Worldradio

September 1981 • Year 11, Issue 3 • 80¢

Fire storms rage in California

Gerhard F. Schilling, AI6I

On Monday, 15 June, a major vegetation fire broke out in Riverside County, southeast of Los Angeles. By Wednesday, six major and numerous smaller fires were burning simultaneously. By Friday, fire storms had developed and more than 29,000 acres and 32 structures had been destroyed. Thirteen civilians and fire fighters had received critical burns, leading to two fatalities. Approximately 1,500 fire fighting personnel were actively deployed, and equipment in operation at the major fires included 285 engine companies, 25 dozers, seven aircraft, three helicopters and 51 hand crews.

For five days and four nights in temperatures exceeding 105 degrees, some 60 Amateur Radio operators provided communications support to the Riverside Ranger Unit of the California Department of Forestry (CDF).

CDF radio, telephone and microwave links were severely overloaded for extended periods of time. But the Volunteers-In-Prevention (VIP) program of the CDF had been initiated last year to provide Amateur Radio support for such a contingency. Some of the program members had already gained experience during the fires near Lake Elsinore last year (see **Worldradio** January 1981, page 14) and the floods in February of that year (see **Worldradio** November 1980, page 13).

This time, amateurs were called upon to assist in many ways. They rode in CDF vehicles or served at communication stations in fire camps and at CDF headquarters. Mobile units were dispatched to any new sighting of smoke to report precise locations and conditions in order that the few available fire engines could be dispatched to the right place. Other operators rode with CDF and U.S. Forest Service (USFS) field information officers to assess the danger situation around fire perimeters. Amateurs also participated in a special operation designed to find suspected arsonists. I will not discuss here the techniques employed.

The Emergency Command Center (ECC) of the Riverside Ranger Unit is located in the CDF headquarters compound at Perris, California. It is the communications and dispatch center for 33 CDF fire stations in the western part of the county. During a major emergency, it controls and dispatches hundreds of fire engines, rescue squads, aircraft and strike teams as well as USFS, OES (Office of Emergency Services), and other units which may be called in from other counties or from out of state. It receives and handles all fire and medical emergency reports in the county. In addition, there is

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Japan revises law

The president of the Capitol Hill Amateur Radio Society, W3USS, conferred with the president of the Japanese Diet Amateur Radio Club, JG1ZQU on 17 June 1981. David Siddall, K3ZJ met Keizo Obuchi, JI1KIT In the office of United States Senator Barry Goldwater, K7UGA, and escorted the Japanese Congressman to the W3USS station.

Congressman Obuchi played a key role in the passing of a bill by the Japanese Diet on 15 May 1981, that will amend the Japanese radio laws to allow amateur licensing on a reciprocal basis of non-Japanese residing in or visiting Japan. The revised law will take effect on 23 November 1981, after which Japan may negotiate and conclude reciprocal agreements with other nations for amateur licensing purposes.

Highlight of the meeting at W3USS was the presentation to Congressman Obuchi of an honorary membership in the Capitol Hill Amateur Radio Society.

Congressman Obuchi was visiting Washington as a member of the Japanese Mission of the Congressional Federation for the Promotion of the Information Industry. He is Chairman of the Communications Regulation Study Group of that organization. Formerly, he was a member of the standing committee on communications in the Japanese House of Representatives and the Parliamentary Vice-Minister of Posts and Telecommunications. □

Keizo Obuchi, JI1KIT, (right) president of the Diet Amateur Radio Club (JG1ZQU), converses with David Siddall, K3ZJ, (left) president of the Capitol Hill Amateur Radio Society (W3USS). ***(Photo by Robert Lisbeth, N4CFI)***

Flood reaffirms need for Amateur Radio

Doc Bemmels, W0KL, SEC Kansas

The Great Bend (Kansas) flood — which began on Monday, 15 June — demonstrated the importance of Amateur Radio communications during emergencies in a big way. Electric power in most areas of the city was shut off early Monday, but 2-meter operation was begun immediately. Emergency Coordinator (EC) Marshall Reece, N0BLD — who was operating the amateur station in the EOC of the State Emergency Preparedness headquarters in Topeka — alerted the Section Emergency Coordinator, and the Kansas Emergency Net was activated on 3920 kHz, with EC WD0EXP in Larned being the relay into 2 meters in Great Bend.

Due to electric power failure and deterioration of the telephone system, *Amateur Radio was the main link into the state for the National Guard, American Rea Cross and the city administration* during the stages on Monday. Emergency generators eventually came into service, but the amateur operators continued to be important — both for in-city communication needed in the process of moving people from their homes to evacuee centers, and for statewide communication for the Red Cross and other agencies. Messages dealt with such problems as moving of personnel into the city and providing cots, blankets and medical supplies.

Amateur operators from Pratt, Hays, Salina, Topeka, Lawrence, Howard, Hutchinson, Wichita and other communities traveled to Great Bend with extra equipment and manpower, and were immediately put to use.

Two extra HF stations were operating by early Tuesday — one at the community college, the other at the courthouse, which was the operating center for the city administration, the Red Cross and the 2-meter base. One HF station was on 3920 kHz and the other on 7249 kHz.

Operators were so busy with official business that they could not handle most health and welfare inquiries on Monday and Tuesday. By Tuesday evening, however, such inquiries were being cleared as well as the limited phone service would permit. Registration lists from the evacuee centers aided this service.

The operators in Topeka moved on Tuesday from the EOC to the Red Cross building, using the W0CET call. The Red Cross station in Wichita, W0SOE, was also active, as was the link with Salina Red Cross and Garden City. After about 48 hours of continuous operation, the Kansas Emergency Net was secured at 10:00 a.m., Wednesday, 17 June, and most of the 2-meter in-city operation was

(please turn to page 4)

A busy day

Submitted by Scott Thompson, KB6CC

For some amateurs, the Field Day exercise was not the end of their radio activities:

Late Sunday, 28 June, the U.S. Forest Service requested Amateur Radio Assistance for communications at the Gamboa fire which burned over 3,800 acres of the Vantana wilderness in the Las Padres National Forest near Big Sur, California. Many Amateur Radio operators responded direct to the fire camp and Forest Service dispatch offices from their Field Day activities. For the next five days over 50 amateurs volunteered their skills, equipment and manpower from the more than one dozen transmitting sights in support of fire suppression activities.

It is interesting to note that many of the radio amateurs involved with this fire emergency are the same ones who volunteered their services for the 20 days of the Marble Cone fire five years ago. □

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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.

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Special — Events

Washington Special

The Pend Oreille Amateur Radio Club will operate a Special Event station from the Pend Oreille County Fairgrounds in Newport, Washington from 27 to 30 August. They will be on the air 24 hours a day, using the call WB7TBN (Newport High School's radio club call), on the following frequencies:

CW — 14.340, 21.400, 28.700, 39.45, 37.15. RTTY — 28.090, 21.090, 14.080, 36.50.

The club was organized in 1977 by a few amateurs in the area, who bought and still maintain their own 2-meter repeater atop Cooks Mountain, just north of Newport. The frequency is 147.12; repeater call is WB7SML. Bulletin Editor Mike Bice, WB7SGU, writes that the club currently has 45 active members from Eastern Washington and Northern Idaho. □

Population Center

The Population Center of the United States as determined by the 1980 Census will be commemorated by the special events station KAØIAR from 1700 GMT, 10 October until 1700 GMT, 11 October by the Jefferson County ARC in DeSoto, Missouri. Approximate frequencies used will be 25 kc up from the bottom edge of the General portions of the 10, 15, 20 and 40-meter bands as well as the center of the Novice portions.

For certificate, send QSL and a large SASE to Rev. Michael Dieckmann, KAØIAR, 3009 High Ridge Blvd., High Ridge, MO 63049. □

Railroad anniversary

The Schenectady Amateur Radio Association will operate a special event station, K2AE, to commemorate the sesquicentennial, the 150th anniversary, of the opening of the Mohawk and Hudson Railroad. The railroad was the first to operate in New York State, the first to operate north of the Mason-Dixon Line and the third to run in the United States.

Listen for K2AE the weekend of 26 September from 1600Z Saturday to 1700Z Sunday on the following frequencies ± QRM: 7235, 14285, and 21360.

Amateurs who work K2AE and desire a QSL card showing a likeness of the historic train should send an SASE to K2AE, P.O. Box 6, Alplaus, NY 12008. □

Balloon-A-Fair

The Tulare County ARES (Amateur Radio Emergency Service) group will sponsor a special event station at the 1981 Visalia (California) Balloon-A-Fair during the last weekend in September. Contacts will be made by Amateur Radio from the site where nearly three dozen colorful hot air balloons are scheduled to fly throughout the weekend. Some radio transmissions may even be made while HAM (Hot Air Mobile).

A colorful certificate will be awarded for radio contacts during this special event. Look for Dan Crowe, KB6AR, or Scott Thompson, KB6CC on 7.235, 14.285, 21.360, or 28.510 MHz (plus or minus for the courtesy of other users of the frequencies) during the 48-hour period from 0100Z, 26 September to 0100Z, 28 September. (6:00 p.m. Pacific time Friday to 6:00 p.m. Pacific time Sunday)

QSL with a business-size SASE to KB6CC at the current Callbook address for your certificate of contact. □

24th Jamboree on the Air

It is JOTA time again — 17-18 October 1981. Time to gather around the ham shack. Scouts, former scouts and anyone interested, meet on the air for a weekend of good scout talk. It gives radio amateurs and scouts worldwide a chance to listen to or talk with other scouts. In some cases where equipment is available for Slow Scan television, to see them also. That includes Girl Scouts, guides and all scout leaders.

Amateurs invite scout groups to their shacks for the occasion, or scouts seek out amateurs. Amateur Radio clubs have lists of their members, and a list of such clubs is available from the American Radio Relay League, Attn: Sally O'Dell, Director Youth Activities, 225 Main St., Newington, CT 06111. Send a self-addressed stamped envelope with your request. Amateurs may contact local scout offices for names of scout leaders in their neighborhoods.

Look for stations operating at camporees and other scout events and for K2BSA, the national headquarters Amateur Radio club station, and HB9S, the World Scout Bureau station.

Time: Generally 0001 UTC Saturday to 2400 UTC Sunday, though since this is not a contest, operations may start Friday and go into Monday.

