College
Student Center Building (Cafeteria)
Port Huron, MI (313) 364-9640
1st Tuesday/monthly - 7:30 p.m.

MISSOURI

Heart of America Radio Club
3521 Broadway
Kansas City, MO 64111
3rd Tuesday/monthly

NEW HAMPSHIRE

Great Bay Radio Assoc.
Dover District Court, Dover.
(603) 332-8667/332-8015
WB1CAG/Talk-in 147.57
2nd Sunday/monthly — 7:00 p.m.

NEW JERSEY

Gloucester County ARC, W2MMD
PO Box 370, Pitman, NJ 08071
VFW Post #2117, Woodbury, NJ
1st Wednesday/monthly - 8:00 p.m.

NEW YORK

Hall of Science Amateur Radio Club, Inc.
PO Box 131, Jamaica, NY 11415
Queens County Dental Society Bldg.
86-90 188th St., Jamaica, NY
2nd Tuesday/monthly - 7:30 p.m.

Long Island Mobile Amateur Radio Club (LIMARC)
146.25/85, 147.975/375, 223.22/.224 .82. 444.125/449.125
Membership: Tom Koutsis, WB2IQT, 1341 Harry Ln.,
No. Merrick, NY 11566. Net Mon. 8:30 p.m. 146.25/85
Meets 1st Tues/8 p.m., H.B. Thompson, JHS, Syosset

Suffolk County Radio Club
Meets 1st Tues. monthly, 8 p.m.
Bohemia Recreation Center
Smithtown Ave., Bohemia, Long Island
More info! Jim Heacock, KA2LCC, (516) 473-7529

Westchester Emergency Communications Assoc.
Little Theater — County Center
White Plains, N.Y.
Talk-in WB2ZII/R 147.66/06
2nd Monday - 8 p.m.

NORTH CAROLINA

Wayne County Amateur Radio Assoc., K4CYP
PO Box 1578
Goldsboro, NC 27530
MGN Regency-Uptown
3rd Saturday/monthly - 8:00 a.m.

OHIO

Ashtabula County ARC
Ken Stenback, AI8S (964-7316)
County Justice Center
Jefferson, OH
3rd Tuesday/monthly-7:30 p.m.

Champaign-Logan A.R.C., W8EBG/R
Joe Palmer, KS8M, President
2 Meter Net, 147.60/00, Tuesdays, 8:30 p.m.
Dinner Meeting, 1st Thursday/monthly
Daolees Restaurant, West Liberty, OH, 7 p.m.

Findlay Radio Club
1333 W. Sandusky St./Box 587
Findlay, OH 45840
Repeater 147.75/15
1st and 3rd Thursday/monthly - 7:30 p.m.

Xenia Weather Amateur Radio Net (XWARN)
2nd and 4th Monday — 7:30 p.m.
Xenia PD, City Bldg.
call in/147.165-147.765
Xenia, Ohio

OREGON

Oregon Tualatin Valley ARC
Portland General Electric Auditorium
14555 S.W. Old Scholls Ferry Road
Beaverton, OR 97005
3rd Wednesday/monthly - 7:00 p.m.

TENNESSEE

Lakeway Amateur Radio Club
Randy Hall, Activities Mgr.
Box 1636, Morristown, TN 37814
State Area Vocational School
Last Thursday/monthly - 7:30 p.m.

VIRGINIA

Eastern Shore ARC (ESHARC)
110 Church Street
Chincoteague, VA 23336
Repeater WA4TVS 147.855/.255
Net Mon. 9 p.m. Mtgs. as announced

Southern Peninsula Amateur Radio Klub (SPARK)
Repeater 146.13/146.73 — WR4ALW
VEPCO Bldg. (Penbroke Av. & G St.)
Hampton, VA
1st and 3rd Wednesday/monthly - 7:30 p.m.

WEST VIRGINIA

Jackson County Amateur Radio Club, Inc.
Bob Morris, WA8CTO, Sec.-Treas.
308 Edgewood Cir., Ripley, WV 25271
First National Bank of Ripley, WV
1st Thursday/monthly - 7:30 p.m.

SUBSCRIBE TO WORLDRADIO; see page 9

Setting up a fair booth

Two summers ago, three Amateur Radio clubs — the Marin Amateur Radio Club, the Amateur Communications Society and the Sonoma County Radio Amateurs, Inc. — pooled their resources to operate an Amateur Radio booth at the Marin County Fair. Nelson Lecklikner, N6AQY, was one of the amateurs involved, and he sends these suggestions for the benefit of other clubs that may be contemplating fair booths in the future.

1) If fair officials insist on treating you as another exhibitor, try to get someone on the "inside" to smooth the way. 2) If you can't do it all yourself, see if other clubs would like to join you. 3) Plan, plan, plan. 4) Order your message forms early and more than you think you will need, just to be safe. 5) Begin training operators NOW in traffic handling, so the work doesn't fall on one or two persons. 6) Get a Net Directory from the ARRL. Your SCM may have them. 7) Alert traffic nets through your SCM so nets can be prepared to handle the sudden traffic load. 8) Arrange for your club station to report into traffic nets for at least 30 days to handle service messages or arrange for members to do so to guard for the club station. 9) Keep your booth neat and displays simple. Avoid garishness or a cluttered appearance. 10) Locate the booth near a high traffic area, if possible, but with space for antennas. 11) Insure that security is excellent or remove high-priced items nightly. 12) Include a pencil sharpener in your list of supplies and make sure you have plenty of pencils on hand. 13) Arrange for media coverage well in advance. 14) Do not accept local (in county) traffic unless you have arranged for willing club members to telephone messages to addressees. □

The trailer, ready for business. "Amateur Radio" sign was made by Carolyn Wilson, WB6TKD. *(Photos by Nels Lecklikner, N6AQY)*

Jerry Foster, WA6BXV; Hank Alvernaz, W6ZQK; and Nels Lecklikner, N6AQY put the antenna pole together in the swampy area behind the trailer.

S.F. area club goes inactive

Esther Given, W6BDE

At a short business meeting in December 1982, 12 BAYLARC (Bay Area Young Ladies Amateur Radio Club) members in attendance cast a unanimous vote to place BAYLARC on inactive status. All members of record in 1980 through 1982 were voted "lifetime members." There will be no further dues, elections, formal business meetings, or operational activity unless the club is reactivated. Among the reasons for this decision were the fact that no new, young YLs have joined to perpetuate the group and keep it alive; operation has been limited to the few YLs living in the San Francisco Bay area who are now retired or swiftly reaching that status; planned activities for recent years have been cancelled due to attendance problems and the newsletter, *SPLATTER* — the direct line of communication — can no longer be produced and mailed under the current dues structure.

A holiday time reunion for 27 of "Betty's YLs" was held recently in Santa Rosa, California. Betty Bravin, AG6C held classes last year for 31 Sonoma County YLs — all 31 upgraded and at least four have gone to Advanced Class tickets. It was a great evening of laughing, reminiscing and gift exchanges and prizes. Those attending were: *First row (left to right)* — Connie Freitas, N6FYV; Martha Corniola, N6FBB; Pat Schaffer, KF6AG; May Kobold, N6GZV; Nonie Cochran, N6HFM; Georgia Morton, N6GZU; Jeri Bremer, N6FCV; Kathi WB6UZA. *Middle row* — Betty Bravin, AG6C; Linda N6GYI; Jan Blanke, N6FXY; Terri Pannett, KF6CA; Terri KA6RQO; Helen Detting, N6GTF; June Hall, WD6HCX; Barbara Malmuth, KA6UFO; Donna Lunt, N6FYW. *Back row* — Sharon Holmes, N6GYK; Mimi Miller, N6GYJ; Duana Clark, N6GCD; Sara Davis, N6FAX; Jeannine Rancourt, KA6RQQ; Claudia Rhymes, N6GZW; Vi Meniktos, N6HIV; Helen KA6WWB; Diane Galliani, N6GYG. *Not pictured:* Dorothy, N6RHU; Helen Freehafer, KA6IXJ; Louise Sullivan, N6FYL; Judy Laduke, KA6RQK; Anita Broennimann, N6GGU. *(Photo by Connie Freitas, N6FYV)*

Past articles on stereo tape cassettes

Gordon West, our maritime mobile columnist, offers the best of his past articles on maritime mobile on a stereo tape cassette. Topics that Gordon will discuss on tape will be maritime mobile installations, selections of antennas, grounding techniques, radio propagation over the water, Amateur Radio nets, choosing the equipment, and finally, learning how to tune up antenna tuners and operating the equipment while out at sea. This tape cassette is recorded in stereo to provide mariners with a separate voice and sound channel to illustrate typical radio transmissions, sounds and atmospheric conditions.

The tape may also be played in regular mono equipment with both channels coming out as one.

Mariners wishing back issues of the maritime mobile column on stereo tape cassette should write Gordon West directly at Gordon West's Radio School, 2414 College Dr., Costa Mesa, CA 92626. $9.95 plus California tax where applicable, and $2 for postage and handling.

Summer hot topics

Now that we are in the middle of our prime boating season, let's take a look at some popular topics I hear mentioned on the radio waves.

Nets

Marine mobile nets provide a tremendous safety factor to cruising mariners throughout the world. Most nets take place on high frequency, and we are once again publishing our popular net directory. Net control operators, please make changes, corrections and additions to this directory, and let me know so we can keep this up to date for fellow mariners.

Mariners, remember that a maritime net control operator's job is a tough one. He must constantly fight QRM, adjacent channel interference, and be the mediator when the frequency is occupied before the net comes on. The best bet is to let him do his job and be patient before checking in. Unless you have emergency traffic, wait your turn.

Before checking in to a maritime mobile net on high frequency, listen to it. In fact, listen to it for several days to get the hang of how it is run. Most maritime mobile nets are well structured, and you must follow the net control's advice to keep it running smoothly. If they ask for check-ins only south of Point Sur, don't check in if you are actually north of it! If they ask for any medical emergencies, don't break in and tell them you want to call your Aunt Edith in Oklahoma City to tell her how well you are doing at sea.

Always save the words "break break" or "break break break" only for an emergency. Indiscriminately using the word "break," repeated several times, may only signal a false alarm that there is an emergency.

Watch your phone patch traffic. Calls to friends regarding airlines reservations, hotel accommodations or financial matters are strictly taboo. Calls for ordering routine supplies from a local supply house for your vessel are also not legal. Sure, if your prop falls off and you need a new one, no problem. However, having a friend — via the patch — contact a local paint store for varnish, deck caulking compound, etc., should be conducted on the commercial radio bands.

If you are on a boat trip with a lot of other mariners who may know something about radio, but who don't have a ham license, don't leave your call letters posted by the radio setup. It is not legal for anyone other than the actual licensee to initiate, communicate, and then terminate a radio transmission. There seems to be a gray area as to whether or not a third party, under the direct supervision of the control operator and licensee, can actually say the call letters over the air. I recommend that the licensees must originate and terminate all calls themselves to make it very clear they are on board and are acting as control operators for the third-party traffic.

Giving someone permission to use your call sign is absolutely nuts, illegal, and will not be tolerated by net control operators. Also, remember that most net control operators run call signs through their local FCC office to ensure that the name of the licensee agrees with whom is on the air that morning. He also looks for Novice and Technician Class privileges being used illegally on General Class bands. Any type of call sign bingo is prohibited, easy to detect, and may ruin your chances of ever becoming a bonafide Amateur Radio operator. If you know of another mariner who is doing that, tell him to knock it off.

Maritime net controllers, let's hear from you with your corrections, changes, and from anyone else who can make some additions to our maritime mobile list, published with this month's column.

Equipment scene

The new Kenwood TS-430S high frequency transceiver still continues to be the pick hit set for this summer. Stacked up against the ever faithful ICOM 720, the Kenwood 430 does it all, plus much more. Reliability has been tops, just like the ICOM 720. The instant access to eight memorized channels (including the mode of transmission for those channels) is one of the top features for this set. Some of those eight memorized channels may include marine frequencies for receive only. The FCC makes it clear that this set is not authorized to transmit on marine frequencies, although it will without much modification (one wire removed). Of course, in an emergency, you can use any device to signal on marine channels for help.

Nye and Cubic tuners size comparison

William Nye, Sr., sent us down one of his fabulous antenna tuners. the MB-1-02. This tuner is quite similar to the ICOM tuner that we described a few months ago. The Nye MB-1-02 tuner sells for under $200 and is the ultimate in a small tuner that will handle both a marine longwire or a conventional 50 ohm whip antenna. An antenna selector switch on the rear of the unit allows for two 50 ohm antennas or a balanced feed antenna using a built-in balun. They also offer a model without the balun and multiple antenna switch that sells for approximately $180. I recommend you spend the extra $20 and get the antenna tuner with a multiple of outputs to match any type of antenna you may wish to hoist aloft.

We tested the tuner for almost a month and found it to be a superb performer. Its small size makes installation a snap. They even give you multiple ground lugs on the rear chassis for easily attaching copper foil. That's a first!

The face of the unit features large meters that indicate up to 150 watts output forward power, and 30 watts output reverse power. This is an ideal ratio to allow you to see an expanded reading of your reflected power while adjusting for maximum forward power. We found the silver-plated inductor with roller contact assembly smooth to operate. This allowed us to effortlessly tune in for maximum receiver noise while setting up the tuner for a new set of frequencies. Users should make sure that the inductor roller is firmly on a coil — not between them — when tuning up.

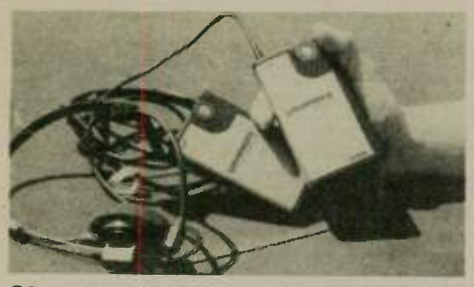
No illuminated meters on the Nye tuner. It was suggested that these were left out in order to keep current consumption for a sailboat user at the bare minimum. We didn't see that the ICOM meters which were illuminated drew that much current, but nonetheless, with this set you may need a flashlight at night.

We judged the overall performance of this antenna tuner as superb. Its size is dramatically different from the Cubic ST-3B, as the photograph indicates. I will then leave it up to you as to which one to select for your next installation.

Another handy piece of equipment to have on board are those little tiny communicators. These are the sets that

Maritime Mobile Nets

Time	Net name	kHz	Coverage area
24 hours	Maritime Mobile Net, everywhere	14313	Worldwide
0100	Central Gulf Coast Hurricane Net	3935	Gulf
0100	Maritime Mobile Net	21407	Pacific/Indian Ocean
0200	Seafarers Net	14313	Worldwide
0330	Maritime Mobile CW Net	14040	East Coast
0400	DDD Net	14115	Canada
0400	Maritime Emergency Net	14310	Worldwide
0500	Maritime Mobile	14313	Pacific Ocean
0500	Australian-NZ-African Net	21200	Indian Ocean
0530	South Pacific Net	14313	South Pacific
0630	Pitcairn Net	14180	South Pacific
0630	South African Maritime Net	14320	Indian Ocean
0700	Pacific Net	14220	Pacific Ocean
0700	International Maritime Net	14313	Worldwide
0715	Bay of Islands Net	3820	South Pacific
0730	Bernie's Net	7230	Caribbean
0730	Guam Net	14310	South Pacific
0800	United Kingdom Net	14303	Atlantic Ocean
0900	German Maritime Net	14313	Atlantic Ocean
0900	Canary Islands Net	7080	Atlantic Ocean
1000	Pacific Gunkholer's Net	14389	South Pacific
1030	Caribbean M/M Net	3808	Caribbean
1030	Barbados Cruising Net	14263	Caribbean
1100	Maritime Weather Net	3750	Northeast Canada
1100	Inter-Con Net	14313	Virgin Islands
1200	Gordo's Net	14345	Mexico
1230	M/M CW Net	14040	East Coast
1230	Oman Sinbad Net	14315	Indian Ocean
1245	Sea Net	14320	Worldwide
1245	Trans Atlantic M/M Net	21400	Atlantic
1300	Waterway Net	7268	East Coast
1400	Florida U.S. Power Squadron Net	7292	Florida
1445	North Net	14345	Worldwide
1545	Marqueses Net	14340	South Pacific
1600	California Baja Net	7235	Baja California
1700	California Hawaii Net	14340	Pacific Ocean
1700	Skipper's Net	14330	Pacific Ocean
1730	M/M CW Net	14040	East Coast
1800	WB6NOA on the air	14342	Worldwide
1900	Manana Net	14342	Pacific Coast
1900	Shamaru Net	7285	Hawaii
1900	Colin's Net	14330	New Zealand
1900	Halo Net	21390	South America
2130	East Coast Waterway Net	14290	East Coast
2200	International Maritime Mobile Net	21404	Pacific
2200	Pitcairn Net	21350	South Pacific



Ohra full duplex communicators

operate at 49 MHz and let you talk and listen with another crew member up to a half mile away. Here is some important information that you will want to know about these sets:

Almost all inexpensive communicators operate half duplex. You talk, then they talk, etc. A tiny vox circuit keys the transmitter on and off with your voice. Usually the first syllable gets clipped.

There is something better that goes further — it's a full duplex communicator from Ohra Corporation, 3555-G Lomita Blvd., Torrance, CA 90505. Their set, the "Walk-phone," operates *full* duplex on two separate channels at 49 MHz. This allows you to simultaneously talk while listening to the other person, just like a phone call. No annoying click of the vox circuit — nor any missed syllables. When you are talking, the other person can interrupt and yell, "Watch out for the log ahead."

They also seem to go further. Tests in Puerto Vallarta, Mexico, gave us a whopping four miles over water. Downtown we could only get a half mile, but that's not bad for these lightweight communicators.

We have tried many systems that sell for around $150 for a pair, and all of the vox units are really just toys. The professional Ohra system that sells for about $250 is indeed a work of art using full duplex circuitry. If you do any type of tower work, climbing of the main mast, or decide to go ashore in the dinghy, these sets are invaluable. Like any delicate piece of electronics, keep them dry — they will not take a dunking in salt water.

Write the boys at Ohra Corporation for a nifty catalog on their full duplex communicators that really work well aboard any type of boat.

For those of you thinking about getting a cordless telephone to add to your dock phone, wait just a few months. New frequencies for cordless telephones are on the horizon. This means a dump of the present cordless phone equipment at ridiculously low prices — similar to the CB debacle.

If you're looking for an inexpensive cordless phone, you will find prices plummeting when the FCC announces the new 10 channels. Then will be the time to pick up a phone at rock-bottom prices. Most cordless phones will easily span a marina where a common AC power line is used.

The final product we evaluated for this summer was the new 5-band marine/mobile antenna from Gene Hansen Company, 1000 Hansen Road, Corrales, NM 87048. This $160 antenna uses a tapped coil for 5-band operation without having to go back aft and change whips or resonators. Each band may be "trimmed" for lowest SWR by using a tuning slug stick upon initial installation.

Gene (left) and Gil tune up 5-band antenna.

In our tests, we found that the SWR was well below 1.5 to 1 on all bands except for 40. Forty was slightly higher, probably because of the close proximity of a quarter-wavelength stay. Nonetheless, we worked out to worldwide stations on just about all bands without having to touch the whip once.

This antenna was designed several years ago for military applications. There is nothing complicated or tricky about what's inside the coil. It simply and simultaneously resonates on all five bands — 10, 15, 20, 40 and 50 kHz of 80 meters once it's easily tuned up. The antenna is stainless steel and has no moving parts or screw-on joints. The overall length is 8 feet, and the top mast may disconnect for easy storage. There is also a quick disconnect mount available that allows for the entire setup to be removed from your ship or mobile unit, or moved between the two.

The large center loading coil will easily handle up to 500 watts PEP output. At last, an antenna that works on all five bands without having to change a coil. If you plan to use a mobile whip on your marine setup, you may wish to write the manufacturer for more details.

(Tests are still being conducted on this antenna. Discrepancies in performance have been received. Good performance was achieved only when using a perfect groundplane beneath the antenna. This antenna is more sensitive to groundplane anomalies than are single-band whips. More test results soon.)

Coax comments

Here's some good input on coax from Bob Wheaton, W5XW:

After reading your April column in **Worldradio**, there are a few comments I'd like to share with you.

I believe, if you check, you'll find that RG never meant Radio Government. RG is an ancient JAN (Joint Army-Navy) designation for cable used to propagate RF signals and is a two-letter abbreviation of Radio Guide. Similarly, UG, a common connector prefix, is from Union Guide. At least that's how I remember it. /U, as you said, is Universal.

The following RG cable types which are most commonly used and also most commonly available, are *not likely* to be "non-contaminating" versions: RG-58, RG-58/U, RG-58A/U, RG-59, RG-59/U, RG-8, RG-8/U, RG-11 and RG-11/U. The jacket material used on the foamed dielectric versions of any of these may or may not be non-contaminating. The most popular non-contaminating jacket materials are PVC Type II, PVC Type IIA and PE-IIIA (high molecular weight black polyethylene).

The Columbia "Permaline" series of RG cables is representative of cables utilizing either PE-IIIA (per MIL C-17D) or a very similar material. Columbia uses the Permaline jacket on many of the cable types listed above, and apparently from their catalog specs, always in conjunction with a foamed polyethylene dielectric. Thus, a cable labeled by Columbia as RG-8/U Type Permaline, Cat. No. 05015, is a foam dielectric version of an obsolete and meaningless military cable number, packaged in PE-IIIA, or something very similar, and essentially non-contaminating. For amateur, CB and marine use below microwave frequencies, it should be quite adequate.

Chaos runs rampant in the numbering of cables, especially the housebrands stocked for CB, but often purchased and used for amateur and marine use by those unfamiliar with the problem. Some foam cable I've seen has had a characteristic impedance near 60 ohms and was labeled as RG-8/U Type, or RG-11/U Type — whichever the distributor specified on his purchase order. Any cable labeled as RG-xxx/U TYPE should be immediately suspect, as the use of the word "Type" following the number usually implies only a similarity to an obsolete, therefore meaningless, military number. Conversely, cables actually labeled TYPE RG-xxx/U can reasonably be considered to at least conform to the general specifications of the obsolete type . . . though this is not always the case. Columbia Permaline series cables, at least in their catalog, are listed as RG-xxx/U TYPE. If the lower loss of foamed polyethylene and a non-contaminating jacket are the most important factors, these cables should be adequate. TYPE as part of the suffix is just a good indicator that the buyer should beware until he can check the manufacturer's specs. As you pointed out correctly, it's often necessary to use the manufacturer's stock number, rather than an RG number, in either research or purchasing a desired cable.

I don't believe the relative flexibility of a cable is a good indicator of whether or not the jacket is contaminating or non-contaminating, and your comment about "an extremely tough jacket (PVC). . ." is meaningless. The original PVC Type I is quite tough and very contaminating. The PVC Type II and PVC Type IIA are likewise quite tough, but are the non-contaminating formulations. The other qualities you mentioned: a healthy 95 percent coverage braid (or better), as well as either a white foam (or off-white solid polyethylene) dielectric, bright copper conductors (or bright tinning or silver plating) are all good signs. If it looks healthy, at least it warrants a check of the manufacturer's specs to see what materials were used. PVC-II is actually classed as Grey PVC semi-non-contaminating . . . whatever that means, HI HI! For the majority of installations, solid dielectric cable is preferable.

(*please turn to page 41*)

Installation of the month!

Happy Flyers
HAMS & PILOTS

"THERE IS NO LIMIT TO WHAT YOU CAN DO – IF YOU DON'T CARE WHO GETS THE CREDIT"

INTERNATIONAL COMMANDER, **Hart Postlethwaite, WB6CQW**
1811 Hillman Ave., Belmont, California 94002 (415) 341-4000
International Vice Commander, Paul Hower, WA6GDC
Box 2323, La Mesa, California 92041 - (714) 465-5288

Women's Pilots Convention (99s)

The Southwest Section of the 99s (International Organization of Women Pilots), held their Spring Section Meeting recently, at Great America, in the San Francisco Bay Area. These gals (and their passengers) flew many miles and from many states, including Hawaii. They came in little Cessna 150s (IFR from LA) and in commercial jets. Some of them were private pilots, others instructors, and others pilots on commercial jets and helicopters. One thing they shared was their personalities, which helped them maintain the drive necessary to become accomplished pilots. Their group contains some of the finest women in the world.

They arrived in pouring rain, to take part in meetings that help them become better pilots, and to share in the various responsibilities required to keep the skies safe for all. They mix work, education, safety and pleasure in ways that result in a truly worthwhile trip. Some of their volunteer work has made it possible for others to learn to fly, and for some to upgrade their skills.

Ham operator involvement

Carol Clarke, of Salt Lake City, is their present governor. She is a very active Amateur Radio operator, so it should be no surprise that many radio amateurs and pilots could be involved. Janie Postlethwaite, WB6ODQ, is a member of the host chapter (Golden West of San Carlos), and had the job of organizing the education program. The theme was to be "Computers and their role in aviation." With so many amateurs now involved with computers, a number of "on-the-air" conversations began to arouse the interest of fellow amateurs. As we have been mentioning in our recent articles, the kind of people who have what it takes to be amateurs are the kind who will respond when things need to be done.

As the amateurs began to volunteer to bring their computers and to share their knowledge with others, additional help was offered in areas not even considered. Sheldon Bennet, W6HVL, (formerly Jethro with Homer and Jethro), volunteered to come on Friday afternoon and provide professional live music for the hospitality room. (He is a super musician, and really added much to the program.)

Harmon Hallett, WD6FAG, manages "Robar", the robot for Model Ts and the misfits, of Fremont. With their permission, he was able to bring Robar, and donated his time greeting the girls at the airport, as well as entertaining them at the Marriott. Robar's appearance with these lovely lady pilots was enough incentive for the Channel 11 TV news crew to come to the airport for an interview. Interestingly, when the robot talked, he sounded like a ham operator. Janie was chosen for the interview, along with some of the arriving pilots. In this case, our amateurs were seen, as well as heard.

Computer education program

It was really amazing to listen on the air, and to watch the preparations for the upcoming program. Bob Douglas, W6EGU, and Vic Borgnis, WB6EVH, worked together to program a special audio/visual presentation that played through Bob's Atari in the hospitality room all weekend. Some software was donated (details follow), and Ross Peterson, WB6ZBU, was able to arrange for some donated time on the CompuServe computer service. Scotty Campbells provided video equipment so we could tape much of the affair. By the time May rolled around, we had more equipment than we had room for.

We must share with you that there is a great deal of interest in computers; our computer education room was full almost all of the time. We had two Apples, an IBM and three Ataris. The volunteers carried their equipment up (and down) stairs, and most of them were there for two days. If you are looking for a special program with a special affair, remember our story.

Aviation software

I can see we will have to spend a column or two sharing some of the latest programs available. Skylark Flight Plans of Newport Beach provided a fantastic program for flight logs and plans. All pilots were given the opportunity to run different routes to destinations, and see the differences in time and fuel consumption. Some were amazed at how little difference there was in two routes. This was an important safety message, since pilots now realized how little it costs in time and fuel *to fly the safest route, rater than fly direct over barren country!*

Programmers Software of Cabot, Arkansas provided a really neat IFR FLIGHT SIMULATOR program. I really enjoyed it, because you really had to think to fly the instruments properly and find the airport. It is a "MUST" for pilot computer owners. You can sure fly it cheaper than your airplane. The mental exercise on VOR interpretation prepares you for real flight, without danger or cost.

Harmon Hallett, WD5FAG; Janie WB6ODQ, and Hartley Postlethwaite V, followed "Robar" the robot to the 99s education program. Robar's voice sounded like it had done some hamming.

Phone-line computer services

There are a number of different companies who provide various services that you can access with your computer and a modem (some only require a terminal). We were very fortunate to have Ross arrange for a free day of services from CompuServe of Columbus, Ohio. I had never been able to see such a service in action. Ross had a crowd almost the whole time, and I would estimate that we were telephone-connected for nearly six hours to CompuServe.

Of particular interest to pilots was their aviation services. Ross ran many complete flight plans all day Saturday. He would tell the "big" computer where they wanted to go, from where, the type of plane and the time. Quickly, information began to arrive on the printer. Some of the flight printouts were about three pages, partially due to the detailed weather information for the flight.

One of the pilots intentionally told the computer an altitude that was too low for IFR flight. When the computer came to the first portion of the flight that would be affected by this too-low altitude, everything stopped, and the pilot was informed that a higher altitude had to be selected to avoid terrain. It was amazing to watch. Almost seemed like the computer "back East" was thinking human.

Miscellaneous program information

Vic Borgnis brought his boss' IBM computer with one of the most realistic flight simulators we have ever seen for a home computer. The scenery was in color and banked, rolled, etc., depending on your command inputs. If it is available for my Apple, I will buy it and give a report in a later column. If you have an IBM and like to fly, go see the program.

We had so much trouble finding aviation-related programs to use, we would like to ask our readers to send us names and addresses of available programs so that we can share them with others. If you have any reviews you would like to share, send them to us and we will try to get them put in this column. We are just as interested in any regular ham-type programs. We need to stick together, and to pool our information.

Our personal and organizational thanks to all who donated so much to the success of our first involvement in this type of program. I have been asked to put on a two-hour seminar on DF — including a workshop with questions and answers — at the Pacific Division ARRL Convention in Reno, Nevada. Hope to meet some of you then. □

If your club is involved in any emergency situations, send the story and pictures to WORLDRADIO.

See your group in print — your story may help others be better prepared.

New Product

Hand-held Airband Transceiver

The TR-720 is a solid-state, fully synthesized, portable Airband Transceiver covering the 720 COM channels between 118 and 136 MHz and 200 NAV channels from 108 to 118 MHz. It is only 6.6″×2.6″×1.5″ and weighs just 19 ounces. It employs microprocessor technology, has a twist-off battery pack, comes with a complete set of accessories, is FCC Type Accepted, and carries a full one-year warranty.

It is available for $795 from your local Avionics Dealer, FBO, or factory direct from Communications Specialists, 426 W. Taft Ave., Orange, CA 92665 (800) 854-0547 or (714) 998-3021. □

TEACHER

Alan Kline, KB1DJ
P.O. Box 54
West Lynn, MA 01905

When I teach a Novice class, I like to get my students involved with all the various Amateur Radio aspects, so each week I try to come up with something different — either to hand out or demonstrate. Some weeks, it's just a piece of literature pertaining to the hobby in general; other weeks, it's a demonstration of a piece of simple ham gear, or maybe teaching them a skill they need to learn as an amateur.

These activities and handouts are intended to keep the students interested in staying in the class. As some students might learn faster than others, the pace of the class must almost always slow down for the below average student. My Novice course averages eight to 10 weeks for the fast learners, and the stragglers usually finish by the 14th week. Here is a week-by-week example of some projects you might try.

Week 1

This is a tough night. The whole evening should not be spent on introducing Amateur Radio to the students — just the first hour. Lately, I use a videotape that lasts about 35 minutes and then spend the rest of the first hour introducing the other instructors, collecting registration forms, collecting money, feeling out the student's needs and asking those who came just out of curiosity, to leave.

Week 2

I have compiled a five-page booklet entitled *Ham Radio on the North Shore.* It has a listing of all the local club meetings, net times and frequencies, and some of the finer points of buying used ham gear. In a later article, I'll cover this booklet in detail.