Contacts: No required format, no specific exchange — just scouting fun.

Frequencies: Scout frequencies published by the World Bureau are: **Phone** — 3,740 7,090 14,290 21,360 28,990; **CW** — 3,590 7,030 14,070, 21,140, 28,190; **SSTV** and **RTTY** on usual frequencies. In addition, BSA/USA use: **Phone** — 7,230; **CW** — 3,750 7,130.

The frequencies 3,740 and 7,090 are outside the USA phone bands. Overseas stations using those frequencies may listen inside adjacent USA Phone bands or respond to CW calls. All operations must adhere to FCC rules and regulations.

Certificates: Postcard-size certificates designed by an Australian scouter and issued by the World Bureau are available from JOTA Coordinator, Harry Harchar, W2GND, 216 Maxwell Ave., Hightstown, NJ 08520, for anyone participating in any manner. Send self-addressed stamped envelopes with sufficient postage for their return, at 18¢ for each eight cards. They may be requested before the JOTA weekend for distribution then, or for award at Scout Courts of Honor or other meetings.

Reporting: Logs or lists of participants are NOT required, but reports of activity and photos are welcome for inclusion in the BSA report to the World Bureau and possible use in scout publications. Send them to the JOTA Coordinator mentioned above. □

(See special event, "Syrup Station," page 48.)

FEATURES

COLUMNS

Fire storms

(continued from page 1)

liaison traffic with sheriff's officers, ambulance services, the California Highway Patrol and other government agencies. The communication problems — involving simultaneous tactical, strategic, and logistics traffic — are formidable.

The VIP Amateur Radio control station with multiple equipment was located inside the ECC. It identified as "Perris ECC" plus the call sign of the duty operator every 10 minutes and at the beginning and end of contacts. Mobile amateur units identified with their call signs, while operators at base camps or aboard CDF vehicles identified with both amateur call and CDF radio designator. Critical communications were carried out as third party traffic, allowing CDF officers to talk to each other directly over the amateur links.

During this emergency period, all amateur communications were conducted on VHF-FM, primarily on N6BAE/R and WB6FUB/R. Cooperation from non-participating amateurs was excellent. But what was heard on the air during these five days and four nights was only a small part of what was going on. Let me sketch just a few incidents.

There was the radio amateur aboard a CDF vehicle who suddenly found himself sitting at his radio 10 feet from the fireline, while his fire personnel tried to stop the flames.

There were two radio amateurs dispatched to a rugged mountain top in an attempt to serve as a relay link to hand-held CDF radios on the fire line behind the mountain — until the flames moved towards the top and they were advised to leave . . . fast.

There was the night when an amateur operator was sent to drive 30 miles to the location of a base camp to find out why headquarters could not communicate with this camp. The answer: the camp was moving. Another operator was dispatched to find the new location. He did.

There was also the school which had been designated over TV and radio as the evacuation center for refugees, but the building was closed until an amateur was dispatched to locate the principal. As it turned out, it was quickly determined not to use this school after all — the approaching fire line was only half a mile away.

Then there was the time a radio amateur at CDF headquarters was ready to leave on an assignment, when he radioed back that the power pole where his car was parked was on fire — and all electric power went out in the ECC. Two minutes later, the senior CDF dispatcher — instead of commanding in his elaborate ECC — was sitting in a CDF car parked in front of the building, dispatching engines and aircraft over the car radio. Parked next to him now was the amateur who had just reported the power pole fire, dispatching over Amateur Radio. CDF headquarters personnel and radio amateurs were running in and out of the building with slips of paper, and another amateur was kneeling between the two cars, assisting with the paper flow.

During the second day of operation, a CDF incident commander at one of the base camps needed an *immediate* air drop of flame retardant and could not get through to headquarters on CDF radio. But he received an immediate response over his amateur link to headquarters, jumped in the air, clapped his hands and yelled: "I love it!"

After this, the demand for amateur

Gordon Busby, W6CDB (left), and David E. Pesonen, Director of the California Department of Forestry (second from left), stand in a fire camp, waiting for phonepatch traffic. The two men on the right are members of Pesonen's senior staff. ***(Photo by David Hannah, W6NBJ)***

operators was staggering and far exceeded our ability to supply them around the clock. In other words, many CDF and USFS officers would have liked to have had a ham operator next to them at all times. We could have handled that with regard to frequency management, but it was beyond our logistic ability of having amateurs at the right place at the right moment. Remember — telephone lines were seldom free. By the last day of operation we were doing better. We had mobile operators standing by at Perris headquarters, often for lengthy periods of time, but ready for immediate dispatch when and where needed — either in their own cars or for transfer to a CDF vehicle.

Finally, there was the amateur control operator at headquarters who was so concentrated on his task during an emergency report that he did not even notice senior CDF officers were listening to every word, while a microphone boom was held under his chin and a television camera ground away.

As I implied, some of this traffic must surely have sounded strange to a listener in his air-conditioned radio shack. Calls used ranged from Chief 6102 and Battalion 6118 to Featherly Base Camp and Barber ICP (Incident Command Post); from Unit 2516 and Patrol 115 to Truck 47 and many others. We never had R2D2, but we came close with Unit 12R8.

There were several periods when lives and property were in immediate danger, and we had to carry some tactical traffic to provide relief for the overloaded CDF tactical frequencies, both simplex and via repeater. At such times, the CDF radio designator was more important than the call sign of the operator who happened to be at the set at the moment. But we followed FCC emergency rules as conscientiously as we were able to in the heat of the operation — no pun intended.

After some 50 hours of operation, many of the participating amateurs were becoming as fatigued as the CDF personnel. On Thursday, CDF requested that the Riverside County Office of Disaster Preparedness formally activate RACES to provide additional amateurs to the VIP operation in progress. Through QSTs and telephone calls — whenever there was an open line — we were able to obtain sufficient volunteers to provide the needed relief operators, including amateurs from nearby counties. Even those ARES and RACES members with little prior experience in extended, major fire suppression operations learned very fast and provided the much needed help.

Let me close this report with a quote from a QST which went out after VIP deactivation on Friday evening:

"Chief Flake, Riverside County Fire Warden and Ranger-In-Charge, Riverside Ranger Unit of the California Department of Forestry, wishes to express his sincere appreciation to all participating radio amateurs for the truly valuable help they provided during this emergency."

I can assure you that Dave Flake really meant that.

(Dr. Schilling, AI6I is the VIP Communications Support Coordinator of the CDF Riverside Ranger Unit, and an ARES Emergency Coordinator.) □

Technical conference

The 27th Annual VHF Conference will be held Saturday, 17 October 1981 at Kohrman Hall, Western Michigan University in Kalamazoo, Michigan. This is a technical conference for amateurs and radio engineers; it is *not* a hamfest or swap shop.

The time schedule for the day follows:

8:30 a.m.—Registration 3034 Kohrman Hall
9:00 a.m.—Design of Low Noise GaAs FET Pre-Amps, Fivash
10:00 a.m.—An Overview of Packet Networking (digipeater), Groh
11:00 a.m.—Eliminating Instabilities in VHF Solid State Power Amplifiers, Rohrer
12:00 noon—Lunch
1:30 p.m.—Effects of DC Paths in Yagis and Systems, Perthel
2:30 p.m.—The Amateur Allocation 902-928 MHz, Klingelhoeffer
3:30 p.m.—Coherent CW, deKat and Gross
4:30 p.m.—Wideband Amateur Repeaters, Waigand
6:30 p.m.—Awards dinner □

Ed Redington Memorial Scholarship

The Ed Redington Memorial Scholarship Fund, established last year in honor of W4ZM, has continued to increase. Although it is hoped sufficient funds will be received to establish a perpetual scholarship in Ed's memory, the fund is still short of that goal.

Many individual and club contributors have indicated they expect to make annual contributions to the fund, in order to spread their tax deduction over a longer period. This is to remind them it is now time for their 1981 contributions.

With the fund still short of its goal, it is hoped many others will follow the lead and make additional contributions this year, and in coming years to assure a sustaining fund for this worthy cause.

Won't you help us reach that goal? You may wish to suggest additional contributions at your next club meeting. Everyone who knew Ed appreciates the value of this living memorial to him. Donations in any amount will be most gratefully accepted and acknowledged. Send your contributions to: **Foundation for Amateur Radio; Marked for: Ed Redington Scholarship Fund; c/o Richard F. Vincent, K3AO; RFD #1 Box 230; Bryantown, MD 20617.** □

ATV Magazine changes hands

Amateur Television Magazine has been purchased by Mike Stone, WB0QCD, long-time contributor to the publication, from Henry B. Ruh, KB9FO, who published the bi-monthly magazine for the past seven years. The transfer will be effective with the September issue, which will be Mike's first issue. Mike indicates the magazine will be expanded in format and appeal to include other specialty communication modes. The magazine, in its 15th year of publication, has been the sole source of ATV, SSTV and other video-related amateur activities. Mike is an account executive for the Tash company, supplier of retail store sundries and supplies.

Henry has been very active in Amateur Radio for many years, has frequently represented Amateur Radio before the FCC on numerous matters, and has served for five years as advisor to the FCC for WARC. During the seven years Henry was publisher/owner, the magazine grew in circulation, scope and format and matured into a widely regarded publication with readership in 25 countries. Continued assistance and contributions will be provided to the new publisher to insure a smooth transition. All inquiries after 15 August 1981 should be sent to: **Amateur Television Magazine**, Mike Stone, WB0QCD, P.O. Box H, Lowden, IA 52255.

ATV Magazine has been the primary source and usually the first publication to report on the various video modes including the experimental medium scan, color slow scan and many other video topics. It has also provided continuing material on VHF, UHF and higher frequency operations, TVRO, MDS, and other video modes. Former owner/publisher Mr. Ruh, and the magazine have received numerous awards from the ARRL, the White House and from foreign countries for public service and technical achievement. The magazine also presents various awards and certificates for operations, public service and technical achievement. □

Radio museum

Amateurs visiting Guelph, Ontario should not pass up an opportunity to visit old-timer Fred Hammond's (VE3HC) radio museum. His new museum location was opened in January with ribbon-cutting ceremony and open house. If there is something in your shack that might well grace a museum, contact Fred at his Callbook address, or through the Hammond Mfg. Company in Guelph.
—RTTY News, Ontario, Canada □

Did you work Holland?