The weekly demo usually centers around the lesson plan, which involves basic electricity — maybe a demo with an electromagnet or a simple circuit with a battery, light bulb and wire.

Week 3

As the first few weeks of class deal with a concentrated study of Morse code, I supply them with a list of CW abbreviations, like the procedural KN and SK, and the slangs, like BCNU and 73.

The weekly demo is usually a 2-meter walkie, since many are only interested in getting their "talking" privileges anyway. Those who only wanted a Novice now start to think about the higher levels.

Week 4

Your students will be itching to get their hands on some gear by now, but I try to convince them they should make a wise choice on buying ham gear, because it depreciates in value very rapidly. So I encourage them to start writing to the ham equipment manufacturers for info. To get them started on this project, I give them a recent copy of 73, QST, CQ or Worldradio. They are easy to obtain, because many amateurs collect magazines for a few years and then want to clean them out of their shacks. My fellow club members know to call me before they throw anything out.

The demo of the week is usually a very simple one, one that many older amateurs take for granted — soldering. They get a hands-on experience with just two pieces of wire and some solder.

Week 5

We are fortunate to have a few surplus parts and equipment stores in our area. My long-time favorite has been John Meshna's of Lynn, Massachusetts. The late John Meshna was, in a certain way, an Elmer to all of us local amateurs. Now his son, Doug, carries on the tradition of helping us amateurs fill up our junk boxes. Meshna's catalog makes an interesting handout to all my Novice and General students. I explain to my students that if they don't buy parts from a local store like Meshna's, that store might go out of business and then, the only choice will be Radio Shack.

The weekly demo is on antennas. I have built a scale model wire dipole, right down to the PL259. I make all the various configurations out of it: dipole, sloper, Vee beam and verticals.

Week 6

The local Heathkit Electronic Center is another supporter, not only of our teaching efforts, but also of the local amateurs. They give out their catalogs generously. They have let us use the store for demonstrating their gear and to show our movies. I go over their products with the students.

The weeky demo is from Heathkit. They have a small, very simple kit that includes a circuit board and a few electronic parts that, if assembled properly, act as a

(Continued on next page)

WITH THE HANDI-HAMS

Maureen Pranghofer, KF0I

It was in the mid-1930's when Chuck Diebold first became interested in radio. He was interested in becoming a ham, but did not consider this seriously until after World War II when a local amateur in Sarasota, Florida offered to assist him with the code. However, his dreams of becoming an amateur were ended when the helpful ham became a Silent Key. So Chuck, who is confined to a wheelchair, has spasticity and limited speech, limited his radio interests to SWL and CB. CB was fine until others began harrassing him because of his speech handicap, so he gave it up and continued to be interested in someday becoming an Amateur Radio operator.

When an article about Chuck's interests appeared in a local newspaper, the ham community responded with assistance. They informed him of the Courage HANDI-HAM System, which Chuck joined in March of 1979, and helped locate some way in which Chuck could obtain equipment. The request to local service clubs met with very generous results through the Sarasota Lion's Club, who provided Chuck with a complete station including a Century-21, a Butternut vertical, coax, a code reader with video screen and HAL Keyboard.

Chuck, who had been reading about radio for some 40 years, did not need much work on the theory, and was so motivated to get his ticket that he obtained the Novice within four months and became the proud owner of the call KA4JZM. On his HANDI-HAM application he had written, "If I can become a ham I will be a CW man." After 40 years of dreaming of this goal, Chuck was finally on the air making stateside and DX contacts.

In September of 1980, Chuck packed up his station and made the big move to the Good Shepherd Home for the Handicapped in Allentown, Pennsylvania, after having been on the waiting list for four years. Once there he quickly got his station set up as best he could. However, he had no outside antenna and so contacted the Courage HANDI-HAM System to see if we could locate someone to assist him. A local amateur was contacted and soon Chuck was back on the air. In addition to being on the air and enjoying radio himself, Chuck began to tell others at the home about his newly acquired hobby.

Jim Johnson, KA3IYL. Equipment shown is MM-2 (foreground), MBA reader (background) and Century 21 (party obscured by Jim's head).

Chuck Diebold, KA4JZM

One of those he told was Jim Johnson, another Good Shepherd resident who is confined to a wheelchair, without use of arms or legs and who is unable to speak. He communicates with a pointer on his forehead. Despite Jim's disability, he eagerly worked toward the Novice. In January 1982, some nine months after joining HANDI-HAM System, I received an excited letter from him stating he had passed the code test. Shortly afterward, he passed the written portion of the exam and is now KA3IYL.

With assistance from his one-to-one he has been on the air having worked 11 contacts during the Novice Roundup and having had QSOs with 10 states and six countries. For him, Amateur Radio is more than a hobby. It is a new way to communicate.

One of Jim's goals is to be able to operate his station independently. This has been a challenging problem to overcome by both him and his one-to-one. Initially it was thought that a keyer with microswitches would work out okay, but it was too much effort for him to punch the needed information with his forehead pointer. So through the continued interest of those persons at the Good Shepherd facility, money was donated to purchase an AEA keyer with memory. Jim is able to activate this independently and has programmed several messages with it. However, he has some difficulty sending individual letters with the keyer.

In order to become more independent on the air, the volunteer working with Jim has rigged up a motorized bandswitch operating via pushbutton and a motorized VFO. This has all taken time, and Jim has patiently waited until he can be active on the air without having to have standby assistance. This goal will soon be accomplished through Jim's determination and motivation to stick with the program and through assistance from other amateurs and the Courage HANDI-HAM System. □

Teacher

(*continued from page 37*)

simple oscillator. The general idea is to get the students interested in kit building — and it works.

Week 7

The weekly handout has always been a newsletter, published for the Quannapowit Radio Club of Wakefield, Massachusetts. Their editor — Fred Lingel, K1CCW — prints one of the finest club newsletters in the country. It contains much info for the new ham.

The weekly demo is a trip to a local amateur's shack. This is only because we do not have a station set up where we teach — yet.

In the weeks left, the students get demonstrations on SWR meters, VTVMs, antenna tuners and all the other related ham gear. All that is left to pass out in the form of literature to them is their FCC 610 forms and info on getting their gear on the air. After week 8, the only students you will have left will be the serious studiers and potential amateurs — help them as much as you can. □

Dan Lewis, N6HY, is the new mega-mile champ. He worked a record-shattering 21,597,015 miles-per-watt output in a contact with Charlie Ebert, KD5OB, on 9 January 1983.

Dan was running .000067 of a watt output — that's 67 *micro*watts — on 10-meter CW between Dan's home in Paso Robles, California, and Charlie's home in Kansas, Oklahoma.

Bill Harding, K4AHK — awards chairman for QRP Amateur Radio Club International — promptly issued both men the club's famous 1000-Mile-per-Watt Award. "This award is the all-time high, edging out WB6UNH's 19,250,000 miles-per-watt of June 1979, "Bill said in announcing the award.

QRP ARCI awards the certificate — also known as the KM/W Award — for a two-way contact which, when the output power is divided into the Great Circle distance between the two stations, equals at least 1,000 miles per watt. Awards chairman Harding said that more than 800 KM/W certificates have been issued since the award was introduced.

Dan said the whole process began when he and Charlie established contact on SSB. Dan was running about 2 watts from his Ten-Tec Argonaut 505. His antenna was an east-west V-beam, 115 feet on a leg and fed with open-wire line through an antenna tuner.

After establishing contact, Dan began experimenting with attenuation of his signal in 10, 20 and 30dB steps.

"When he still copied me at a level of several milliwatts, we decided to try some ultra-low-power work on CW," Dan recalled. "We had varying degrees of success with various power levels," he said. "We then decided I would reduce (power) to the 50 to 100 milliwatt level and wait for a propagation peak.

"When the propagation peaked, Charlie gave me the 'go,' and I transmitted the four-digit number 6735 at 2339 UTC. Charlie correctly responded with 6735, and I transmitted back 'Eureka' on 2 watt SSB. It was difficult copy for Charlie, but we did meet with success," Dan said.

Dan determined his power output level by measuring the Argonaut's output with an MFJ Power Sentry with a 2 watt slug. The signal then was fed into a step attenuator and then into a 50.7-ohm dummy load. After rectifying the AC voltage with a diode, the DC voltage was read with a Fluke 802 voltmeter.

Leo Delaney, KC5EV, president of the Houston Area QRP Club and a coordinator for QRP activities for the 1983 ARRL National Convention there in October, has announced a special dinner for low-power enthusiasts.

The dinner is set for Friday, 7 October, and will include all of the featured speakers at Saturday's QRP Forum during the convention program.

Distance champ Dan Lewis, N6HY, displays his certificate acknowledging a QRP contact of more than 21.5 million miles per watt output. At his elbow is the Ten-Tec Argonaut 505 and the attenuator he used to reduce power for the award try.

Although reservations are not required, Leo asks that those planning to attend the banquet let him know by Labor Day so the restaurant can be given a tentative count.

Dinners will be $15 per person and will offer a choice of a seafood platter or steak, salad, potatoes, vegetable and bread, with gratuity included. A cash bar will be available.

Leo promises there will be no speeches. He can be reached at P.O. Box 383, Spring, TX 77373.

This year's ARRL national convention will be the first at which a major QRP program will be part of the activities. □

TRAFFIC

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Choice of words

A half century ago, it was cheaper and almost as fast to send a telegram instead of making a long-distance phone call. Back then, operators had to make all the connections at manual switchboards, and a three-minute call across the country could cost $10 or more. That was when you could live on $25 a week. Today it's all automated, no operator is needed, and the cost is figured in cents, not dollars, so few people send telegrams any more.

The invention which Alexander Graham Bell called "an improvement in telegraphy" on his patent application has, to a great extent, displaced other forms of electronic communication in the life of the ordinary citizen.

Back then, however, when telegrams were in common use, a style of writing developed which was called *telegraphic.* Because the telegraph company charged so many cents per word for a message, frequent users of the telegraph developed a style of writing which conveyed the message in the fewest possible words. If a word could be eliminated without altering the meaning, it was dropped. Such is usually the case with the articles *a, an* and *the,* for example. The word *am* is used only with the pronoun *I,* so the pronoun is not needed. In fact, it can generally be eliminated.

"Will arrive Friday" would be readily understood to mean "I will arrive Friday." Or if more than one person signs the message, the meaning would immediately be grasped as "We will arrive Friday." Often, a few words can be saved by rearranging words or by using different words. "Guests for dinner" can be changed to "Dinner guests" and save a word. "Is getting married to" becomes "Marries" and three words are saved. And the example given above, "Will arrive Friday" can be further shortened to "Arriving Friday," with no loss of meaning. Because Friday is still in the future, there is no need of the word *will* to express the future tense.

Of course, in some cases one can cut too much and obscure the meaning, as in the telegram, "Triplets born more later" (more babies on the way, or more details to follow?). Then there is the case of the Scotsman, whose thrift was proverbial, sending the following telegram: "Reckon turnpike mother broker arm analysis nursing her home biplane Sunday." If you can't figure that one out, see the end of this column.

What does all this have to do with Amateur Radio? We don't charge for messages by the word. Even so, handling messages takes time, so our efforts to be brief make it possible for more messages to be handled. Sometimes a long message is needed, but too frequently our "night letters" are merely the fruit of long-windedness.

For the benefit of younger amateurs who have never had occasion to send telegrams, a night letter was a lower-cost telegram that was usually passed at night when traffic was light and mailed to the addressee the following day from the office of destination. Where the rate for a regular telegram was so much for the first 15 words with an additional charge for each word, a night letter's base price was for the first 50 words, so they tended to be longer. So when you hear an old-timer say, "Here follows night letter number 60, K4ZN, check 47," you will know what he means. He means it could have been said much more succinctly. It's best to keep it under 25 or 30 words, if possible.

For over 40 years, we amateurs have had one effective way to keep texts shorter — the ARRL list of numbered messages. Every amateur who is at all involved in traffic handling should have this list. If you don't have one, send an SASE to ARRL headquarters and ask for one. You'll find the list in several ARRL publications, too, such as the Net Directory, the logbook, and some of the books on operating a station.

One thing it's best to avoid in our attempts to be brief is the use of the contractions *I'll, we'll,* and *we're.* When a message is handled by CW or RTTY, the apostrophe is not transmitted, and the words become *ill, well,* and *were,* which in some cases could be misunderstood. Better to spell it out in full; better yet, drop the pronoun as mentioned above, say *will* instead of *I'll;* best of all, drop it completely if the meaning permits.

To all old-timers

Jim Hatherly, WA1TBY, Section Traffic Manager for Eastern Massachusetts, has the following to say "to all senior members of Amateur Radio":

"For some time I have been wanting to start this letter to you older hams who have seen Amateur Radio grow from a relatively small group to what it has become today. Along the way, you have made contributions yourselves, and you can still do so.

"The National Traffic System has two main cycles — one mostly on SSB in the afternoon, and one mostly on CW in the evening hours. The evening nets are not much of a problem because those who work during the day can usually find time to check into these nets, although we can still use more outlets on these sessions. But it's the daytime nets that are the problem. We lack people to cover these nets on a regular basis, and as a result it's a dedicated handful of hams who keep them going. We sure could use your help. Can you help us keep the 'mail' moving?

"Many of you have at one time or another handled traffic, and even derived your living from telegraphy. Well, let me tell you that handling the traffic is just as much fun today as it used to be, perhaps even more, because we now have more people who know that Amateur Radio has a message service that can send radiograms around the country, and many are taking advantage of the service. This trend is growing and our relationship with the public is being enhanced. The traffic figures bear this out over the past few years. But we do need your help to cover the net sessions.

"Can those of you who are retired perhaps devote an afternoon a week to this venture in fun and public service? Can we lure you back? We would love to hear from you."

Jim goes on to recommend that his readers (he was writing for a New England newsletter) check into the First Region Net. Instead, here you will find a list of the National Traffic System's daytime region nets, which generally meet at 1:45 and 3:30 p.m. local time. If you don't find your net at that time, ask a traffic handler or your Section Traffic Manager when your region net meets. Sometimes local needs make changes necessary.

Net	Frequency	Coverage
1RN	3948	New England
2RN	3930	NJ and NY
3RN	7265	DC, DE, MD, PA
4RN	7243	FL, GA, NC, SC, VA
RN5	7290	AL, AR, LA, MS, OK, TN, TX
RN6	7275	CA, HI, NV
RN7	7235	AB, AK, BC, ID, MT, OR, WA
8RN	7240	MI, OH, WV
9RN	7283	IL, IN, KY, WV
TEN	7232	IA, KS, MB, MN, MO, ND, NE, SK, SD
ECN	7073	MR, NF, ON, PQ
TWN	7233	AZ, CO, NM, UT, WY

The abbreviations in each case are those used on CW. On voice the nets are simply designated "First. Region Net," etc., except for Region 11; its net is called the "Eastern Canada Net," as it is the only net whose coverage is exclusiv Canadian. The western provinces part pate in Regions 7 and 10, which also clude U.S. sections.

Many sections these days also h nets that meet during the daylight ho and can use the help of old-timers terested in getting back into the tra game. It is unlikely that your offer to as liaison between a section net and y region net will be refused. It is also unli ly that your section or region net ha full complement of net control statio In most instances, you find an iron n or woman or two who calls the net seve times a week. If these people don't mi fine, but it's a good way to lose good t fic people if we burn them out from o work because nobody is willing to h share the burden.

As Jim concludes his plea, "I feel t you old-timers still have a lot to con bute to uphold the traditions you h already set for us."

Listen on your section or region net quency. If you like what you hear, ch in. If you don't like it, maybe you check in anyway, and do something ab it.

In a letter accompanying his invitat to old-timers, Jim said that getting th involved would mean there would be m who could handle traffic in an emergen He says,

"During disasters like a hurricane in Caribbean, an earthquake in Italy, the hu cane nets have asked for NTS people to h take some traffic into the NTS. Not too m volunteered because of their unfamiliarity w the system. Knowledge that could be gai from checking into the nets of the Natio Traffic System would make these amate that much more proficient in times emergencies."

For years there have been two separ systems of nets, each going its own w with little or no liaison between them: National Traffic System and the indep dent nets that follow its procedures, the nets — mainly on 20 and 15 meter that follow a different procedure.

The National Traffic System has, d ing the past year, begun liaison with "other nets" by an IATN representat who checks into the evening cycle of Eastern Area Net, providing a route any traffic to or from points outside United States and Canada where thi party traffic is allowed.

As occasions are so rare when there formal traffic on these "other nets," NTS people will be inclined to sit arou for hours with nothing to do as the n handle phone patches, "two-way "push-pulls," "one-ways" and inform — their stock in trade.

If an emergency arises where there need to handle formal traffic and nob on the net feels qualified to take it, best thing to do is to contact some who can and get that person to come the net frequency. It may be that particular individual who receives the quest will not be free at the time, probably will be able to suggest some else. Or, as suggested last month, get touch with a Transcontinental Co Director. They were listed in last mont column. Any of them will be happy to range for someone to pick up traffic feed it into the system.

While the National Traffic Syst lacks the personal contact you get on "other nets," it is geared to handl higher volumes of traffic, and you turn your message over to the system forget it.

RTTY

With all the new computer-type minals on the market, old-fashioned T

types are fast becoming obsolete, so expect the prices to drop. Maybe more of them will be used by traffic handlers soon. Not by Novices, however, as the FCC rules require them to use only the International Morse Code.

The Scotsman's telegram

The translation is: "Wreck on turnpike. Mother broke her arm and Alice is nursing her. Home by plane Sunday." The full text is 16 words, the abbreviated one is 11. But you can say it in more conventional telegraphic style and still keep it down to 11 words: "Wreck on turnpike mother broke arm Alice nursing flying home Friday."

The ARRL Board meeting

There were a few items tucked away in the minutes of the ARRL Board meeting of 21-22 April of particular interest to traffic people.

In the area of emergency communication, the ARRL will effect a Memorandum of Agreement with REACT, the CB organization (minute 75), and will explore the possibility of a Memorandum of Understanding with the Associated Public Safety Communications Officers (minute 92), presumably similar to what already exists between ARRL and the Red Cross and Salvation Army.

The Board asked the League Counsel working with the General Manager and staff to investigate the possibility of clarification on what is permissible as third-party communication (minutes 93 and 95).

If you have any comments on these matters, get in touch with your Director.

Maritime Mobile

(*continued from page 35*)

Foam types will often have poor braid, unknown jacket materials, odd or non-constant impedance values, etc. As you say, it's more likely to fail due to moisture problems.

I'm intrigued by your comment that non-contaminating cable will minimize the capillary effect of seawater creeping into the coax, destroying the braid and center conductor. You almost sound as if you mean to imply that moisture (or water) transmission through the outer jacket is the problem addressed by the PVC-II, PVC-IIA and other non-contaminating jackets. This is not the problem at all; the problem avoided by the non-contaminating jackets is essentially that they are compunded with plasticizers which do not have a tendency to leech into the PE dielectric, as with common vinyl and PVC-I jackets. This leeching of plasticizers contaminates the PE dielectric, changing its characteristics, as well as loss and characteristic Z of the cable. This problem occurs from the date of manufacture and is accelerated by heat.

Where contaminating types are in use, it's good practice to run at least a loss test every few years, and replacement after five to seven years is indicated. All plastic jackets will exhibit some vapor transmission. In addition, some pinholes may be present. There are cables more suitable for direct burial, for example, but Anixter, in its recommendations, suggests PVC-I, PVC-IIA and PE-IIIA as all suitable. This implies that vapor transmission through the jacket, which would indeed contaminate the center dielectric, braid, etc., will be about equal irregardless of the exact type.

Thankfully, as the newer cable types replace the obsolete RG-8, RG-58, RG-59 and RG-11 series, they generally bring with them non-contaminating jackets. Cables from the reputable manufacturers with types RG-58B/U, RG-58C/U (now standard), RG-8A/U, RG-213/U and RG-214/U should be non-contaminating 50-53.5 ohm types. Also, types RG-59A/U, RG-59B/U and RG-11A/U should be non-contaminating 73-75 ohm types. Since a manufacturer has no obligation to make sure these cables conform to the applicable military spec, generally MIL-C-17D or MIL-C-17E, it should not be automatically assumed that the cables just mentioned all will. There are some RG-213/U cables on the market that are in real distress. A piece of Delco RG-213/U I examined — with about an 80 percent braid, but apparently normal in other respects — turned out to be a "consumer grade" cable, not manufactured to MIL-C-17E, the applicable spec for this type.

With the special cables such as RG8/X or RG-8 Mini, a manufacturer stock number and catalog would be the only reasonable way to determine what it is.

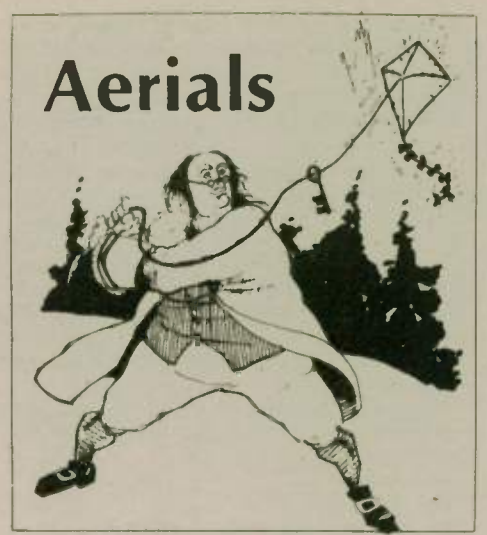
Another comment you made which is intriguing is the one about why the outside jacket is different from the center dielectric; so they will not bond together, and thus the jacket can be easily stripped. Could be, but there are a number of cables which utilize polyethylene for both dielectric and jacket;: RG-29, 37, 38, 39, 54A, 55, 55B, 71A and 71B/U types. That would make it appear more logical that the manufacturer uses materials compatible with the intended application of a given cable.

PE offers low RF loss, so is great as a dielectric. PVC, by comparison, has terrible loss at RF frequencies, so would be totally unsuitable as a dielectric, but some PVC has the perfect qualities to make a good jacket. For applications where the heat — either ambient or developed due to power loss in the line — would damage the PE/PVC varieties, the manufacturers provide us with other cables which utilize Teflon (PTFE) as the dielectric, and PTFE, KEL-F, FEP-IX, fiberglass tape, etc. as the jacket. Here again, Teflon may be used for both, so it's doubtful that the use of dissimilar materials is to facilitate jacket stripping.

3-M Scotchkote, according to 3-M, should be painted over their black PVC tape, such as #33, to further enhance its weatherproofing. I have no idea how it holds up in California, exposed to salt air. I have used it in southern Texas, as indicated by 3-M over PVC tape, and after two years exposure to sun, wind and rain at 85 feet above ground, it was a mess. Most of it had simply flaked off, and it was providing zero additional waterproofing. Luckily it was an N connector situation with Dow-Corning DC-4 silicone grease in the connector to displace all air, so it did not get waterlogged. Housepaint would probably provide more protection in southern Texas. Coax-Seal does work — great — but it should be protected from any rubbing and is not animal-proof. The Dow-Corning DC-4 silicone grease inside is good protection, and as Decibel Products notes in making that recommendation, the slight impedance bump which might result at that point in the line is offset by certain waterproofing and increased reliability. I use DC-4, wipe off the outside with lacquer thinner to remove any grease or oil, and use Coax-Seal.

Hope some of this is useful to you and Worldradio readers. 73 and Tnx for an interesting column each month.

Sincerely yours,
Bob, W5XW
Elect. Tech. USN (ret) □



Kurt N. Sterba

Here is a rather interesting letter on what can be done with a minimum of.

Dear "Kurt N. Sterba",

I look for your articles every month in **Worldradio**, along with the QRP column! In spite of all the pithy comments, there is always something new for me to absorb, and it helps my limited knowledge of radio theory.

I am a self-styled "drugstore" ham! I buy it off the shelf and when it breaks I take it back to the same store to be repaired. No apologies! I got my Novice ticket with ARRL material and my General with a Bash book, and I'll probably get my Advanced and Extra with the help of the latter.

I thought you might be interested in one of my antenna experiments that was a success! I live in a condo and with the exception of my downspout/gutter and a long wire laying on the shingles, all of my antennas are in the attic, which has a peak at 30 feet. I run a Ten-Tec Argosy and feed everything with twin-lead and use counterpoises for grounds.

Anyway, I built a 15-meter dipole from 18″ sheet aluminum kitchen foil. The "wire" is clipped over a run of twine and the antenna lead is fastened with alligator clips. The improvement in reception is absolutely amazing over a regular dipole, and I am convinced of this fact. I am also convinced that there is no gain but you have to hear them before you can work them, right? That particular antenna was expanded to a 20-meter dipole with clip-on wires at right angles and as a bonus, it also loads nicely on the 40-meter band and does even better than my long wire on that one, TX and RX!

On 20 meters the bandwidth is exceptional, and I can work the entire CW and phone portions without re-tuning if necessary, and the SWR is never over 1.3 to 1! 10 and 15 meters are fair but 40 meters is a bit narrow, as would be expected. But four bands on a 33 ft. antenna is pretty good to my way of thinking, especially when you consider the whole deal cost me about $5!

I have also tried other configurations, including around the walls of a room, inverted Vee and random wire. A shortened version with 8 feet in a dipole configuration will also work with low power and some patience. For an apartment ham or a ham in a motel room, this design is quite a boon! This summer, I plan to make a wire beam in my attic, and I have a hunch this is going to be some performer.

Can an apartment ham work DX? You bet, and I have about 68 countries after two years of operating and some of these on QRP. I do not work contests or pile-ups and prefer a simple ragchew to anything else. I work about 98 percent on CW!

Your coverage some months back on delta loops was appreciated, and I have operated some QRP portable with them on 15 and 20 meters. Very nice! I would like to see you touch on coaxial dipoles and wire beams which would have a good appeal for a cliff dweller like myself.

Thanks for an interesting if not a provocative column! Hope to hear you on the bands one of these days. If you hear a ham tell you he is working a "Reynolds Wrap dipole," I'll expect you to identify yourself. Hi!

DAVID GAUDING, KA0JWO
St. Louis, Missouri

OK, Dave, if I do hear you on I'll give you a quick KNS on CW, but that's all.

To a subject that is strange. I've heard hams say, "I'd get on 80 but I don't have the room for an antenna." And that's from people who are already on 40!?

Really odd. Because, one really doesn't need much room for 80. That is, if you are going to use 80 for what it was intended for. Which is, reliable local communication.

First of all, great height is not required and in fact, may defeat the program. A low antenna has a high angle of radiation, which puts most of the signal right back where you want it, around your area.

Next, a quarter-wave wire fed with a tuner will work just fine. In fact, some people are on 80 using the outer shield and half of their 40-meter dipole! Or, try tying center and shield together and go into the tuner with that. If your house were but 35 feet on a side, you could put an 80-meter dipole under the eaves, or you could snake the wire here and there along the fence.

If all else is impossible, there is the vertical. But, you may scream, "If I don't have the room for a dipole, where will I put all those long radials?"

Forget them! What most don't realize is that unless you can run out *LOTS* of radials, running them out long is just an exercise in enriching the pockets of the copper manufacturers. What you should do, with limited space in the length direction, is run as many *SHORT* ones as you can.

Oh yes, some OFs will write in and argue with me, but the fact remains that you are wrong and I am right.

An addition to earlier statements: When using any end-fed wires, single-fed wires, make sure you ground to the water pipes, sprinkler system, chain link fence, whatever. Also, a wire cut to quarter-wave, connected to the ground post on the tuner, and run around the baseboard will help.

You might try bonding your window screens together and loading them up on 80. If you have lots of windows, you might really have something.

If you should think you can't get out with strange antennas, just remember that for the last 50 years, operators in the clandestine services have been sending messages with antennas that are not full size and a wavelength high. Such would certainly be: "Here I am, come and get me!"

Now an apology is in order. For some years I have snorted and wheezed when hearing something stupid said, such as in a recent issue of a magazine in which the writer said he put up a wire antenna and cut it at 492 instead of 468, because since he wasn't using insulators there wouldn't be any "end effect." Obviously he never heard that *AIR* was an insulator. Besides which, it is the velocity factor of wire that makes a wire antenna shorter than the free space figure.

I have thrown in comments about such people that they must have gotten their licenses out of a Crackerjack box.

I'm sorry. My conversion came about this way. I've been cleaning my basement. Basements are boxes full of things put away, that you don't need and possibly never will, but you can't bear to part with.

I found something I paid 25 cents for. Yes, a quarter. It was the First Postwar Edition of the ARRL License Manual. In 30 small pages, all the rules and regs and all the theory (68 questions for Class B, 52 questions for Class A) that you would need.

The ARRL said the book "contains questions and answers such as are asked in the government examinations. If you know the answers to the questions in this book, you can pass the examination without trouble."

Yes, I can see why they said, "If you know the answers to the questions in this book you can pass the examination without trouble." Because they were, (as I remember), the questions and answers that were on the test!

Note: I am certainly *NOT* defending today's quickie road to a license. *BUT*, I am curious about the ARRL "holier-than-thou" attitude and not allowing Bash to advertise in their hallowed journal. Same for the genius of the New Hampshire hills.

Yes, no wonder the ARRL said about their License Manual, "It makes a simple and comparatively easy task of what otherwise might seem difficult." Absolutely right! That's one thing about the League — you can always believe what they say.

My question is, how did anyone ever flunk the test when they had a book like that around?

I guess before we all go running off at the mouth about today's literature, we should go back and review what we used to study with. I should say what you, not we, used. Because, as smart-mouth Lil says to me: "I think the reason you liked the Signal Corps so much is that they gave you your first pair of shoes."

Now that I have gone back into yesteryear and taken a good look, I think advice to some quarters in hamdom would be the bit about "casting the first stone."

While I still think no one should be a ham that isn't at least half as smart as me, no longer will I lash out at the oafs. For I have found that the test doesn't really ask very much of people. They did what was asked of them, period.

The ARRL said, "The questions and answers in this booklet are designed to give you all the knowledge you need to answer the actual examination questions." (Then they said they aren't really the same questions, etc.) "What they are, however, are carefully prepared items designed to insure that you have the necessary knowledge to cope with the actual test queries."

Gadfrey! Why didn't they offer a money-back guarantee that you'd pass the test?

There was not a single antenna question on the Class B exam nor on the Class A.

(KNS goes by his DBA for the same reason some great jazz records were made by Roger Short and Art Salt. That's pretty arcane. Will we get a letter from an ultra jazz buff?) □

Protect that ham equipment

Every day one hears of burglaries occurring in homes or automobiles. Amateur Radio gear is a favorite target in these burglaries. Are you protected against loss of your equipment? Check your insurance policy. A lot of homeowners policies have clauses excluding radio equipment installed or stored in your car.

The ARRL provides insurance at a nominal figure that protects your gear not only from loss due to theft but also damage due to lightning, etc. You might want to check into this. See **QST** or contact ARRL Headquarters for information on this insurance.

Do you have a complete list of your equipment with manufacturer, part number and serial number? This list should also have a valuation figure — either the purchase price or estimated value. This is especially valuable if something happens to you and your wife would have to get rid of your gear.