Certificates are still available to stations who worked the Holland Amateur Radio Club special event station, K8DAA on 16 May 1981, operating on Windmill Island in Holland, Michigan. Please send your QSL and 75 cents to cover costs to: Jack Van Voorst, 8737 Summit Court, Zeeland, MI 49464. □

Submarine Memorial Day was celebrated on 13 June 1981 (see page 2, May issue). These two amateurs are seen putting up a beam in preparation for the special event, which involved Mancorad Amateur Radio Club, W9DK being on the air all day, calling from the submarine *Cobia*. On the left is Chuck Scholten, W9BZU; on the right is Steve Tate, N9AQW. Ken Tate, WB9OBX writes that the event was a very successful one. *(Photo by WB9OBX)*

Let Worldradio know what you do in Amateur Radio, many others will be interested in your experiences

ATV repeater to move frequency

After months of attempting to remove the interference from the Pave Paws radar at Beale Air Force Base from the 434.0 MHz input to the Contra Costa ATV repeater, it was announced that the repeater will abandon the 434 input in favor of a split-band TV repeater. Don Smith, W6NKF announced that the existing repeater will be re-worked to add a 1275.75 down converter at the antenna to feed the IF of the repeater.

This will allow the existing 450 ATV transceivers to crystal up on the repeater output frequency of 425.25 and use a varactor tripler up to the 1275.75 frequency. The repeater location at Rocky Ridge should be line-of-sight from most of the (San Francisco) Bay Area, and input signals should be interference free on the new frequency. The output frequency will remain the same, and users should be able to receive their own signal returning from the repeater.

The conversion is expected to be complete sometime in August, and another experimental try at locating the repeater on top of Mt. Diablo is in the works. For further information and to subscribe to the ATV newsletter, contact: Contra Costa ATV Association, 1639 Martindale Dr., Martinez, CA 94553. □

Friendly repeater

Dick McCreary, N8AER

The Capital City Repeater Association consists of about 135 members, and is extremely proud of its hard-earned reputation as "Central Ohio's Friendliest Repeater," with its multiple voted-site system, "open" (yes — * up #down) autopatch and weekly nets at 2030 EST on 147.84 in /.24 out.

The group also has a 147.81 in/.21 out system, 448.3 in/443.3 out and 144.57 in/145.17 out (open patch) sub-band repeater. A 52.84 in/52.6 out system is audio-linked to .84/.24 to allow "full duplex" (crossband) communications and autopatch. □

Flood

(continued from page 1)

terminated at the same time. The city administrator of Great Bend was very warm in his praise of the work done by the amateur operators.

Full cooperation of amateurs not directly involved was experienced by way of keeping the frequencies clear, acting as relays, and in being helpful and understanding in general.

It is impossible to recognize all of the operators who contributed so effectively to the effort, but special recognition should be given to the EC for Zone 10C, David Morgan, WD0EPX for his untiring work and skill in coping with the situation. Marshall Reece, N0BLD, with the aid of his wife Dolly (an amateur), was a key operator. Lanny Ellis, K0EZ; Jim Armes, WD0CFZ; James Zeltner, WB0OAO; William Jolly, WD0BSD; Don Krentzel, W0PSN; Jack Norman, WB0ZUC; N0CBO; Al Eubanks, KA0BCS; KV0VV; J. Frank Fields Jr., KB0QJ; and John Nafzinger, W0UFP were tremendously helpful. Kudos to all the others who contributed so greatly to the effort. Over 30 operators, 65 pieces of equipment, and five generators were brought into the city, and more could have been used.
—Kansas Amateur Radio □

If you received this publication and are not a subscriber of WORLDRADIO, it was no accident. Please consider it an invitation to join. We can be very friendly.

The Rig That Filters The Crowd

OMNI-C has what it takes to filter the crowds. To narrow the Amateur Radio world right down to the particular signal you want. The selectivity, sensitivity, dynamic range and operational features you need to cut any crowd down to size.

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Standard filters include an excellent 8-pole 2.4 kHz crystal ladder filter and, in addition, a 150 Hz active audio cw filter with three ranges (450, 300, 150 Hz).

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Front panel switches put any optional filter in series with the standard filter for up to ***16 poles of filtering*** for near ultimate skirt selectivity.

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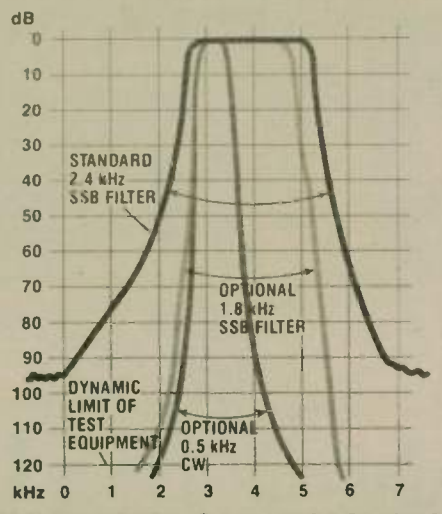

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Built-in notch filter. To drop out unwanted signals or carriers. Tunable from 200 Hz to 3.5 kHz, with a 50 dB notch depth.

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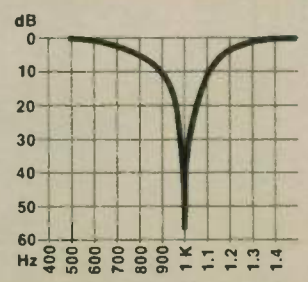
OMNI-C features stand out in any crowd.

All solid-state—from the pioneer, Ten-Tec.

TEN-TEC OMNI-C



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Separate receiving antenna capability. Switch receiver to a common antenna for transceive or separate receive-only antenna; the system also acts as receiving antenna by-pass with an instant break-in linear amplifier or transverter.

"S"/SWR meter, electronically switched.

200 watts input, all bands, with 50-ohm load. 5 year pro-rata warranty.

100% duty cycle on all bands up to 20 minutes. Full RTTY and SSTV power.

Built-in VOX and PTT with front panel controls.

Built-in phone patch jacks for easy interface.

Built-in zero-beat switch for spotting the exact frequency of a DX station.

Built-in adjustable sidetone volume and pitch.

Adjustable threshold ALC, optimum power for driving a linear. Provides means of working into a high SWR.

Front panel control of linear or antenna. The rear panel bandswitch terminals control relays or circuits in step with front panel bandswitch.

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Low distortion audio, less than 2%; a Ten-Tec trademark.

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Book Review

The Complete Idiot's Guide to DX

by Stuart Gregg, NF4Z

As to be expected from a book issued by the Bash publishing house, this is a lightly written volume with flashes of humor.

For many, it could be an introduction to what DXing is about. It could whet the appetite to enter the fray.

Unfortunately, since it is aimed at — as the publisher states — "complete idiots" (of which there aren't really too many who have obtained licenses), it is lacking in many areas for the beginner and outright bewildering in others.

For example, probably the worst failure of neophyte DXers (and even those who have been around) is the improper use of Z, GMT or UTC (as you choose) and the date changing to tomorrow in the late afternoon or evening in the Western Hemisphere. No mention is made of this at all.

Some reference is made to Great Circle charts, but no mention is made of true north (North Star) as opposed to stumbling around in your backyard with a Boy Scout compass.

Pity the poor newcomer who stumbles into page 73 and reads that "RF Power in Transmitting Antenna ... 2000 watts (PEP) Outstanding."

Outstanding? Yes, but highly illegal! As would be the 1600 watts (PEP) also listed. And 800 watts mentioned (in the antenna) may be possible with a Class C amplifier theoretically running at 80 percent efficiency with no feedline loss.

We had best point out that while we can run 1000 watts DC or 2000 watts PEP, that is INPUT to the FINAL. *NOT* output.

In a later reference, the author makes reference to his antenna and "1000 watts on CW and 2000 watts PEP on SSB pumping into it."

What we have here is either a most candid confession or a total lack of knowledge on the part of anyone who perused these pages at the publishing organization.

The reader is told that a unidirectional Rhombic has a gain of 13dB over a dipole. (What leg length Rhombic?) We are told that a Ground Plane is 1.8dB poorer than a dipole. (At what heights, in what direction, at what distance?)

One chapter compares horizontal and vertical antennas for 80 and 160, but no mention is made of the technique of using the vertical for transmitting while at the same time using the horizontal for receiving.

A glaring error (in a book aimed for total beginners) is the lack of warning to use the standard phonetics so that DX stations with a limited English vocabulary will not wonder what you mean. "Cute" phonetics should be abandoned.

On a related topic, the author essentially calls U.S. amateurs who cannot speak other languages illiterate dolts, "more provincial and less cosmopolitan" than the overseas amateurs.

I once talked about this to a most erudite and urbane amateur from the Netherlands. He called it rubbish. And he said Americans were too defensive about such and said that while Europeans speak many languages and study algebra in elementary school, the United States was the only country in the world where the telephones worked so well.

If Americans heard several languages when they turned on an AM broadcast radio or another language when they traveled 50 miles, they too would have greater facility. Remember, the distance from San Francisco to New York is about the same as from London to Moscow.

Back to the book. It rants and raves about "Lists" and "Policemen" at such length that the potential DXer will hastily beat a path back to 420 MHz.

The less desirable behavior on our bands is detailed, but not the fact that the greatest tool available to the CW DXer not possessing the "World Class Competition" receiver is one of the relatively inexpensive outboard CW filters.

Information on some rather obscure contests is given, but nothing on the Radiosport. Details are given on awards that practically nobody applies for but (especially painful in a beginner book) scant mention is made of the Worked All Continents award (it is never spelled out) and how to apply for it.

Addresses are given of award managers who can't get three letters a month and yet the ARRL address is not given. DXCC is skimmed over. No mention at all is made of the many JA awards. Etc., etc., etc.

As an aside, how in the name of good sense can you have an award called DXCC-QRPP which you can get for working 50 countries? CC means Century Club. Unless the "new math" has made 50 into 100, it is a distortion of the language.

There is a great deal of lure and lore to DX; there are challenges and satisfactions like no other facet of Amateur Radio. However, telling us about an award for working ALL 454 Norwegian communes including the five Arctic/Antarctic ones — as this book does — misses the point.

It was indeed a surprise to get to page 143 and find the Chapter Titles under an Index, instead of in the front under a Table of Contents. An Index is usually a reference to all the subjects mentioned in a text. (Incidentally, this book is done in the biggest type you will ever see in a book, in an apparent attempt to pad it out.)

Is the *Complete Idiot's Guide to DX* worth $12.95? I struggle with myself not to say the obvious.

— A. Noble, N6WR □

Book Review

John Minke, N6JM
DX Editor, Worldradio

The Complete Idiot's Guide to DX — a paperback volume of 144 pages, mostly drivel at a $12.95 price tag. The author — Stuart Gregg, NF4Z — seems to be somewhat uninformed with DXing. In his text, the impression is given that most DX stations work CW. That may be so from Europe, but how many South Americans do you find there? He makes the statement, ". . . it is worth noting here that Soviet club stations always have a K right after the prefix; e.g., UA1KAB, and that private stations lack the K." The Soviets ceased to assign such calls to club stations some time ago! Soviet club stations all have the 'UK' prefix, with a few exceptions.

In his section on Lone Wolf DXing he makes mention of subscribing to DX newsletters. Of all the DX bulletins in print today, he lists only two of them. As for the first one, I'm not sure it is still published as I haven't seen a copy in the last few years, and it wasn't very informative.

OM Gregg was an active DXer in his high school days and then dropped out of radio. After an 18-year lapse, he returned to Amateur Radio in 1979. He has only been back into the hobby for two years! This makes him qualified to write a book on DX? I have been writing this column longer than that, and I still don't think I am qualified to put together a book on the subject.

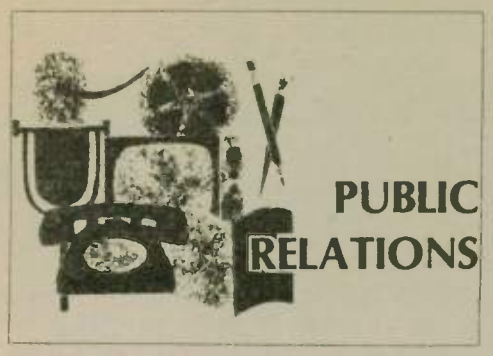
Several attempts are made to blast away at list operations. Frankly, I tend to agree with him on that. But again, you are paying good money to read his opinions where it is no guide at all.

Now we come to DX Contests. More drivel. The author wastes several pages on giving the rules for the DX contest sponsored by CQ Magazine. Rules do change, and a good example of this is that he lists the FORMER rules for the ARRL DX Competition. These rules are always available in the several Amateur Radio monthly publications, (QST, CQ, 73, etc.). He then lists other DX contests in order by the month. His All Asia Contest is listed in the wrong month, (it's in June and August). The European DX Contest is completely overlooked, plus that of the USSR CQ-M Contest in May. All this information is in your favorite monthly, and is up-to-date.

Stuart Gregg spends much space attempting to convince you to run the legal limit with a good beam antenna. Well, perhaps. But I don't think that's what DX is all about. Sure, the power is going to help in the competition with the "big guns." But there are sure a lot of DXers who enjoy DXing with low power. My own DXCC total at this writing is 258 (249 confirmed), and I don't have an amplifier and never have had one.

The Art of QSLing. Here we go again with more drivel. He goes into great lengths on the design of the QSL card — a nifty card to catch the eye and guarantee a return QSL card in exchange. Personally, I don't think it makes any difference what the card looks like as long as it is filled out correctly. A spiffy QSL card mailed direct to a rare DX station without including the SAE with IRCs (or green stamps) is not going to help you get a card in return. Sure, the pretty QSL cards are attractive and most DXers enjoy receiving them. I do use such a card — the club design of the Northern California DX Club, a full color shot of the Golden Gate Bridge with San Francisco in the background. What the author did fail to do in the section was devote more space to tips on completing the information on the card. I failed to notice anything about using the proper time. How many of you DXers make the boo-boo of using your local time in lieu of UTC?

DX Awards — 36 pages of it! He lists several good awards here but fails to mention Worldradio's Worked 100 Nations Award. We are outdone by such awards as the Brazilian YL Award and the Worked All Licenses Award. The JARL awards program is also left out. As the Japanese amateurs are many and all seem to QSL, this should make working at their awards program easy, interesting and fun. □



North Carolina proclamation

WHEREAS, operators in the Radio Amateur Service are licensed by the federal government to operate in the "public interest, convenience and necessity" and take pride in serving their communities and nation while pursuing a satisfying hobby; and

WHEREAS, the Radio Amateur Service provides a continuously ready source of technically oriented personnel for business and industry, the ham population being a good indicator of the technical and educational level of an area; and

WHEREAS, radio amateurs promote international goodwill through free and informal communication with hams throughout the world; and

WHEREAS, North Carolina benefits from the activities of its practicing radio amateurs and it is fitting to recognize their contributions to our state;

THEREFORE, I proclaim 22-28 June 1981,

AMATEUR RADIO WEEK IN NORTH CAROLINA

and commend this observance to our citizens.

By the Governor:
James B. Hunt, Jr.

Note: Through the efforts of Marie Presler, WA4YMM, Fayetteville, NC Governor Hunt proclaimed 22-28 June 1981 as Amateur Radio Week in North Carolina. Many thanks to Marie for another job well done. (Jim Mulhall, WA4KBI, CFARS News Editor)

Eureka

Mayor Fred Moore of Eureka, California signed a proclamation declaring the week of 22-28 June "Amateur Radio Week". In the **Times-Standard** for Saturday, 20 June 1981, there was a three-column photo of the mayor signing the proclamation observed by Cecilia Edwards, KA6ERE, president of the Humboldt Amateur Radio Club; Bob Roblin, W6RNL, vice president; Jim Myers, WA6ICB; and Jerry Chappelle, K6TYK. This proclamation was in connection with Field Day.

Radio Amateur Information & News, CA

Please send **NEWS** and **PICTURES** to *Worldradio*

New Jersey proclamation

WHEREAS, an annual test of emergency communications from field locations will be conducted 27 and 28 June 1981; and

WHEREAS, this annual test includes Field Day exercises organized by the American Relay League, Inc.; and

WHEREAS, the Englewood Amateur Radio Association, Inc. has brought honor to its members and the City of Englewood by placing first in its transmitter category throughout the United States and Canada during the Field Day exercises in 17 of the last 18 years; and

WHEREAS, Englewood's results in the 1972 Field Day exercises surpassed all previous records since the start of field day activities in 1933;

NOW, THEREFORE, I, Sondra J. Greenberg, Mayor of the City of Englewood, do hereby proclaim the week of 21 June to 27 June 1981, as

Englewood Amateur Radio Association Week

and I encourage the recognition of the essential emergency services, as well as the year-round services, which are provided by Amateur Radio operators in Englewood.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the City of Englewood to be affixed this 12th day of June, 1981. □

Junior Olympics via Amateur Radio

For the past four years, SNARS has provided communications for the Reno area Junior Olympics. This year, seven brave amateurs kept 500 contestants running, jumping and throwing on time and in the right place. This is not even counting the spectators, who were kept from getting in front of the discus, javelin and runners!

Two-meter handies kept up with the action and the base at the booth did the rest. Participating were: Don Meier, W7CR; Bill Oberding, N7CMW; Paul Darrah, WB7EIX; Cindy Darrah, WB7EIY; Bob Knoll, WB7RJA; and last, but running the show, Neil Dresbach, WA7KCD. □

A Junior Olympics runner breaks through the finish line.

Alaskan missionary 'keeps in touch'

Submitted by Ian MacDonald, W1GMC

Brother George Feltes, S.J., KL7EN is a Jesuit missionary in Northern Alaska — this year marks his 50th anniversary there. At 82 years of age, his average day consists of working among his four sheds and his radio shack, oiling a tractor, boxing a supply of can openers or some precious tools, rebuilding an engine or some broken bicycles for one of the missions. His mild manner, quiet smile and his enthusiasm for anything Alaskan befit his role as manager of a supply depot for the Jesuit Fathers and Brothers out in the bush. He says, quite simply, "I do their shopping and repair work for them."

Brother Feltes' interest in Amateur Radio began during the years he was stationed at St. Mary's, where the Jesuit Fathers and the Ursuline Nuns staffed a boarding school for native Eskimo youngsters. The mission was located almost at the mouth of the Yukon River.

After studying books and practicing on a very small set, Brother Feltes managed to pass the exams required for a license. Since then, he has been a most enthusiastic Amateur Radio operator, and spends two or three hours each evening and most Sunday afternoons talking with other amateurs throughout the world.

Since several of the Fathers in the missions are also Amateur Radio operators, this hobby helps Brother Feltes keep in touch with the various missions. He even has frequent conversations with a Bishop in one of the Western states, who is also an amateur.

Other accomplishments of Brother Feltes include being the first Jesuit to fly a plane, the first man to fly a diesel plane, and the first to make a trans-continental diesel flight across the United States.

—Information excerpted from The Alaskan Shepherd □

'Elmers' for handicapped

Vince Luciani, K2VJ

If any of your club's current handicapped members were just starting out in the hobby and had come to you for help, would you take the time to teach them? Sure you would.

And if you were to receive a phone call that a handicapped person — perhaps a total stranger — lived nearby and was interested in joining the hobby, would you take the time to teach that person? Of course you would.

Then if you have already established in your mind that you would make yourself available to give Novice Class instructions to a handicapped person in your area, why not make those valuable resources available through the national office for such services — the HANDI-HAM System?

The HANDI-HAM System is a division of Courage Center, at Golden Valley, Minnesota. Courage Center is a non-profit organization which provides rehabilitation services to people with physical disabilities and speech, hearing and vision impairments. Courage HANDI-HAM System — led by Bruce Humphrys, KØHR — is organized to take the requests of handicapped from around the country and to match them with volunteer instructors ("Elmers").

The obligations for Elmers are minimum, but the impact of what can be done by those of use who still get around is tremendous. You know what Amateur Radio can do for people's lives; think of how much more it can mean to those who are physically handicapped. It brings the world right into their living rooms and turns their lives around for the better.

There is need for volunteer members who will agree to work with the physically handicapped in their area. Commitments are minimum; you do what you can. There is no regimented classroom schedule, should you agree to work with a handicapped student, since it will be quite informal and at your own convenience. And you don't have to be an Extra Class or an engineer to handle the assignment. All you need is the talent by which you achieved your own license to help out with Novice Class studies and the code to 5 wpm. However, a set of code tapes will be made available so you really won't need to teach it yourself; the tapes will do it.