Is your equipment marked either with your call sign or preferably your driver's license number (identification and number)? In the event of recovery of stolen gear, such a listing or marking will greatly help you get it back. Remember that recovered gear that cannot be specifically identified is sold at police auctions to whoever bids the most. You certainly wouldn't like to bid on your own gear and then have someone else outbid you.

— Lockheed Employees Recreation Club ARC, Burbank, CA □

Ron Flynn, KB8LU

The 1983 Dayton Hamvention is now history. Despite the rainy, gloomy weather, everyone seemed to have a good time. I don't know that anything was settled as far as which way to go for color SSTV. Everyone must make up his own mind.

SSTV get-togethers

As most of you know, there were two simultaneous SSTV get-togethers this year at Dayton. As this year's ATV/SSTV Forum Chairman, I sponsored one, and Don Miller, W9NTP, sponsored the other. In this column, on the SSTV nets and in many letters I sent out, I invited anyone who wished, to demonstrate their homebrew SSTV equipment at my get-together. I talked at great length last December with Don Miller on the subject, and we both agreed that the get-together was for the individuals and that commercial interests should not participate.

There were so many who wished to demonstrate their equipment that a 15- to 20-minute time limit was set for each presentation. I had reserved an extra meeting room at the Holiday Inn North, where Robert Suding and others could have given longer technical talks on their equipment. It just didn't work out, though. In an ironic twist to these events, virtually everyone who spoke at Don Miller's get-together also showed their equipment at commercial booths at Hara Arena. Therefore, everyone had a chance to see that equipment. I'm told that the 50-60 who attended had a good time. I hope next year there can be one huge SSTV get-together to satisfy everyone.

About 120 attended my meeting at the Holiday Inn North, including many XYLs. Special thanks to Howard Nurse of Commsoft Corporation for providing an ample keg of beer for all. Also, special thanks to Joe Hawkins and Bob Rubesh of Robot Research for the snacks and other refreshments. I emceed the shindig and also brought along my six-memory Robot and color monitor.

For several months, I had been making up a tape of color SSTV pictures recorded off the air. Before and after the program, I showed these pictures as a color SSTV slide show using the 25.5-second single-frame color mode. Stan Brokl, N2YQ, showed a tape about the Jet Propulsion Labs (JPL) and had many JPL souvenirs available. Bill Wells, W4CVS, showed a videotape about SSTV with actual on-the-air QSOs.

Murphy showed up, but didn't stay too long. Howard McAfee, KD6HF, demonstrated an interface that will link the Robot 400 to virtually any computer for graphics and pictures processing. Lou Tepfer, W6FVV, explained the goals and purposes of the new International Visual Communications Association (IVCA). More on this in future columns. Bob Bebermeyer, WB0UNB, demonstrated the 7.6 program on the TRS-80 Color Computer using the N7QM Interface. Fred Sharp, W8ASF, showed a "Blinky", an SSTV/RTTY tuning device, and demonstrated high-resolution color SSTV.

1983 Dayton Hamvention — Howard McAfee demonstrating SSTV computer interface at the Friday night get-together

The highlight of the evening was that a large number of SSTVers secretly got together and made two surprise awards. Sam Mormino, WA7WOD, was given a plaque honoring him for all the help and assistance he has given SSTVers around the world. Howard McAfee, KD6HF, was given a plaque honoring him for all the technical advances he has made in SSTV. The recognition for these two fine gentlemen was long overdue.

ATV/SSTV Forum

Two excellent programs were presented at the Saturday afternoon ATV/SSTV Forum. Larry Horne and Jim Chladek of the cable TV show "Network Two New York" showed videotape excerpts from some of their various shows and illustrated the ways in which they use ATV in producing their show.

Stan Brokl, N2YQ, of the JPL ARC, showed spectacular slides of the Viking and Voyager spacecraft encounters with Mars, Jupiter and Saturn, as well as pictures of the JPL club station. The pictures from the spacecraft actually come back to Earth as a form of SSTV picture. This was also well illustrated.

A question-and-answer session followed these two programs. Sam Mormino, WA7WOD, of Interface Systems explained the early development of color SSTV. His company introduced the first commercially available color SSTV system in 1981. Howard Nurse of Commsoft Corporation explained the development of color SSTV using computers. His company introduced a hardware/software SSTV system for Apple computers in 1982.

Finally, John Stahler explained the thinking of Robot Research and how he developed Robot's new color SSTV system. All three gentlemen then stayed to answer questions from the audience.

Hara Arena

The rains kept many of the thousands at Dayton indoors this year. It was difficult at times moving around the three large exhibition rooms. Volker Wraase is no longer represented by KW Control Systems here in the States. He was showing his color SSTV equipment, as well as Fax equipment. We were told this equipment could be ordered directly from Germany.

At the Commsoft booth, the Photocaster color SSTV system for Apple computers was being shown as well as color printing of SSTV pictures. In a previous column, I described their earlier technique of printing color SSTV pictures using colored carbon paper and making three passes through the printer in a RGB composite fashion. Now they use a color printer and the results are fantastic!

Sam Mormino and Howard McAfee were showing high-resolution color SSTV at the Interface Systems booth. An upgrade to the 3000C board using 64K chips provides extra memory and allows higher resolution color SSTV pictures to be sent and received. RGB color is sent at either 8.5 or 17-second frame rates. Single-frame color SSTV is sent at 25.5 or 51-second frame rates.

As I reported two months ago in this column, Microcraft was showing high resolution RGB color SSTV in the form of an upgrade kit to the Videoscan 1000. The unit plus the color upgrade is available wired and tested or in kit form. I'm told that 25.5-second single-frame color has also been included. The quality of the color SSTV pictures was excellent. Besides 25.5-second SFC, 8.5, 17 and 34-second frame rates are utilized.

Robot Research unveiled two new SSTV products at Dayton. Prototypes of the 400C retrofit to upgrade the Robot 400 to color were shown. Also shown was a prototype of their new 450C scan converter. Both will be available after 1 June.

The retrofit kit consists of a plug-in board which replaces the original 400 board, plus a few other components. The snatch and receive contrast and brightness controls of the 400 are removed. Two of the four holes are filled with new switches, and wiring connections are made to the board edge connector. One switch is a speed switch for 8 or 12 seconds or automatic scan tracking. The second switch is a mode switch for memories 1, 2, 3, plus composite color and color bar generator. The width control pot is rewired and is used for a camera input gain control. A front panel overlay covers the two holes and provides labeling of controls. Cost of the 400C retrofit is $475. It is compatible with RGB frame sequential color SSTV.

1983 Dayton Hamvention — Stan Brokl of the JPL ARC at the ATV/SSTV Forum

1983 Dayton Hamvention — Jim Chladek (left) and Larry Horne (right) at the ATV/SSTV Forum.

In future columns, I will go into more detail about all the new Robot products. The new 450C color scan converter will sell for $875. A Model 1200C high-resolution color scan converter was not shown, but preliminary specs were available and it will be available later this summer. A retrofit to the Model 800 to add color SSTV graphics plus other RTTY improvements was shown. Several SSTV graphic frames can remain stored in the 800 with power off because of battery backup power. The new 800 with all improvements will be called the 800C.

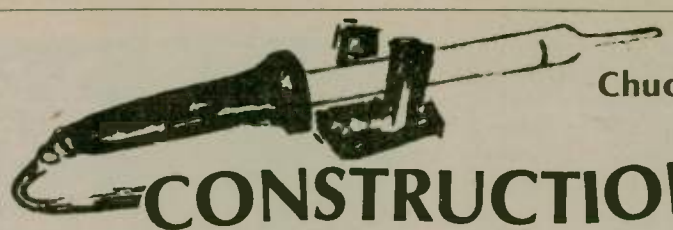
It was good to see many of our old friends at Dayton again this year, and quite a few of them brought their wives along, even though they are not amateurs. I also got to eyeball several other friends who we had worked for years but never met in person. A good time was had by all.

Next month — another look at the TRS-80 Color Computer for SSTV plus more Robot details. 73s □

●●●

Hope we can serve you. Your comments and suggestions are welcome.

Chris Wilson



CONSTRUCTION

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Telephones for intercom

Some amateurs have a need for a means to communicate, from the station to the house, for example, and in many cases you just can't beat the old-fashioned telephone for economy, reliability, simplicity, performance. New telephones cost about the same as squawk boxes, while used phones cost much less, somewhere around $10, and often even cheaper — particularly for older models that have not been modified for use on newer phone systems and equipped with modular plugs. Phones with no dials also sell for less, and not many of us will need the dials.

The principal difficulty many of us find in using telephones for intercom work is the fact that they don't come with directions on how to install, and most discussions of the subject these days concern connecting a phone to the public phone system, not with setting up your own private one.

Here are a few of the simpler ways you can go about it. As each one's need is unique, you may find that some combination of these circuits, or maybe a modification of one of them, will suit your needs best. That's one advantage to doing it yourself; you end up with a custom-designed job.

The telephone

Figure 1 shows a simplified schematic of a typical telephone. Note that telephone people use different names for parts that we also use in radio work. The microphone becomes the *transmitter*, the earphone is the *receiver*, telephone people call a *condenser* what radio people now call a capacitor (we used the term condenser ourselves 50 years ago and some old-timers still do), and the *coil* or *induction coil* is what we would call a transformer.

Placing the handset in the cradle opens the switch and disconnects the handset from the line. To ring the phone, an alternating current, usually about 80 volts at 15 or 20 Hz, is applied to the line, passes through the condenser and actuates the ringer.

Picking up the handset connects the transmitter and receiver to the line. On the public phone system, the flow of direct current through the transmitter signals to the switching equipment that the phone is in use. If the phone is being answered, the signal causes the ringing to stop and the connection to be completed. If the user is about to make a call, the circuits are readied to select the connections as dialing progresses, and the dial tone is sent to tell the user that the system is ready.

Not shown in *Figure 1*, the rotary dial shorts the transmitter and receiver and causes short interruptions of the circuit, about one-twentieth of a second in length, to transmit the number being dialed. A tone pad contains a solid-state circuit that generates two audio tones when a button is pushed, and these tones tell the switching equipment the number being sent. But, as already noted, this will probably not be of any use to us in this application.

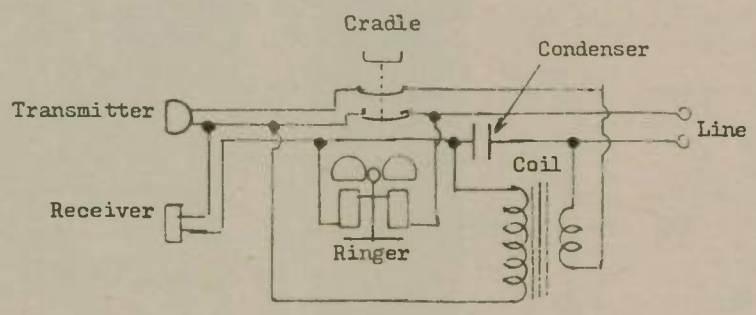


Figure 1

Direct current flows through the transmitter and the primary of the coil. The transmitter is a single-button carbon microphone, whose resistance varies in accordance with the sound pressure on the diaphragm. (If you know what a *double-button* carbon mike is, you are either an antiquarian or an antique: it was popular back around 1930, had a carbon element on each side of the diaphragm, giving a push-pull effect and thereby cancelling out any even harmonics generated in the microphone.)

Varying resistance means varying current, and the varying current in the primary of the coil induces a higher voltage in the secondary — the signal which is fed to the line.

Signals received on the line pass through the condenser (to block DC) and into the receiver to produce sound.

While a telephone using this circuit would work, actual instruments are somewhat more complicated. The coil, for example, is designed to feed the proper amount of audio from the transmitter to the receiver. It has been found that people will adjust the level of their voice to obtain a certain volume of sound from the receiver, and the telephone circuits are designed to give that volume when a signal of desired strength is being delivered to the line. Modern telephones also include varistors — resistors whose value varies in accordance with the voltage — to act as volume compressors. Now we have telephones with memories, telephones with lights and multiple-line phones, but the basic principle is still the same.

Ringing a telephone

If you wish to use the ringers on your telephones to call people to the phone, you can use the circuit of *Figure 2* with older phones. Older phones will ring on 60 Hz AC, or at least their ringers can be adjusted to enable them to do so. Adjusting involves moving the bells in and out (the screws that hold them are not in the center, so you can vary the spacing between the bell and the clapper by rotating the bells). In addition, there is usually some way to adjust the spacing between the magnets and the armature, and often to adjust the spring tension too.

Newer phones won't ring on 60 Hz as their ringers are tuned to a lower frequency. If you have some way to generate 15 or 20 Hz, you can ring them with that; otherwise you will have to use one of the other systems described below.

The circuit of *Figure 2* shows 25 watt light bulbs wired in series with the AC line. They normally will not glow, or at most will glow only dimly, when the phone is rung. Their purpose is to limit current if the line should be shorted.

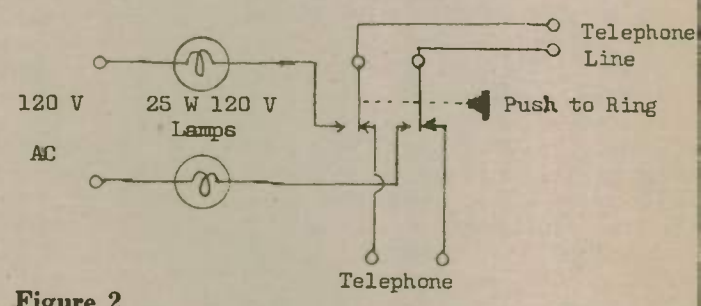


Figure 2

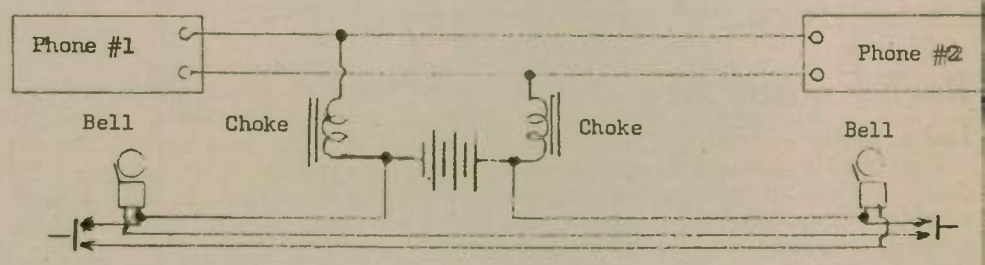


Figure 3

The talking circuit

Figure 3 shows the talking circuit for two telephones in a simple intercom system. A battery is shown, but a low-voltage DC supply would do as well — anything from 6 to 30 volts. The chokes are needed to keep the audio signal in the line. They can be filter chokes, such as are used in power supplies, or you can use the primary of a filament transformer or the coil of a relay. The next section will show how the relay can be used to ring the phone as well.

bells, chimes or buzzers, as preferred. I've even used an auto horn where something louder was needed.

Automatic ringing

The circuit in *Figure 4* shows how you can connect the phones so that a bell will ring at the other phone whenever someone picks one up. The relays can be Radio Shack's 273-003 or 273-004, depending on the voltage.

Paging system

If you have more than two phones on a circuit, you have several choices. You can put a ringing circuit at each phone, as shown in *Figure 2* (if the phones will ring on 60 Hz AC), and use a code ringing system to identify whom you are calling, as was done on rural systems in the early part of this century. You can run a separate ringing line to each phone, and have separate push buttons so that there is a set of buttons at each phone. You can install a switchboard, but that is beyond the limits of this article to discuss.

Or you can do something like what is shown in *Figure 5* and install a paging system. Because there are so many variables, different layouts, different kinds of amplifiers available and different needs, the circuit is only a block diagram, with the details to be determined to fit each case. There is a push button at each

phone, to turn on the amplifier. To call a person, you push the button and ask for the one you want; then that person will go to the nearest phone to answer.

Phone patching

Can private systems like this be used when patched to an Amateur Radio station? Most certainly they can, and they operate exactly as when patching to the public phone system, except that you don't have to worry about the special rules of the telephone company, and you don't have to have any special kind of connecting devices. Just connect the two wires of the telephone line to the two terminals on the phone patch unit (with a capacitor in series with one of the lines if it's necessary to block DC), and you're ready to go. □

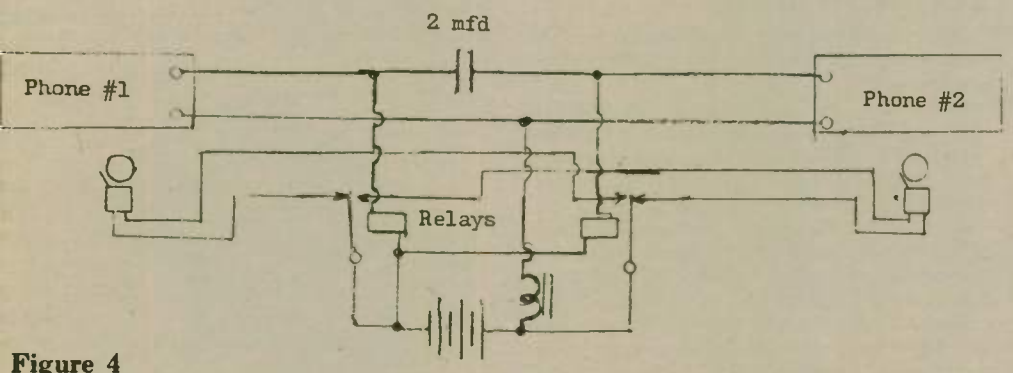


Figure 4

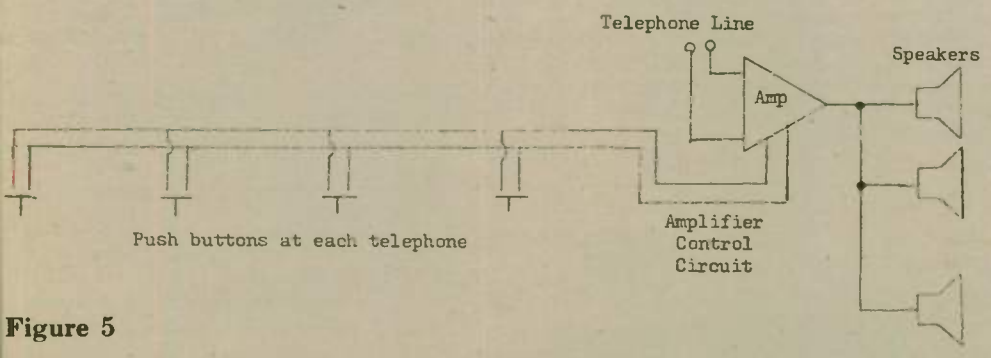


Figure 5

Radio plumbing

Lad Kucera, N9AEG

Most ops try to locate the antenna outdoors and the transceiver indoors for rather conspicuous reasons. One common obstacle is routing the transmission line from inside to outside. The old standby, an open window, permits the company of insects in summer and cold air in winter, thus leaving something to be desired.

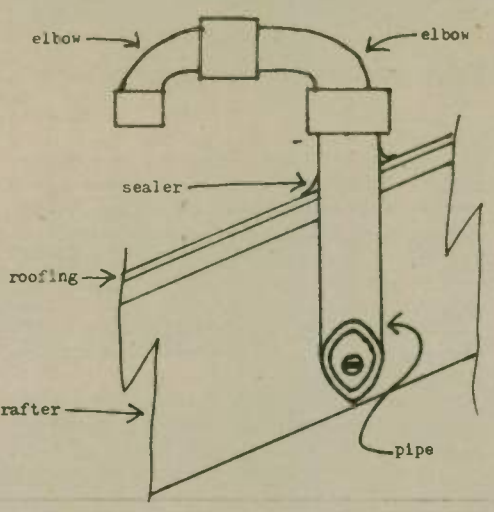
Amateurs have dreamed up some ingenious methods of getting the signal out of the house. A fitted sash plug can be used to "seal" the open windows, especially if you are renting. A recent issue of *Solid Copy (CARC)* explained how to drill holes through windowpanes (yes, glass)! Major publications have also shown soffit connectors and wall conduits.

One of my favorite "feed-throughs" is a roof conduit. Two have been installed, each with excellent results. The materials list includes: PVC water pipe 1½" I.D.* about 18" long. PVC elbows; machine screw and nut ¼" dia. 2½" long; sealer, silicone rubber.

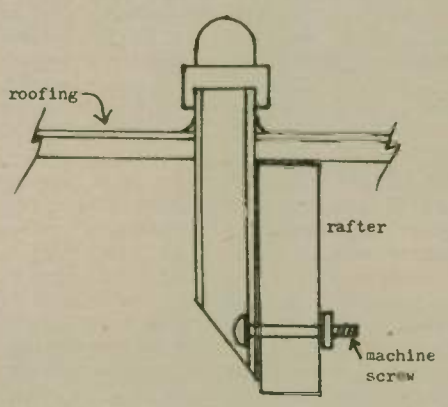
(*The 1½" is an industry standard size. Use the inside diameter which best suits your needs.)

The suggested diameter of plastic pipe will carry many RG-8/U cables without binding. Also, the plastic pipe edges are much more forgiving on the coax vinyl jacket than a metal pipe edge. Since the pipe is not under hydraulic pressure, the special fitting solvent should not be used. The two elbows can be glued to each other with silicone rubber. Since access is desirable, no glue should be used on the elbow to pipe joint. The weight of the cable will prevent the elbow assembly from falling off.

— *Chicago Suburban Radio Assn.* □



Front view



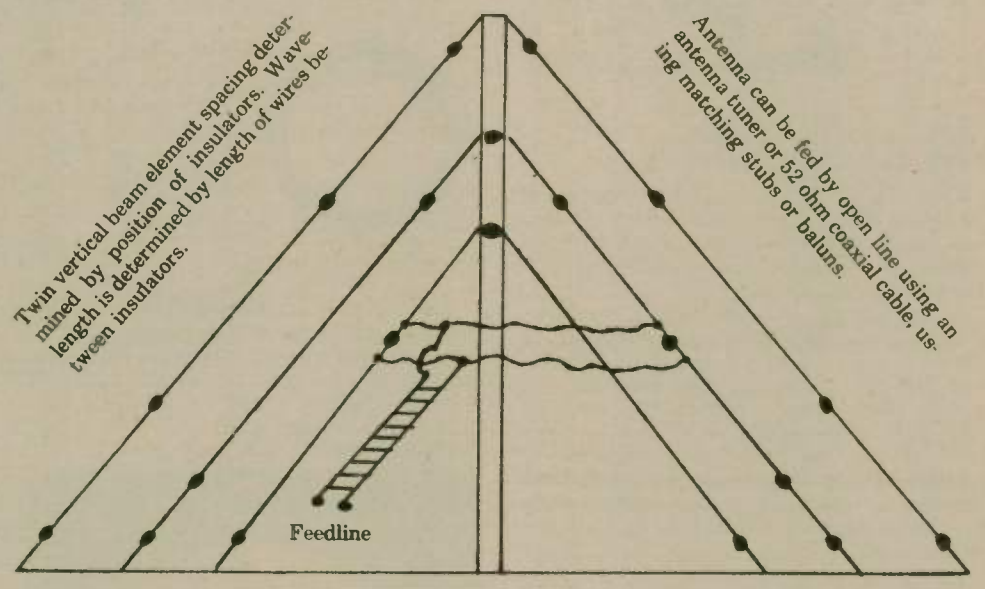
Side view cross section

Share your knowledge with your fellow amateur and Worldradio reader . . .

Building a twin vertical beam antenna

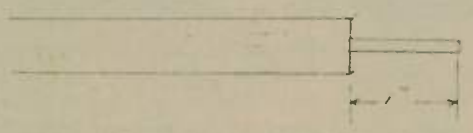
Kenneth Hand, WB2EUF

Here is a sketch of a twin vertical beam antenna that I thought some readers with limited space might be interested in. The drawing pretty well explains itself. The center mast should be as high as possible — from 30 feet up. I would like to hear from readers building and using this unusual type of beam antenna (twin-phased slanted Vee vertical). Will answer all radiographs and correspondence. Please enclose SASE. My address is P.O. Box 708, East Hampton, Long Island, NY 11937. □

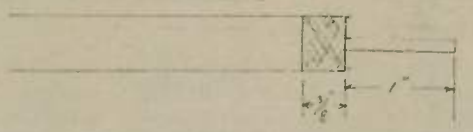


Coax connector — the right way

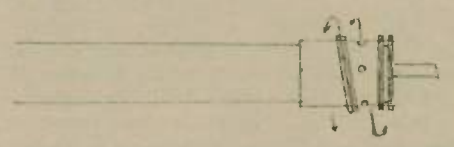
Ken Cone, W6IEU



Cut back end of coax with sharp knife. Do not nick or cut center wire.



Cut back rubber cover, as shown. Be careful not to cut braid. Fold braid back over the rubber covering.



Take sleeve off of fitting, slip on coax, threads toward end of coax. Screw coax connector over braid that is folded over rubber. Pliers may be used for tight fit. Screw sleeve back on connector. Cut exposed wire from end of connector. Solder. This eliminates over-heating of coax, plus the connector can be removed and reused. A savings of $1.50. This method has been used for years at this QTH. □

FM RF amplifiers

A new line of FM RF amplifiers that increase the output of low-power high band or UHF portables and mobiles from as little as 2 watts to as much as 100 watts is now available from The Antenna Specialists Co.

In announcing the new line, Director of Marketing Robert M. Treanor cited three market benefits of the RF amplifiers: "First," said Treanor, "the performance and reliability is what our customers expect from Antenna Specialists' professional communications products. Second, they are very competitively priced. And third, they enhance our ability to provide the two-way user with complete mobile antenna systems of consistently high quality throughout."

The compact, self-contained A/S RF amplifiers operate on 12VDC (negative ground) and are field-tunable across the range of 136-174 MHz in high-band models or 430-512 MHz in UHF. Six high-band models accept nominal RF inputs of 2, 10 or 25 watts and produce a nominal output of 25, 50 or 100 watts.

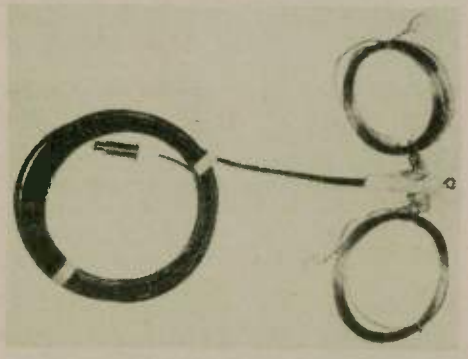
The four UHF models deliver a nominal 25, 50 or 80 watt output with a nominal input of 4 watts, or 80 watts RF out with 25 watts in. Unit size varies depending on the frequency range and power output. The smallest is only 1.56"H × 3"W × 3.75"L (including connectors) and is supplied with an under-dash mounting bracket. The medium power models are 2.5"H × 4.6"W × 6.6"L (including connectors), and the high power models are 2" longer; both have mounting flanges with four bolt holes.

For complete technical details and specifications, write to: Marketing Department, The Antenna Specialists Co., 12435 Euclid Ave. Cleveland, OH 44106. □

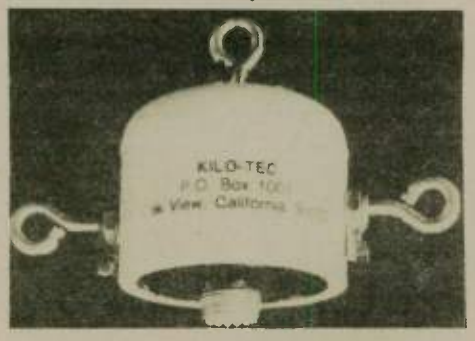
Antenna products

Kilo-Tec announces two new antenna products. The "KT5B" multi-band dipole antenna and the DP-1 center connector.

The "KT5B" is a multi-band antenna designed for the 1.8 MHz through 30 MHz Amateur Radio bands. It uses no loading coils or traps and will handle 2kW PEP. The unit price is $59.95. Delivery is two to three weeks.



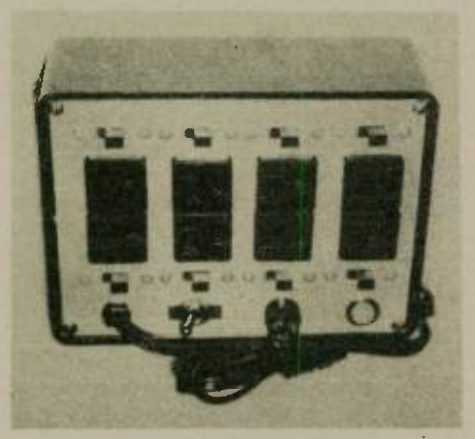
The DP-1 antenna center connector, with SO-239, can be used with dipoles, quads or Vee antennas where a weather-resistant coax connection is needed. The unit is rated at a full 2kW and features a Mil-Type potting material to prevent RF flashovers. The unit price is $8.95 with stock delivery.



For further information, contact Kilo-Tec, P.O. Box 1001, Oak View, CA 93022, or call (805) 646-9645. □

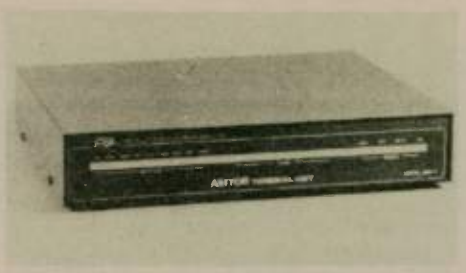
Surge suppressor/ noise filter

Kalglo Electronics Co., Inc. has added a new console model SPIKE-SPIKER™ to its existing line of voltage surge suppressors and noise filtering devices which protect sensitive computer, office equipment and other high-tech products from damaging and disruptive voltage spikes and conducted line noise — called the DPC-PLUS, it provides eight individually switched 120V, 15 amp outlets divided into two banks of four outlets each, a main on/off switch, fuse, status lights, and 7 ft. grounded heavy-duty cordset.



Voltage spikes are suppressed in six different stages on both the common and differential modes. Suppression starts at 131V and responds in one picosecond with an absorption capacity of 174.5 joules. Noise filtering is provided by using inductive/capacitive series-parallel low-pass networks in five stages on both common and differential modes. Separate status lights provide, at a glance, monitoring on the common and differentials modes.

For more info, write to: Kalglo Electronics Co., Inc., Dept. DPC-PLUS, 6584 Ruch Rd., — E. Allen Twp., Bethlehem, PA 18017. □



Terminal unit

Advanced Electronic Applications, Inc. announces the arrival of the AMT-1 AMTOR Terminal Unit.

Features of the unit include: full AMTOR error-correcting data communications facilities plus RTTY, ASCII and CW (transmit only); mode and configuration control from the terminal keyboard or by computer program control; 16 LED Panadaptor-type tuning indicator plus status indicators for all operating modes; and crystal-controlled AFSK sine wave function generator and 4-pole active receive filter.

The unit operates with most HF transceivers and home computers (or data terminals). It is microprocessor-based with transmit and receive data buffers, and operates from a simple 12V power supply.