This, then, is a request to those who are able to see the big picture in Amateur Radio, to those who are willing to invest of themselves right up front, where it really counts. Though you may have worked DXCC, WAZ, BPL and achieved a host of awards, not until you help put a handicapped person on the air will your Amateur Radio life be full. It's certainly worth thinking about.

The way you get started is to simply send a letter or radiogram to **Bruce Humphrys, KØHR, Director, Courage HANDI-HAM System, Courage Center, 3915 Golden Valley Road, Golden Valley, MN 55422.** Tell Bruce you are interested in becoming an Elmer for a local handicapped person, and he will take it from there.

As an inducement to getting involved with the HANDI-HAM System I am offering a soft-cover copy of my book — *Amateur Radio, Super Hobby!* — at half price ($5, postpaid) to anyone who starts a one-on-one relationship with a local handicapped through HANDI-HAM, to any handicapped who join HANDI-HAM in the future, and to all those presently in the HANDI-HAM System. **This offer expires 30 October 1981.**

Blind applicants to HANDI-HAM will be able to "read" my book because the Library of Congress plans to put it on talking tapes and in braille. □

Presentation of 50-year certificates to (left to right): Norman Henkel, K6BA; John Pomeroy, K6UQ; presenter Bert Ayers, W6CL (President, S.C. Chapter QCWA) and recipient Robert Daniel, K6EX. *(photo by Moe Joffe, W6PHE)*

A gathering of old-timers

Three "half-century" awards were given at the semi-annual dinner on 2 May by the Southern California Chapter of QCWA, the Quarter Century Wireless Association.

Robert Daniel, K6EX; Norman Henkel, K6BA; and John Pomeroy, K6UQ, received large framed certificates for 50 years of hamming. Thirteen other members qualified but were unable to attend.

Secretary Moe Joffe, W6PHE, recognized Forrest Barr, K6BV, who has held his ticket since 1913. "We're also proud of member Ray Meyers, W6MLZ, for his 70 years of amateur operation and Don Wallace, W6AM, for 69," announced Moe.

"Our chapter, with 365 members, is the largest in the International QCWA," he said, "and remember — we 'gave birth' to four other chapters now flourishing: San Diego, Inland Empire, Central California and the Central California Coast Chapter."

The president, Bert Ayers, W6CL, invited all to participate in the Sunday 9:00 a.m. net conducted on 3917 kHz by Herb Gleed, W6FQ, as well as the CW gathering on 3696 kHz with net control, Norm Henkel, K6BA, at 11:00 a.m.

Several members of a "self-destruct" organization, the Ozone Club, were pointed out. "This remarkable group has special qualifications," he said. "You must have received your first license and operated during the days of Spark Gap with that ozone-producing device! W2CVF is the leader."

A slide-and-sound program, "Vikings for a Week," was presented by Lenore, W6NAZ, and Bob Jensen, W6VGQ.

Amateurs who have held licenses for at least 25 years are invited to join QCWA, headquarters at 1409 Cooper Drive, Irving, TX 75061. Harry Gartsman, W6ATC is president. □

HIGHLIGHTS

Bill Grenfell, W4GF

The Amateur Radio operator licensee total was 381,699 at the end of May. 77,469 were Novice Class licensees; 69,403 were Technician Class; 121,095 General Class; 86,494 Advanced Class; and 27,238 were Extra Class. At the same time, there were 3352 current Club station licenses; 286 Military Recreation station licenses; 613 RACES; and 3075 Secondary station licenses.

•

New commercial First and Second Class Radiotelephone operator licenses will not be issued, nor will they be renewed as such, probably effective in September or October of this year. The First is no longer required for the operation and maintenance of broadcast stations (only a Restricted Permit is required). A new license called a General Radiotelephone Operator License will be issued to holders of 'phone First and Second Class licenses as a substitute upon application at renewal time. However, until the time the new license forms are available (possibly as early as September), First and Second Class licenses may be renewed as such, if they are in the last year of the license term, or if they are in the one-year grace period after the expiration date. Also, until the new license is available, examinations will be given and licenses issued for the Second Class certificates. Reference by FCC to operator licenses does include Restricted Permits.

•

The 160-meter band increased power limits which became effective 10 June, are as follows: 1000 watts DC plate power input may be used in all states and territories between 1800 and 1900 kHz. In the following states, the respective day/night DC power input limits in watts, between 1900 and 2000 kHz are:

States	1900-1925 1975-2000	1925-1975
ME, MA, NH, RI	100/25	0
CT, DE, MD, NJ	200/50	0
NY, PA, VT	200/50	0
KY, NC, OH, SC	500/100	0
TN, VA, WV	500/100	0
FL, GA, IL	500/100	100/25
IN, MI, WI	500/100	100/25
AL, AR, IA	1000/200	200/50
MN, MS, MO	1000/200	200/50
Territories and remaining states	(1900-2000 kHz (1000W day 200W night	

The permitted emissions limitation to A1 and A3 remains in effect throughout the entire band.

•

Spread spectrum and other wideband modulation techniques got a boost from FCC in their 30 June 1981 meeting. Approved were:

1) A Notice of Inquiry to explore the merits of authorizing wideband modulation techniques; to examine the Radio Services which might benefit therefrom and to examine the technical characteristics of wideband signals.

2) A Notice of Proposed Rule Making to authorize spread spectrum modulation in the Amateur Radio Service (Parts 2 and 97).

3) A Notice of Proposed Rule Making to authorize inland expansion of (shared) operation in the 420-450 MHz band for non-government radiolocation use including use of spread spectrum technology.

Although the text of each item was not available at the time this was written, a verbal description was given at the meeting. Chairman Mark Fowler said he thought this would heighten the amateur's interest in their experiments. Commissioner Quello asked if the amateurs could be properly policed and identified. Field Operations Bureau Chief McKinney said he didn't have equipment suitable for monitoring spread spectrum emissions and that they wouldn't know where to look for the transmission of station identifications. He also observed that with regular techniques and emissions, amateurs have the most compliant Radio Service, but felt the peer pressure to observe the rules would not be present when spread techniques were being used. Commissioner Lee indicated his admiration of the amateurs, his belief that they probably cost less per kilowatt to regulate of any of the Radio Services, and that they were always anxious to correct anything that might go wrong.

The Notice to amend Part 97 would limit the use of spread spectrum techniques to Advanced and Extra Class amateur operators, and to the 50, 144 and 220 MHz amateur bands.

•

FCC proposes changes in the sharing and use of the 220-225 and 420-450 MHz bands by the Amateur Radio Service. A new band at 902-928 MHz is proposed.

FCC's Second Notice of Inquiry (NOI) in General Docket No. 80-739, released 15 June, proposes the United States' frequency allocations which would implement the 1979 World Administrative Radio Conference (WARC) allocations from 28 MHz through 1215 MHz. In the 220-225 MHz the WARC added the Fixed and Mobile Services, sharing on a primary (equal) basis with the Amateur Radio Service. This adds the flexibility to provide for a possible allocation of a piece of the band to other Radio Services in the United States. However, FCC proposes to continue to accommodate national defense radar systems in the band, under the extension of the primary status of radiolocation to 1 January 1890 as provided in footnote 3608AA of the allocation table.

While WARC '79 deleted the Amateur Radio Service from the table of allocations at 420-430 MHz and 440-450 MHz, it also adopted footnote 3640A providing amateur secondary use therein in the United States, Australia, Jamaica and the Philippines. FCC proposes to adopt that footnote but prohibit amateur use of 420-430 near the Canadian border (north of line A, described in Section 1.955 of FCC Rules) in order to protect Canadian fixed and mobile services. 430-440 MHz will remain available as at present, with the Amateur Service sharing on a secondary basis with the Radiolocation Service.

The 902-928 MHz band was allocated by WARC to Amateur, Fixed, Mobile and Radiolocation Services in this region of the world. FCC proposes that the Amateur Service share this band on a secondary basis with the Radiolocation Service. The amateur use is on the condition there will be no operation between 39°N to 42°N and 103°W to 108°W. This area includes Denver and Aspen, Colorado; Rawlins, Wyoming; and Scotts Bluff, Nebraska. It appears that the 28, 50 and 144 MHz bands will be unaffected by this NOI. The comments were required to be filed with FCC by 15 July and reply comments by 30 July! □

One jammer's reason

Bob McGarvey, WB3EVF

You've probably wondered what makes a jammer a jammer. One explanation is that the offender wants attention. Another is that he has a personal grievance against someone on the frequency he is jamming. Well, I came across another type and another explanation.

The jammer in question is in South Jersey and has a General Class license. His specialty is calling CQ as close to an active net as he can get without being on the identical frequency. His territory is the General Class segment of whichever band he happens to select for his attention.

His reason? He resents all the Advanced and Extra licensees who use the nets in the General portions. It's as simple as that.

important notice...

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Tell us of your interests and what type of news, articles, features and columns you would like to see. Tell us of your activities. The more we know about you, the better we can tailor this publication to serve you.

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

If they would stay away from what he regards as his licensed preserves, he might be happy. But then he'd have to find himself a new cause.
— *The Home News* ☐

CW *is* valuable

Alice Johnston Hisamoto, KL7HCT — honor student from the University of Alaska — is an exchange student this summer, attending Magoya Gakunin University in Japan.

Alice speaks via 21.270 MHz SSB phone every weekend to her parents, sisters and brothers. For two weekends recently when the propagation conditions were bad, the only way she could communicate was by CW. She then realized the value of code for QSO. When she was 8 years old, Alice copied CW at 25 to 30 wpm, but never realized the value until now. Moral: Learn CW.

Alice's early skill with CW may have something to do with the fact that both her parents are amateurs — Robert, KL7AM and Louisa, KL7HCO. Mr. Hisamoto has been in Amateur Radio for 64 years, and was recently elected president of the Alaska Chapter of the Quarter Century Wireless Association.

Besides Alice, Mr. and Mrs. Hisamoto have six children with amateur licenses, and four more coming up.

—Short Circuit, Fairbanks, AK ☐

Amateur Radio call signs

Amateur Radio operators have continually expressed an interest in what are the latest call signs which have been systematically assigned. To further our policy of making the new call sign assignment system public a list of the last call sign issued, by group, for each radio district and non-contiguous area is published. The following is a list of the last call signs assigned as of 1 June 1981.