The AMT-1 is priced lower than many similar units which do not offer AMTOR. For more information, contact Advanced Electronic Applications, P.O. Box C-2160, Lynnwood, WA 98036; (206) 775-7373. □

FM mobile transceiver

The IC-120 is a 1.2 GHz FM mobile transceiver, covering 1260 to 1300 MHz. This unit is styled similarly and has features similar to the IC-25A/H series of 2-meter transceivers, and has many common features. Duplex split is variable, but is initiated at 20 MHz when the unit is first turned on. Duplex up and down as well as scanning features are offered. Power output is 1 watt.

ICOM is the first to offer the amateurs a full-featured mobile transceiver for this mostly unused band.

For more information, write to ICOM America, Inc., 2112-116th Ave. NE, Bellevue, WA 98004. □

1.2 GHz repeater

To complement ICOM's entry into the 1.2 GHz amateur band with its IC-120 mobile transceiver, ICOM is announcing the inclusion of a 1.2 GHz repeater in our equipment line. This repeater will have a power output of 10 watts, CTSCC capability, IDER and DTMF control. The RP1210 is synthesized to be complementary to the IC-120 transceiver, and has a duplex split of 20 MHz.

Price and availability of the RP1210 will be announced shortly.

For more information, write to ICOM America, Inc., 2112-116th Ave. NE, Bellevue, WA 98004. □

HF transceiver

ICOM announces the most advanced, highest performing HF transceiver with general coverage receiver for the amateur world today, the IC-751. The IC-751 features a new generation of technology and computer control. ICOM's new CPU, with internal battery memory backup provides many advanced features, such as 32 memories with memory storage of mode and frequency, and the scanning capability to cover large segments of the spectrum very slowly, or to scan the memories by selected mode. The IC-751 provides instantaneous, silent band selection and has a unique three-speed tuning system.

Other features included in the IC-751 are full break-in keying, passband tuning, notch filter, RIT and XIT with separate readout, FM built in as standard, a very steep-sided FL44 sideband filter, continuously adjustable noise blanker levels, dual VHO operation and all-mode squelch. An easy-to-read two color fluorescent read-out showing the frequency in white and the control functions in red, for low eye fatigue and high visibility in all ambient light conditions is standard.

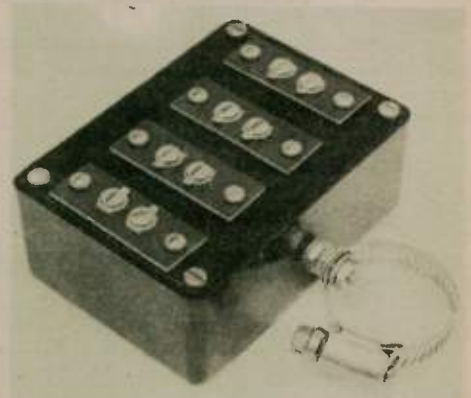
The IC-751 is equipped standard for operation from 12 volts DC, and there is an optional internal AC power supply. The IC-751 has an advanced receiver design that provides true competition-grade performance.

For information, write to ICOM America, Inc., 2112-116th Ave. NE, Bellevue, WA 98004. □

Rotor cable lightning protector

At last you can obtain proper lightning protection for your shack's rotor control box. This 8-conductor, model IS-RCT, is designed with fast 50 nanosecond 3-element crowbar gas tubes.

Made with heavy duty UV stabilized plastic case and all stainless grounding hardware, it is to be mounted, terminals down, to keep snow and rain off connectors, on a ground pipe or grounded tower leg. Crimp and/or solder lugs included (not shown). Introductory priced at $29.95.



For additional information, please contact PolyPhaser Corporation, 1500 West Wind Blvd., Kissimmee, FL 32741; (305) 395-1807. □

SUBSCRIBE TO WORLDRADIO; see page 9

New HAL products

HAL Communications Corp. is proud to announce that the following new products were exhibited at the Dayton Hamvention on 29 April.

MPT3100

The MPT3100 is a software improvement offered for DS3100ASR terminals equipped with the MSO3100 circuit board. The MPT3100 adds editing, automatic message recording, and batch transmitting features to those of the "electronic mailbox" MSO3100. All requirements of NAVMARCOR MARS NTP-8(A) are supported.

The MPT3100 replaces the former MSO3100 option, and all previously manufactured DS3100/MSO3100 terminals can be factory updated.

DSK3100

The DSK3100 is a mass storage accessory for the DS3100/MPT3100 terminal, using standard 5.25″ floppy diskettes. It is available with two-disk drives. A total of 511 messages or 326,000 characters may be stored on the disks. The DSK3100 gives power-failure protection for the MPT3100 message files. Also included in the DSK3100 is a non-volatile clock with autodate, a parallel printer output, and a user I/O port for direct access to disk files.

The DSK3100 is housed in a cabinet that matches the ST6000 and may be added to any DS3100/MPT3100 system.

ARQ1000

The ARQ1000 is a full send-receive terminal for the AMTOR ARQ code. All features of the CCIR 476-2 Recommendation are supported. Modes include: ARQ, FEC, SEL-FEC, and MONITOR.

The ARQ1000 may be used with the HAL DS3100 and ST6000, CT2200, CT2100, or CWR6850 terminals or any ASCII or Baudot terminal at baud rates from 45 to 300 baud. Non-volatile keyboard-programmable ARQ access code. SEL-CAL code, and WRU answerback codes are included. The ARQ1000 is housed in a cabinet that matches the CT2200 and CT2100.

Available options include the DM170 internal demodulator and ARQX10 encryption module.

CT2200

The CT2200 is the successor to the popular CT2100 Communications Terminal. It offers all the features of the CT2100 plus keyboard programming of all eight "brag-tape" messages; programmable selective call control of the printer output; manual printer on-off control; non-volatile storage of HERE IS, "brag-tape" and selective call codes; and new rear panel connections for use with the ARQ1000.

The CT2200 is a new product that replaces the previous CT2100. However, an update kit (including a new front panel) is offered to update a CT2100 to the CT2200.

CWR6750

The CWR6750 is a receive-only RTTY and CW demodulator and display generator. The CWR6750 features a built-in 5″ video display. Operating from +12VDC, the CWR6750 is compact and portable — just the thing for RTTY and CW short-wave listening.

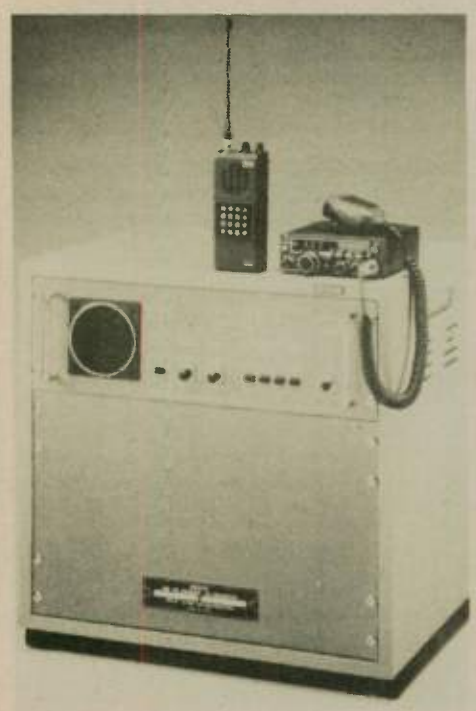
For further details, contact: HAL Communications Corp., P.O. Box 365, Urbana, IL 61801; (217) 367-7373. □

2M base station transceiver

ICOM is proud to announce the introduction of a new base station transceiver for 2 meters — the IC-271A. The IC-271A covers the entire 2-meter ham band, and features FM/upper sideband/lower sideband and CW modes. The IC-271A has a 25 watt output standard, with an optional built-in power supply. It has 32 full-function memories. Built-in sub-audible tones selectable from the main tuning dial provide ease of operation. Frequencies, modes, tones and offset may be written into each memory. Scanning is possible with the IC-271A; either the whole band, memories or selected modes may be scanned.

The IC-271A features ICOM's new high contrast, two-color display, showing frequency digits in white and control functions in red. Pricing of this unit is to be announced shortly.

For more information, write to ICOM America, Inc., 2112-116th Ave. NE, Bellevue, WA 98004. □



440 MHz repeater

This ICOM RP3010 repeater is designed for use by radio amateurs in the 440 MHz band. It offers 10 watts of output power, CTSCC capability, IDER and DTMF control. The 440 MHz repeater is of very high quality and rugged construction, and is designed to work over a wide temperature range. The ICOM 440 MHz repeater is crystal-controlled.

Pricing and availability to be announced.

For more information, write to ICOM America, Inc., 2112-116th Ave. NE, Bellevue, WA 98004. □

31st Annual NW DX Convention

The Western Washington DX Club, W7FR, will be hosting the 31st Annual Nortwest DX Convention 29-31 July, at the Double Tree Plaza Hotel, near the South Center shopping mall and the Seattle/Tacoma Airport.

There will be world-famous speakers, slides, symposia, awards, prizes, a Saturday night banquet and a Sunday morning breakfast. Attendees may also enjoy side trips by boat around the scenic harbor.

For registration information, contact Ruth Bennett, WA7RVA, 6729 Beach Drive SW, Seattle, WA 98116; (206) 932-1335. Also use the WW DX club repeater; call Frank W7FR on 146.40/147.00. □

ARRL Pacific Division Convention

Resting as a sparkling jewel midst the grandeur of the snow-capped Sierra Nevada range is Reno, Nevada, site of the 1983 Pacific Division Convention to be held on 19-21 August. The MGM Grand Hotel will be the location for the grandest extravaganza in the history of the Pacific Division. The spacious, newly-converted tennis pavilion has been reserved for this event, and 199 exhibitor booths await commercial and club exhibits which will reveal the latest in state-of-the-art Amateur Radio design, equipment and happenings.

The host club for this convention, the WIDE AREA DATA GROUP, has put together a program which allows for plenty of time to roam through the convention facilities, while enabling interested amateurs to attend *all* forums.

The official "Welcome Booth" will be located at the immediate entrance to the convention hall. All participants in this gala celebration are encouraged to stop at this booth for a chat, information, maps of the convention floor and Reno-area sites and other tidbits of interest to our guests.

In addition to the scheduled forums, on subjects ranging from AMSAT to YLs, there will be plenty of meeting rooms for special get-togethers with VIPs and executives. A loose, free-style, maverick-like atmosphere — which is the trademark of the Wide Area Data Group — will pervade this convention. If you don't like "stuffy" conventions, where the visitor is poked and prodded, cajoled and conned, you will want to attend this convention.

Roy Neal, K6DUE, will be the featured speaker for the after-dinner Address. After feasting on the hospitality of the MGM Grand master chefs, the banquet participant will have the opportunity of shaking hands in an informal session with Roy Neal; Vic Clark, ARRL President; Dave Sumner, ARRL General Manager; the Honorable Richard L. Bryan, Governor of Nevada; and other VIPs who will assemble for this gala event.

Entertainment will include a trip to the world-famous Harrah's Automobile Museum and a ride on the *M.S. Dixie*, across Lake Tahoe.

The convention hall will open at 6:00 p.m. on Friday, 19 August, and will last until 3:00 p.m. on Sunday, 21 August. There will be an indoor swapmeet with tables available at $5 each (bring your can-do-without-ables). The MGM Grand has a huge RV park with all hookups; a special section of 500 spaces has been reserved.

Special room rates apply at the MGM Grand; call MGM Reservations Direct, at 800-648-5080. Advance tickets are available at $7.50 (convention facilities only) and $35 (includes banquet and after-dinner sessions). Tickets at the door will be $10 (convention exhibits only), and $37.50 (with banquet and after-dinner sessions).

A Communications Command Center will be manned by N7DFY and crew; talk-in on 147.63/.03 (high-level), 147.90/.30 (low-level, atop MGM Grand) and 222.86/224.46 (low-level). When in view of the MGM Grand Hotel, talk-in on 146.52 MHz. □

Colorado

The SKI COUNTRY AMATEUR RADIO CLUB will hold its second annual swapfest on 23 July at Colorado Mountain College, 1402 Blake Ave., Glenwood Springs, Colorado. No admission charge, tables are $5 each. Many prizes and drawings every hour.

Talk-in on 07/67.

For further info, contact Frank Ketter, WA0BBI, Box 280, El Jebel, CO 81628. □

Illinois

The DU PAGE AMATEUR RADIO CLUB Hamfest/Computerfest will be held at the Downers Grove, Illinois American Legion Post grounds on Sunday, 10 July, from 9:00 a.m. to 4:00 p.m. Large outdoor flea market. Tickets $2, available at the gate only. Plenty of parking space. Food and drink available.

Talk-in 144.89/145.49.

For more information, send SASE to W9DUP, P.O. Box 71, Clarendon Hills, IL 60514, or call 312-971-1156. □

Indiana

The 12th Annual INDIANAPOLIS HAMFEST and Indiana Section ARRL Convention will be held at the Marion County Fairgrounds in Indianapolis, Indiana on 10 July. There is a large indoor flea market with electricity and an outdoor flea market "lane". The professionally decorated commercial displays for Amateur Radio and for computers are each in separate buildings.

This year's forums reflect the new technology in Amateur Radio with forums on packet radio, RTTY, terminal units, antenna design, and computers in Amateur Radio. The Indiana Section ARRL will conduct its annual Emergency Communications Forum. Ed Metzger, W9PRN, the Central Division Director, and Larry Price, W4RA, ARRL Vice President, will conduct an ARRL Forum. The Indiana Navy-Marine Corps MARS and the Indiana Radio Club Council will conduct meetings.

There are on-site facilities for full hook-up camping, professional food service and ladies activities. Admission is $4 at the gate. Flea market space is $5 space only, $8 with table, and $1 outside.

Talk-in on 146.16/76 and 146.52.

For additional information and flyer, write to: Indianapolis Hamfest, P.O. Box 11086, Indianapolis, IN 46201. □

Maryland

The BALTIMORE RADIO AMATEUR TELEVISION SOCIETY again presents the famous BRATS Maryland Hamfest, on Sunday, 31 July. This is the oldest and largest of the three hamfests held each year at the Howard County Fairgrounds, Route 144 at Route 32, adjacent to Interstate 70 in West Friendship, Mar ıd, about 15 miles west of Baltimore.

The fairground will be available for set-up on Saturday, 30 July, at 2:00 p.m. Overnight security will be provided. Overnight facilities for RV's available.

Talk-in on 147.03 (+600), 146.76 (−600), 146.52 and 29.54/64.

For table reservations and information, call Mayer Zimmerman, W3GXK, at (301) 655-7812. □

Michigan

The STRAITS AREA AMATEUR RADIO CLUB will host its annual Swap 'N Shop on Sunday, 17 July, from 9:00 a.m. to 4:00 p.m., at the Harbor Springs High School gym. (Go eight miles north of the State Police post — located in Petoskey — on m119, and follow the signs.)

Free parking Saturday night for self-contained RVs provided at the site. Refreshments, with lunch served between 11:00 a.m. and 1:00 p.m. Hourly prize drawings, including a main prize.

Admission is $2.50 at the door, with plenty of table space for additional $2.50. XYL activities include a wildlife film shown by the renowned Mort Neff, and a microwave demonstration.

Talk-in on 31/91 and 52.

For more information and/or tickets, write to Straits Area ARC, W8GQN, P.O. Box 444, Conway, MI 49722. □

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The HIAWATHA AMATEUR RADIO ASSOCIATION is celebrating their 50th anniversary as a club and its affiliation with ARRL through the years. We will be sponsoring the 35th Annual Upper Peninsula Hamfest on 30 July, at the National Guard Armory in Ishpeming, Michigan.

Registration is $1 per person. Tables are $2 each. Equipment demonstrations, meetings and activities for XYLs and harmonics will be featured. Door prizes will be awarded, including one grand prize.

Talk-in on 146.16/76.