Radio District	Group A	Group B	Group C	Group D
0	KK0M	KC0CY	N0CTB	KA0LLS
1	KE1B	KA1SH	N1BOV	KA1HGU
2	KN2F	KC2CP	N2CQI	KA2MVV
3	KD3Z	KB3RS	N3CFH	KA3HOO
4	NN4W	KD4NO	N4EZE	KA4UXL
5	KS5B	KC5SB	N5DMO	KA5LTX
6	NC6A	KE6AT	N6EQO	KA6PZM
7	KJ7H	KC7CK	N7CVH	KA7KSM
8	KN8X	KC8IE	N8CWO	KA8NFI
9	KG9K	KC9BK	N9CJA	KA9LEJ
N. Mariana Is.	AH0A	AH0AA	KH0AC	WH0AAE
Guam	AH2L	AH2AK	KH2AQ	WH2ACW
Johnston Is.			KH3AB	WH3AAB
Midway Is.		AH4AA	KH4AC	WH4AAF
Hawaii	NH6K	AH6CY	KH6NN	WH6APT
Amer. Samoa	AH8A	AH8AA		WH8AAL
Wake Wilkes Peale				WH9AAA
Alaska	NL7W	AL7CQ	KL7OF	WL7AQW
Virgin Is.	KP2B	KP2AF	NP2AJ	WP2ACO
Puerto Rico	NP4F	KP4CZ	NP4CP	WP4BWK

Converter IRL – FSK 500, FSK 1000 KANTRONICS – Field Day 2, Mini-Reader CURTIS – KB4900

MPI88G, ST6000, ST5000 ROBOT – 800 Superterminal, SSTV Scan

MACROTRONICS – M80, M83, Terminall, M800, M830, Ritty Riter, CA650, TA650, A6500, FSD1, M65, M650, CM650, TM650,

DS3100ASR, CT2100, DS2050KSR, ESM914, TR930,

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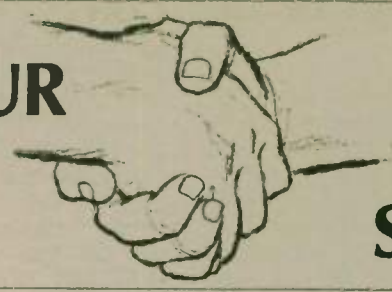


Counties prepare to battle fires

EMERGENCIES! We are all aware of the fact that when a disaster occurs or an emergency arises, amateurs are always involved in passing traffic, or some form of assistance to local agencies.

Some of our members belong to other groups that are primarily set up for emergencies.

One of the most important things is not only that the agencies know the potential value of Amateur Radio, but that the public is kept informed of what we can do.

The following is an excerpt from a recent article that appeared in the Union Democrat of Sonora, California. With the way the fire season is starting this year, these amateurs could become well experienced.

"An excellent success" is how coordinator Gene Peterson has characterized fire training exercises near Jamestown.

Almost 800 inmates and California Conservation Corpsmen participated in the first annual exercise, and Peterson said he thinks crews will be more efficient on fires this summer as a result.

"Most of the crew members are inexperienced, and they have often ended up doing their training on the first two or three fires of the season," he said.

The exercise also was an opportunity for Amateur Radio operators in Calaveras and Tuolumne Counties to coordinate their emergency communications network with the State Department of Forestry's.

Members of the Tuolumne Amateur Radio Society (TARS) and Calaveras Amateur Radio Society (CARS) used their equipment to augment the Department of Forestry's radio network.

During a big fire or other disaster, the ham network would increase the State Department of Forestry's communications ability tenfold, according to TARS emergency coordinator, Cliff Wilton.

In Jamestown, the state used the volunteers to order equipment like food and clothing. That freed the state's two radio channels to be used exclusively for moving people on the "fireline."

About 16 TARS members volunteered either to man their radios at home or to spend four hours at the Jamestown site.

Messages were relayed from Jamestown to the home operators, who then transmitted them to the appropriate receiver.

"The system worked effectively," said State Forestry's unit ranger, Fred Frank. "But of course we didn't have a heavy need for it during the practice and didn't have a chance to shake it down."

The state has never used the volunteer amateurs during a real emergency, but Frank said they could be called out during a big fire this summer.

— River City ARCS, CA □

Three-way cooperation

Lenore Jensen, W6NAZ

Helpful cooperation between Red Cross, RACES and ARES was neatly handled 18 June in Los Angeles when 150 residents of a burning apartment complex were suddenly homeless.

A shelter was quickly established by the Red Cross at a school in the Compton area, but no telephone was available. The need was immediate to communicate with the "downtown LA" headquarters for supplies, message handling and the like. As the victims were low-income, the need was for "everything."

Bill Holliday, WB6EDE, Chapter Communications Chairman, was alerted. In turn, he reached the ARES Emergency Coordinator of Long Beach -- Ron Boan, AK6Y, and the District Coordinator for the San Fernando Valley Red Cross — Jerry Fire, WB6YEQ.

It was a weekday and the usual problem of locating available amateurs was present, but Ron secured the services of Jim Michaels, W6PGM, and Bob Shepperd, KA6CSS, for the shelter situation while Bob Witters, K6VGA, volunteered to handle incoming traffic at the downtown position.

RACES of Los Angeles County offered its repeater, K6CPT, on 145.3 MHz. Chuck Arnold, WD6BX served as net control and relay from his own base station while many others courteously stood by.

As the hours rolled on, a search for another ARES operator was conducted by Jim Fortney, K6IYK, an ARES Emergency Coordinator who located Bob Burns, N6ZH, available to take over at the headquarters location. Rose Martin, WD6E[illegible]M also helped out during this emergency.

The 10-hour session went smoothly, thanks to cooperation on all sides. □

Westlink dedicated to service

Bill Pasternak, WA6ITF

The Westlink Radio Network is a non-profit organization designed to serve the needs of today's Amateur Radio operator. Our prime purpose is that of producing a weekly Amateur Radio news program of 10 minutes duration. It is available free to repeater stations, bulletin stations and visually handicapped Amateur Radio operators by calling (213) 465-5550, anytime from 10:00 p.m. PST Sunday through 10:00 p.m. PST the following Saturday.

Judge Stanley Phillips hands the Special Achievement Award to Bill Orenstein, KH6IAF, (center), and Bill Pasternak, WA6ITF — both of whom have provided the Westlink Amateur Radio News as a free service to all amateurs.

Also, Westlink has available a free lending library of VHS format video-cassettes of topics either related to, or of interest to, the Amateur Radio service. These video-cassettes are available on a first-come-first-served basis. For a copy of our latest list, please send an SASE.

Westlink is a totally volunteer operation — there are no paid employees. We operate from studio space in Hollywood, California. Most of our interviews are conducted via telephone, and we utilize modern spot news production technique in the format of the weekly QST. We use either Shure, Sony, Electro-Voice or Senheisser microphones for audio on remote video production. Use of the video field recording equipment is donated to Westlink by Canyon Video Services.

The Westlink "newsteam" is made up of professionals in the field of electronic journalism, or in other specialized areas of endeavor. Each member is a volunteer, donating his or her talent and time to make possible the weekly newscast. Our Los Angeles production staff includes: Alan Kaul, W6RCL; Bill Orenstein, KH6IAF; Lenore Jensen, W6NAZ; Dr. Norman Chalfin, K6PGX; Joseph Merdler, N6AHU; Burt Hicks, WB6MQV; Bill Holladay, WB6EDE; and yours truly.

The following people function as "out-of-town correspondents": Pat Corrigan, KH6DD and Mike Michaels, WA8ARZ/KH6 (Honolulu) Pacific Islands; Don Holloway, WB7ADV/4 Washington, D.C.; Mitchel Wolfson, DJ0QN (Munich, Germany) Europe. In addition, we are honored to have Joe Schroeder, W9JUV, editor of *H.R. Report* as an "honorary" member of our newsteam.

All services provided by the Westlink Radio Network are free. Funding comes from Bill Orenstein, KH6IAF and myself. We do not solicit contributions, but welcome any that are made. Our minimal operating cost is in excess of $500 monthly. Not much when you consider that the networks spend thousands of times that

Westlink

(*continued from page 13*)

each week toward the same type of production.

Anyone wishing to inform us of a possible story, can call (805) 251-7180 *anytime*. If nobody is home, leave a message on the machine and we will call you back.

KA6ITF and KH6IAF were honored with a Special Achievement Award at the Dayton Hamvention on Saturday, 25 April 1981. Professor Eric George Shalkauser, W9CI of Washington, Illinois received the other award. He is a Professor Emeritus in electronics and founder of RME Corporation.

The Westlink Service was started in September 1977 by Jim Hendershot, WA6VQP. KA6ITF took over the production in June 1979, then purchased it in October, as Jim was moving. Until very recently, he and KH6IAF were paying 90 percent of Westlink's operating costs. Of late, donations have been covering half the expenses. Contributed funds are handled by K6PGX.

KA6ITF assisted Dave Bell, W6AQ in making the film "The World of Amateur Radio," has written a book on repeaters and is extremely enthusiastic about Amateur Radio. He also writes a column for 73.

KH6IAF is an engineer at NBC in Burbank, is usually involved with recording for NBC radio news and with Roy Neal, K6DUE, network newsman and correspondent. □

No emergencies, no Amateur Radio?

Art Smith, W6INI

I often puzzle about the motives that some of my fellow amateurs have in joining the ARES. Judging from the response, or lack of response, to requests for participation in public service events, Red Flag Alerts, Emergency Medical Service drills, etc., I am inclined to believe many of them are interested merely in getting on a roll call list for a net, and getting "checked in." There must be something magic in hearing your call sign called, in alphabetical order, by a net control station! Some even go so far as to get checked in by proxy, since they are busy with something else at net time. I am in the dark as to what benefit comes of this.

I also wonder about those who say they'd like to join ARES but then fail to fill out and return the registration form. Needless to say, **you are not a member** until you register. The information contained on the registration form is vital for the Emergency Coordinators to do their job effectively. Perhaps we are lucky, though, in that those who fail to file are probably not the caliber of operator who will perform satisfactorily in an emergency. Could that be?

Why does Amateur Radio exist in the United States? There should be little doubt in our minds that it is the **emergency communications role** as stated in 97.1 (a) of the FCC regulations. Over the years, FCC commissioners and high-ranking staff members have addressed many Amateur Radio conventions. Without exception, they have stressed that the justification for the existence of the Amateur Service is to serve the public in times of emergency. In a 1978 speech by former Commissioner Margita White, she stated, "-----at no time has the public's perception of your contributions to serving the public interest been more important, that the public recognize you are enhancing 'the value of the Amateur Service to the public as a voluntary, noncommercial communications service, particularly with respect to providing emergency communications.' ----now is not the time to pat yourselves on the back, but to pursue even greater efforts to increase the participation of amateurs in these emergency services and to ensure that your networks can adequately respond to the volume of traffic in actual emergencies." (QST, Dec. 78, pages 58, 59.) (NOTE: Commissioner White was twice the lone dissenter to the FCC's ban on 10-meter power amplifiers.)

So, are you one of the 19 out of 20 licensed amateurs who are patting yourselves on the back, or are you one of the 1 out of 20 who are involved in public service/emergency communications through ARES membership?

The success of Amateur Radio at WARC-79 was due solely to its professed role in emergency communications. Will we be so lucky in the future with only 5 percent of the amateurs heeding the call? Over the next few years, there will be several "specialized" WARCs and continuing challenges to our frequencies. Also, there is strong sentiment among the FCC commissioners and staff to mold the Amateur Service in the image of CB. Only if our charter to provide emergency communications is strongly supported can we hope to ward off incursions. Think it over!

Being an eternal optimist, I can see the 19 of 20 who are DXers, contesters, builders and experimenters, rag-chewers, etc., allocating a reasonable percentage of their time and interest to participation in emergency preparedness and related activities by strengthening the ARES.

A well-organized and well-supported ARES is vital to meet the potential needs of our community when that big shake surprises us some day. Only by becoming involved NOW can we have hopes of being ready.

All of us have been getti[illegible] lots of enjoyment **out of** Amateur Ra[illegible]. Why not **put something back into it?**

—*Squelch Tales, San Diego, C* □

If your club is involved in any en[illegible]ency situations, send the story and [illegible]ctures to WORLDRADIO.

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

Red Cross gets help

Joe Heyde, WB7TNH

On Sunday, 24 May, the Red Cross requested assistance with mobile communications from Amateur Radio operators in Great Falls, Montana. About an hour later, five mobiles and one base station were ready to begin operations. Each mobile operator, besides providing transportation and a mobile radio, carried one or two Red Cross personnel who did the flood assessment damage reporting. The mobile operators involved were: Don Heide, WB7ETT; Chris Courtnage, KA7DWS; Carl Snyder, W7RLL; Audrey Beckstrom, KA7DPF; and Walter Partlow, W7FGZ. W7FGZ rode with the emergency water supply truck to the Neihart area, providing communications along that route. The other mobiles covered the areas from Great Falls to Craig along both sides of the Missouri River, and from Great Falls to Augusta along the Sun River. This includes all tributaries and side roads between these points.

On Monday, 25 May, radio amateurs were again requested by the Red Cross for mobile communications. This time it was in the Belt-Armington area. About the same setup was in force, except that a Command Post was set up in St. Mark's church in Belt with a portable communications link, while others were mobile with Red Cross teams throughout the Belt area.

Amateurs involved this time were: Bryan Martin, N7CFH; Jason Martin, KA7HFC; Don Heide, WB7ETT; Gary Crowder, KA7HFM; Audrey Beckstrom, KA7DPF; and Shirley Smith, KA7DPA. KA7DPA manned the Command Post radio. N7CFH and KA7HFC alternated as messengers and also went with Red Cross assessors with portable radios.

On Sunday, the liaison communications between the mobiles and the Red Cross was at the amateur station of Joe WB7TNH, while on Monday, WB7TNH operated from a portable radio set up in the Red Cross Chapter office. All communications were via the Great Falls Area Amateur Radio Club 2-meter repeater on 146.13/73 MHz, and everything worked out fine. There was no loss of communications and no breakdowns.

Also, Phil Brod, K7PWW/Aero. mobile, was in the Belt area. He reported in and did a fly-over of the Smith River areas, giving an excellent picture of the flooding for the Command Post evaluation.

The Great Falls Chapter of the American Red Cross wishes to extend a hearty THANK YOU to the local radio amateurs who helped them with all communications. Their job was well done and greaty appreciated.

Simultaneously, three Red Cross volunteers doing flood assessment and working with the radio amateurs were Doug Ulsh, Chuck Grady and Eric Watson. They are also members of the Big Sky REACT Team, and kept their communications with each other via their CB radio channels.

To all of you: Congratulations on a fine job. WELL DONE! □

'EARS' in the thick of it

Lenore Jensen, W6NAZ

A highly dramatic hostage situation developed on 9 May when a group of volunteer amateurs (dubbed 'EARS') provided emergency surveillance communication for the Hollywood Police Department.

At 11:00 p.m., four were stationed with binoculars on the roof of the 24-story Holiday Inn. They were in communication with other amateurs riding in patrol cars and also with five other amateurs in similar positions suitable for observing possible criminal activity. Should they see any, they would relay to the police cars in the vicinity.

Suddenly, two floors below, a shot rang out. According to Capt. Keith Bushey, KA6KJS, the police were alerted and went into action.

As a SWAT team and other officers converged on the hotel, the amateurs were transferred to the ground floor where they could "quicken the logistic arrangements." Many hotel guests were evacuated from their rooms. The media was arriving and police were extremely busy.

A man had taken a 17-year-old girl hostage in his room and was demanding to see a priest, and also that food should be brought.

Later, he ordered the girl to reach out into the hall for the food, at which point she was rescued by an officer. This was as the man pointed a rifle at the police followed by several shots from inside the room, after he withdrew. An exchange of gunfire occurred.

For hours it was a standoff. At last another shot was heard. After tear gas, officers entered to find the man had shot himself. (It was learned he had been depressed and suffered from multiple sclerosis.)

Oddly, early in the evening the police had given a press conference to introduce the amateurs to the role of citizens in crime prevention. Some late TV newscasts carried the story. No one then realized that wit[illegible] a couple of hours, the ham team would perform an important service. The next day, more telecasts told the story, crediting the Amateur Radio assistance.

The Los Angeles Police Department has been in the forefront of interest in the use of volunteer amateurs to assist the city in emergency situations.

Civil Defense officials have been conducting meetings with the ARES leaders.

Amateurs involved in the May 9 activity were Bernie Abramson, W6PJX; Bob Burns, N6ZH; Richard Corvi, N6CMQ; Ed Clark, WB6VWZ (a police officer); Leonard Drayton, WA6LAU; Norm Friedman, W6ORD; Gerry Gross, WA6POZ; Joe Merdler, N6AHU; Jane O'Hara, KA6LCY; Bill Sherwood, W6FBY; Rene Tidwell, WA6VAW (a reserve police officer); Al Westertin from Sweden, who had just passed his U.S. Extra exam, and Archie Willis, W6LPJ.

Fire Commissioner Jeff Stern, WA6LWV, has been active in seeking opportunities for amateurs to prove their value to civic leaders and the community.

Meanwhile, the police are finding valuable the service of ham volunteers in deterring crime in specific areas, where the high frequency of serious criminal activities reach true emergency situations.

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

Repeaters active during Walk-a-thon

Submitted by Dwight Wygant, KD6JN

On 26 April 1981, 21 members from different organizations such as the Antelope Valley Amateur Radio Club, District 11 RACES, and ARES, gave their time (seven to eight hours each) in public service during the March of Dimes "Walk America" Walk-a-thon in Lancaster, California.

Dozens of health and welfare message phone calls were made through two Antelope Valley Amateur Radio 2-meter repeaters that were linked together by the owner of the 144.800/145.200 — Kit Clover, W9TTT in Juniper Hills — to the 147.84/147.24 repeater, owned by Gary Barr, WA6TWT in Lancaster, giving amateurs complete access to fringe areas of the Antelope Valley where hand-helds could be used, making the Walk-a-thon a complete success.

I wish to personally thank every amateur who participated that day. □

USQS

Domestic QSL Service

Laryl Myers, N7BMY

As you have been reading in **Worldradio** since last October, USQS is a QSL bureau for U.S. and Canadian amateurs. Unlike the DX bureaus, we handle QSLs going TO Canadian and U.S. amateurs. We are similar in concept to the DX bureaus in that other amateurs send us your QSLs, and we keep them in files awaiting your SASE. Like the DX bureaus, we have a small handling charge to those sending the cards, 25¢ per 20 QSLs.

Regarding SASEs, we do request you let us know how long to hold your SASE. If you put a dollar's worth of postage on your SASE, we hate to send it to you with one or two cards! We have many customers who request we hold their SASEs for 10, 15, etc. cards. They are actively requesting people QSL via USQS and the number of cards they receive shows it. It is very easy to request your contacts QSL through us. Simply say QSL via N7BMY, or QSL via USQS.

If you are a member of a club, please send us a club roster with one SASE for the entire club. We will not use the roster for ANYTHING but a list of which QSLs go in the club SASE. Bring this idea up to your club and "talk" someone into being your club's "QSL manager" and be responsible for bringing club members' cards to the meetings.

To use the service, send us QSLs going to Canadian or U.S. amateurs. BE SURE to print plainly! All we need on a QSL is a call: we don't need an address. Sort your cards into call areas, alphabetically if you wish. Send us three SASEs to claim any cards you may have on file, with minimum legal postage on the envelopes! (We do not charge for handling SASEs.) Remit 25¢ per 20 QSLs you send us. DX stations may remit a comparable value in IRCs. Tell your contacts to QSL via USQS or N7BMY. Our address is: **USQS, P.O. Box 814, Mulino, OR 97042.**

The following is a list of QSLs we have received in the last 30 days with no SASEs to claim them. A similar list has been published by **Worldradio** since last October. If you see a friend's call please let him know. We only print calls when cards are currently received, so check past months' lists also!!

Our thanks to all our domestic and DX stations that support USQS. Your comments and suggestions are welcome.