For more information, write to Vi Lehtinen, W8JXJ, 100 North Daisy St., R #2, Ishpeming, MI 49849. □

New Jersey

The SUSSEX COUNTY AMATEUR RADIO CLUB is holding its 5th annual hamfest, "SCARC '83", Saturday, 16 July at the Sussex County Farm and Horse Show grounds on Plains Road, off U.S. Highway 206 in Augusta, New Jersey, just north of Newton.

General registration $2. Acres of free parking and outdoor flea market space. Sellers: $4 preregistered, $5 at gate. Huge building for indoor sellers: $5 preregistered, $6 at gate. Door prizes.

Talk-in on 147.90/30 and 146.52.

For information or registration: Lloyd Buchholtz, WA2LHX, 10 Black Oak Dr., RD 1, Vernon, NJ 07462. □

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The WEST JERSEY RADIO AMATEURS announce their 5th Annual Hamfest, to be held Sunday, 17 July, 9:00 a.m. to 3:00 p.m. The 'fest will be held — rain or shine — at the Super 130 Drive-In Theatre, on Rt. 130, Edgewater Park, New Jersey.

Registration $3; tailgating $3. Register in advance to receive an extra prize ticket. Bring your own table; early set-up at 7:00 a.m. for vendors. Door prizes awarded all day; grand prizes awarded at 2:30 p.m.

Talk-in on 147.75/.15, 144.87/.47 and 146.52.

For more information or to order tickets, send SASE to: Mary Lou Shontz, N2CLX, 107 Spruce Ln., RT 16, Mount Holly, NJ 08060; phone (609) 267-3063. □

North Carolina

The CARY AMATEUR RADIO CLUB announces its 11th Annual Mid-Summer Swapfest, to be held Saturday, 16 July, at the Lion's Club Shelter (next to Cary Senior High School).

Buying, selling and trading will last from 9:00 a.m. to 11:30 a.m. Lunch is 11:30 a.m. to 1:00 p.m. (good places to eat close by). Open auction (we sell all!) and prize drawings will be held in the afternoon. Clean-up ends at 3:00 p.m.

Prize registration is $3, two for $5. Bring your tables and chairs, rain or shine.

Talk-in on 146.28/.88 MHz (80-30 miles); 147.75/.15 MHz (30-2 miles); and 146.52 MHz simplex.

For more information, write to Cary ARC, P.O. Box 53, Cary, NC 27511. □

Ohio

The 19th Annual WOOD COUNTY HAM-A-RAMA will be held Sunday, 17 July, at the Wood County (Ohio) Fairgrounds, Bowling Green, Ohio. Gates officially open at 8:00 a.m. with free admission and parking. There will be drawings for main and door prizes. Tickets are $2; however, five for the price of four in advance. Trunk sales and food available. Advance table rentals $5 to dealers only. Saturday set-up available until 8:00 p.m.

K8TIH talk-in on .52.

For more information or dealer rentals, send SASE to: Wood County ARC, c/o Craig Henderson, Box 366, Luckey, OH 43443. □

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The 6th Annual NOARSFEST, sponsored by the NORTHERN OHIO AMATEUR RADIO SOCIETY, will be held Saturday, 23 July, at the Lorain County Fairgrounds, in Wellington, Ohio.

Tickets are $2.50 in advance, $3.50 at the gate; children under 12 free. Admission ticket serves as ticket for all prize drawings. Additional prize drawing tickets available for $1. Tables (8 ft.) $8 each. Send check for advance registration to: Don Winner, WD8RZG, 8927

Torrance Ave., Brooklyn, OH 44144; (216) 749-6594.

Flea market set-up 6:00-8:00 a.m. Gates open 8:00 a.m. to 5:00 p.m. Free parking, indoor exhibits, refreshments and overnight RV facilities (Friday night) — no hookups.

Mobile check-in: call K8KRG on 146.52/52 MHz. Directions and information on 144.55/145.15 MHz.

To order admission tickets, write to: NOARSFEST, P.O. Box 354, Lorain, OH 44052. □

Pennsylvania

The 46th Annual SOUTH HILLS BRASS-FOUNDERS AND MODULATORS Hamfest will be held on 7 August from 9:00 a.m. to 4:00 p.m. at the South Campus of the Community College of Allegheny County, Pittsburgh, Pennsylvania.

Tickets $3 each or two for $5. Computers, OSCAR, ATV demonstration and flea market.

Talk-in on 146.13/73 and 146.52 simplex.

Further information from Andrew L. Pato, 1433 Schauffler Dr., W. Homestead, PA 15120.

Texas

The AUSTIN AMATEUR RADIO CLUB and the AUSTIN REPEATER ORGANIZATION will sponsor Austin Summerfest '83, 12-14 August, at the Austin Marriott Hotel, Interstate 35 at Highway 290.

Austin Summerfest '83 combines the Texas VHF-FM Society convention with forums, meetings, an indoor swapfest, dealer exhibits and many outside activities for the family at Austin's annual Aqua Festival. Admission is $5 in advance, $6 at the door. Swapfest tables are available on a first-come, first-served basis, but each seller may also reserve one table in advance for $1.

Talk-in is on 146.34/.94.

For more information, write to: Austin Summerfest '83, P.O. Box 13473, Austin, TX 78711. □

West Virginia

The 15th Annual National County Hunters Convention is coming to Charleston, 6-10 July. Convention headquarters will be the downtown Charleston House Holiday Inn on Kanawha Boulevard.

The event is sponsored by MARAC (Mobile Amateur Radio Awards Club, Inc.), a non-profit, unaffiliated club for mobile operators and county hunters. MARAC Great Lakes Division Director Les Shockey, WB8SNO, is handling arrangements. His division, — one of six in MARAC — is made up of the states of Indiana, Ohio, Kentucky, West Virginia, Michigan, Pennsylvania and the VE3 call area of Canada.

The convention will have entertainment for everyone: barbecue, square-dancing, tours of glass-blowing plants, riverboat cruise and white-water rafting. To receive convention packet, send SASE to Bob Dyson, RFD #1, Box 230-M, De Soto, KS 66018.

The organization offers 17 different awards — almost all that are available to mobile operators; nearly all the County Hunter awards, except the one sponsored by CQ Magazine, originate with MARAC.

Each year the convention awards an engraved plaque to an amateur chosen as the "County Hunter of the Year." That's separate from the MARAC awards and can only be won once. This year's award will be presented during the convention banquet at 7:00 a.m. on Saturday, 9 July. Further details are available from the secretary of MARAC, Jon D. Fogdall, WØAGW, at 7120-126th Street Court, Apple Valley, MN 55124.

●

The TRIPLE STATES RADIO AMATEUR CLUB will present its 5th Annual Wheeling WV Hamfest, at Wheeling Park, on Sunday, 24 July, 9:00 a.m. to 4:00 p.m. Dealers, flea market and auction, free parking, refreshments; prizes every 15 minutes; ARRL, SWOT booths, etc. Major prizes and cash award. Admission $2; children under 12 free. Indoor display; tables available, price of admission on-, but reserve space.

Contact: TSRAC, Box 240, RD 2, Adena, OH 3901; phone 614-546-3930. □

Brothers and Sisters QSO Party

The Central Oregon Radio Amateurs (CORA) will have a "Brothers and Sisters QSO party" on 23-24 July, 0600 hours Saturday to 1200 hours Sunday, Pacific Daylight Time.

Operations will be from Brothers, Oregon (WN7ODD), located 42 miles east of Bend, Oregon on Highway 20 and from Sisters, Oregon (N7CSH), located 17 miles west of Bend on Highway 20. Both locations are in Deschutes County.

Phone frequencies will be 10 kHz up from bottom portion of the General bands. CW will be 15 kHz up from bottom portion of the Novice bands.

QSL via CORA, P.O. Box 723, Bend, OR 97709. SASE (4″ x 9″) for QSL cards for working both Brothers and Sisters, Oregon. □

1983 CW County Hunters Contest

The CW County Hunters Net invites all amateurs to participate in the 1983 CW County Hunters Contest. All mobile and portable operation in less active counties is welcomed and encouraged.

Rules

1) **Contest period:** 0000Z, 30 July to 0200Z, 1 August

2) **General call:** CQ CH

3) **Exchange:** QSO number, category (for portables or mobiles: P or M), RST, state or province or country), and county (U.S. stations). Stations may be worked once on each band, and again if the station has changed counties. Portable or mobile stations changing counties during the contest may repeat contacts for QSO points. Stations on county lines give and receive only one number QSO, but each county is valid for a multiplier.

4) **Scoring:** QSOs with fixed stations are 1 point; QSOs with portable or mobile stations are 3 points. Multiply the number of QSO points by the number of U.S. counties worked. Mobiles and portables calculate their score on the basis of total contacts within a state for the state certificate, and calculate their score on all operation if they operated from more than one state in competition for the High Portable or High Mobile Trophy.

5) **Suggested frequencies:** 3575, 7055, 14065, 21065 and 28065. It is strongly requested that only P or M category stations call CQ or QRZ on 40 meters below 7055 and on 20 meters below 14065, with all other stations spreading out above those frequencies.

6) **Certificates will be awarded in three categories. F** — Highest fixed or fixed portable station in each state, province and country with 1,000 or more points. **P** — Highest station in each state operating portable from a county which is not his normal point of operation with 1,000 or more points. **M** — Highest station in each state operating mobile from three or more counties with a minimum of 10 QSOs in at least each of three counties.

Plaques will be awarded to the highest single transmitter mobile and portable stations in the United States who meet the above requirements for certificates. Additional awards will be issued where deemed appropriate by the Awards Committee.

7) Logs must show category, date/time in GMT, station worked, band, exchanges, QSO points, location and claimed score. All entries with 100 or more QSLs *must include a check sheet of counties worked or be disqualified from receiving awards.* Enclose a large SASE if results are desired. Logs must be postmarked by 3 September 1983 and sent to: CW County Hunters Net, c/o Jerry Burkhead, N6QA, 7525 Baltic St., San Diego, CA 92111.

The CWCH Contest will include a large team of mobiles and portables from the Texas DX Society (TDXS). This team will attempt to activate all 254 Texas counties. Working these stations will count as score for the TDXS "Armadillo Run," as well as the CWCH Contest.

Don't miss this one! It should be one of 1983's outstanding CW events. □

Illinois QSO Party

The 21st Annual Illinois QSO Party, sponsored by RAMS (Radio Amateur Megacycle Society), will be held 6-7 August. Operating times: 1800Z, 6 August to 2300Z, 7 August, with a rest period from 0500Z to 1200Z, 7 August.

Bands/modes: All bands, CW and phone. Same station may be worked on each band and mode. No repeater contacts allowed.

Frequencies: Any frequency, but look for most activity about: *CW* — 40 kHz from low end; *Phone* — 3890, 7230, 14280, 21375 and 28675; *Novice* — 25 kHz from low end, especially on the hour and half hour.

Exchanges: RST and county by Illinois station; RST and state or province or country by others.

Scoring: 1 QSO point per contact (2 points if other station is a Novice or a Technician in a Novice band). *Illinois stations* multiply QSO point total by sum of states (50 max.), Canadian call areas (10 max.) and no more than five non-U.S./Canadian countries worked for a maximum of 65 multipliers. Additional DX contacts count for QSO points but not for multipliers. Illinois portables or mobiles away from normal QTH may add 200 to final score for each county of operation from which 10 or more contacts were made. *Non-Illinois stations* simply multiply QSO points by number of Illinois counties worked. They may only count Illinois stations for QSO points. *All stations* may also take extra bonus multipliers, one for each group of eight QSOs with the same county.

Awards: Certificates go to the top three Illinois scorers in Single-op, Multi-op, Multi-multi, Portable out of home county, Mobile, Novice and CW Technician categories. For non-Illinoisans, awards go to top scorers in similar categories in each state, province or country from which two or more valid entries are received. Please send in even a low-scoring log to help another meet the two-log rule. Awards for club participation per SS rules. Decisions of contest committee are final.

Logs: Must be legible and show complete exchanges sent and received, times, dates, operator name and call, address and operation category. Also include a separate sheet listing all multipliers and showing calculations of score. Send a business-size SASE (about 4″ × 9½″) for return of results of QSO party.

Filing: Entries must be postmarked no later than 1 September 1983. Send to: RAMS/K9CJU, 3620 N. Oleander Ave., Chicago, IL 60634. □

Side Winders On Two Open QSO Party

The SWOT (Side Winders On Two) ARC announces the 6th annual QSO party. Any licensed amateur with operating privileges on 2 meters is eligible to participate. The contest will last from 0000Z, Saturday, 6 August to 2400Z, Sunday, 14 August.

Classes: Single Operator; and Mobile or Portable or Multi-operator.

Certificates: First place for highest score for both classes; first and second places for each ARRL section/country each class.

Exchange: Call; SWOT member: Yes or No; Maidenhead locator field and square. Example: N5AE de K5IS, yes, DM 96, break

Scoring: 1 point for non-member QSO; 2 points for member QSO. Sum of QSO points times the number of different squares equals score.

Logs: Submit a copy of your log. Be sure to include your name, address, SWOT number, ARRL section/country and score. Postmark by 1 September 1983.

Restrictions: 1) No FM or repeater QSOs. Use SSB or CW.

2) No time limitations. You may operate any or all of the 216 hours.

3) A station may be counted only once per square. If you or other station change squares, another QSO counts.

4) If operating in contest as mobile or portable, submit the combined logs for all operations and the total of the scores.

5) Moonbounce, meteor scatter, and other of the weak signal type modes are encouraged.

6) SWOT numbers may be given.

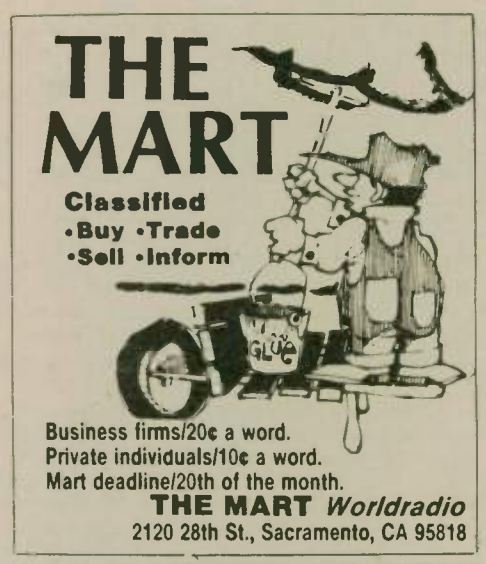
7) If the other operator does not know the Maidenhead locator, then substitute his QTH. Refer to January 1983, QST pages 49-50 for information on the Maidenhead system.

8) SWOT does not intend to interfere with other VHF contests during this QSO party. The intent is to supplement and add to the overall VHF activity.

9) Send SASE if you have a question.

Send logs to: Jerome Doerrie, K5IS, Rt. 2 Box 72, Booker, TX 79005. □

ADVERTISERS' INDEX



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MONROVIA BASIC RADIO. Ham & SWL accessories. Hours: TWThF 1900-2200; Sat. 1000-1700. 325 Linwood Ave., Monrovia, CA 91016. (213)359-2986.

ATTN: BAKERSFIELD, CA. MONROVIA BASIC RADIO local phone: 871-1764, eves.

WYOMING AND UTAH RANCH LAND. Wild horses, antelope, deer. Near paved road. 10 acres — $60 down, $60/month. FREE information, maps, photographs. (Offer void in Calif.) Will trade equity for ham gear, home computer, test equipment, etc. Owner — Dr. Michael Gauthier, K6ICS, 9550 W. Gallatin Road, Downey, CA 90240.

The SOCIETY OF WIRELESS PIONEERS, Inc., invites all professional operators, active or retired, military or commercial, to join the world's largest organization of its kind. Many active nets. Write Box 530, Santa Rosa, CA 95402 for details or send $1 to pay postage on sample SPARKS JOURNAL.

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