WB1ATK	KA2KOA	VE4AEB	KA4MEB	K4ZHK	KM5X	VE7FCF	WA8IBT	AK9N
N1BDH	KA2KQC	KA4AHL	W4MFE	N5BLK	WB5ZHW	W7FG	KA8IVH	W9NUF
KA1BZS	KA2MEN	WP4BBM	WA4NHB	N5DEE	WH6AOZ	KA7GSS	W8IZE	AB9O
WB1CYW	WA2SBS	KA4BDB	KA4OEC	WA5DXI	WD6BPT	AL7H	WB8JBM	W9OA
W1DNZ	KB2VQ	WB4BEU	WD4ORX	W5EA	KL7IB	KA7IFZ	WB8JBN	K9QAU
KA1DYE	K2WT	N4BRI	KA4PDA	WD5EBM	N6DWB	KA7IPE	KA8JCL	N9RR
N1EE	WB2YOF	KB4CB	KA4PKB	KA5EXC	N6EED	KA7IPE	KA8MLS	K9VK
KA1EVY	KH3AB	N4CX	W4PRW	KK5I	KA6FFO	KB7IV	K8OEK	KJ0B
KA1F	N3BON	NE4F	KA4PSV	KA5IEY	WD6FXW	KA7IYD	KJ8Q	KA0BPN
KC1F	N3CCW	KA4FAS	KA4PVA	KA5IQM	KN6M	KA7JJA	WB8SEN	N0BQV
W1FEF	KA3GBV	WD4GBH	KA4QYK	N5JJ	KH6MD	KA7JQM	WA8TER	N0BSN
KA1FXY	KA3GCU	W4GJO	WD4RIM	WD5JYP	KA6MFY	KA7JYU	N8TN	N0CNU
KA1GBP	KA3GGP	WA4GPM	KA4RVR	KM5K	KA6NY	KA7KIP	N9AAP	KA0DCP
KA1RB	W3GM	KC4HX	KA4SAW	KA5KEW	KA6OOW	AG7M	N9BPT	WD0EWD
W1ZT	KA3HHG	KD4IA	KA4TAG	KA5KNO	WA6OPS	N7RO	K9CAQ	KA0GED
K2BA	N3HI	KA4IXD	KA4TDQ	KA5KXS	KK6P	WA7UEC	KA9CXN	KA0GLO
K2BLA	WA3HTC	WD4JET	K4TF	W5MLK	W6PWH	KL7WIJ	WA9EKA	WD0GTL
AJ2F	WB3LUF	WD4JNJ	WA4TKZ	K5MR	KT6V	VE7ZZZ	WD9FTL	KA0JWO
KA2EGH	VE3MQV	KA4KYM	KA4TUU	K5NW	WB6ZHN	KJ8A	WB9FUH	KA0KLS
KA2FXO	K3NB	AK4L	KA4TWE	KM5R	AA7A	KC8AB	KA9FXD	AB0L
KA2GRT	WA3NGU	NE4L	KA4VBI	W5RBO	KA7APJ	KA8BLO	KA9GNG	KA0LDO
KA2HSY	N3RG	KA4LIA	K4VCQ	K5RC	KA7BEX	N8BYK	AI9J	K0RWL
KD2I	NN3SI	KA4LRD	N4WI	WA5SOG	N7BRX	KC8C	KA9KNF	WB0SSC
KB2JM	N4AAA	AA4M	K4WOS	W5SYH	N7BW	KA8DAL	K9MFI	K0VBU
KA2KFD	WB4ADA	KX4M	N4WW	KG5U	KA7DLX	K8GL	KB9MR	KE0Y

At last! The "King of All-Night Radio," talk show host Ray Briem, has finally received his long-wished-for ham call, KA6QGE. And he's given Amateur Radio a world of free publicity as he studied — even sharing his battle with code with his huge KABC radio audience.

"All these years in broadcasting," he says, "it seemed I was surrounded by Amateur Radio operators and I fervently wanted a ticket, too. But the bugaboo of CW always turned me away."

Well, he finally got around to it — and to his surprise, CW wasn't such a terror after all.

Amateurs would phone in to encourage him. "Civilian" listeners would ask why he was so enamored with Amateur Radio. Ray even devoted several five-hour sessions to the subject with guests such as Bruce Alan Johnson, WA1ZQP, Bill Ellis, WB6USB, or the writer.

But his audiences during the past 13 years were well acquainted with Ray's fascination for short wave *listening.* (His home is well sprinkled with receivers.) His deft recordings of BBC News (the best, he insists), Radio Moscow's frustrating propaganda, and other newscasts from countries all over the world have been included on his programs. Also, with an apparently unlimited account at the phone company, he often calls officials and commentators (such as USSR's Vladimir Pozner) for details on major breaking stories, anywhere on the globe . . . giving his listeners rare opportunities.

His feature called "Challenge Line" allows one of his audience to take a controversial position against anyone who wishes to debate.

Particularly remembered from the Iranian hostage months were his spirited arguments with certain students who could call in to rage against the United States. Ray's factual responses created great listener interest.

Personalities promoting various causes are always anxious to be Ray's in-studio guests. In the book, *I'm Mad as Hell,*

Ray Briem, KA6QGE ***(Photo by Bob Jensen, W6VGQ)***

Howard Jarvis of Proposition 13 fame writes, "The Ray Briem Show was the biggest thing we had going for us over the years. He's the most knowledgeable broadcaster about taxes!"

Another cause brought Ray special awards and commendation. When budget cuts threatened to deprive servicemen in isolated outposts and Navy ships of news and sports programs from AFRTS (American Forces Radio and Television Service), he shared his indignation with his audiences. Probably 50 congressmen heard from the citizenry, as did the Department of Defense. The response was so great that somehow top Pentagon officials found the money to retain the global shortwave radio service.

He was awarded a plaque in appreciation of his personal recordings of shortwave broadcasts from North Korea at the time of Cmdr. Bucher's "confession" regarding the *USS Pueblo,* plus the George Washington Gold Medal from Valley Forge to honor his patriotism. Other awards attest to his "unusual ability and exceptional talent in the expression of constructive, pro-American thought."

How did he arrive at his present happy position? "As a child, I guess I always wanted to be a radio announcer. My idols were the greats such as Pierre Andre, Del Sharbutt and so many others. Sure, I listened to the programs, but I was far more interested in the announcers. I had a Webcor wire recorder and would practice, imitating them as best I could," he remembers.

He seemed fated to reach his goal. Joining a radio class in high school, Ray was selected to announce a program fed to the local station, KLO of Ogden, Utah.

"Then I started hanging around the station. As most of the men were away in war, there was a need for male voices, so I was given a part-time job at 75 cents an hour."

When he finished high school, they took him on full time.

Enlisting in the service, he was put into a special school for anyone who had ever

worked in press or radio. There, Ray became an Information Specialist with the lucky bonus of six months' on-the-job training at NBC, New York. One couldn't ask for better training!

He was assigned to AFRS (before the T was added) shortwave studios, which had four big transmitters on the East Coast. He found himself handling "remotes" from glamour spots of the Big Bands, such as those of Harry James, Gene Krupa, Tommy Dorsey, and Tex Benecke (yes, the amateur). These broadcasts to our overseas servicemen were important links with home. The two-year stint left Ray a talking encyclopedia of the names and music of those great musicians.

When the Korean War came in 1950, he was sent to the Far East Network out of Tokyo. His "Home Town Mailbag" was extremely popular with our troops in Korea as he read messages from stateside relatives and followed their wishes by dedicating meaningful songs.

When Ray left the service, he wore the stripes of a Master Sergeant, and had been serving as Program Director.

Years with various stations followed: KUTA in Salt Lake City; KING, Seattle (in TV as well as radio); and then to the mecca, Hollywood. At KLAC he was one of the "big five DJs" in 1960.

In show business, it's well known that "nothing stays forever," so it was no surprise when KLAC station switched from music to "talk."

"Kicking and screaming, I was dragged into talk," he laughs — (now). "Surely," I kept saying to myself, "there must be a better way of making a living than sitting here talking to people."

It was then that he realized his problem. "I wasn't happy because I didn't know enough to handle all subjects, so I literally crammed four years of college into one year or so of concentrated study of all subjects."

It worked. Today his home is filled with books on every topic, encyclopedias, files — and his all-important wire service teletype from UPI. He reads seven or eight newspapers each day. "I long for the time when I might leisurely sit down and read a newspaper for enjoyment and forget what I don't need to retain."

But that's not the way it must be. Ray Briem learns facts and memorizes them for instant-replay on the air. And of great importance, he must study every point of view.

"Sure, I use memory techniques. It's impossible to have a file and retrieve something on the spot, on the air. It all must be in the head." So he listens and watches every newscast he can, frequently videotaping for later reference.

Thus, he was ready when a new opportunity turned up. His friend — the late, popular Joe Pyne — did a program on KABC, ending at midnight when the station went off the air to the sound of the "Star Spangled Banner." Joe suggested Ray might want to follow him for the early hours.

But when management was approached, they were told it would be far too expensive to keep engineers and producers all night and also pay the light bill. And, "Who actually listens at those ridiculous hours?"

It turns out that enormous numbers of people are wide awake from midnight to 5:00 a.m. Creative people, writers, entertainers, employees of aircraft factories, computer data personnel, insomniacs are among those night time radio listeners once measured at 86,000 per quarter hour. It's difficult to measure the potential; it is estimated that 700,000 persons work at night in Southern California.

But the compelling fact to management was that a number of devoted sponsors wanted to follow him to the station. So, 13 years later, it's been a happy-ever-after situation with almost standing-room-only for new commercials.

The success of the top-rated show has been its lively format, the airing of present-day problems and the intriguing personality of the host. He's impatient with the ignorant, appreciative of the well-informed.

"Those who get their news only from short radio newscasts or TV news often don't really understand the situation. My mission is to inform, to stimulate, to get the people to *think*," he points out.

"Information is the most important thing of all. Every citizen should take the trouble to know the issues and *then vote!*"

But how can the average citizen really *know?*

"If you really want to be informed about world affairs," he insists, "you must read the **New York Times**, the world's greatest newspaper. Then, to get different shades of opinions in editorials, take others — including local papers. How can you make up your mind with only one paper?

"TV is great for actualities or when they do an in-depth series on one subject. But normally, TV is forced to skim the surface. I really feel I fill in the gaps; we have time to discuss current problems.

"And another thing — how many people actually can tell you names of their legislators — local, state and federal?"

Preparing for his shows takes a good deal of his day with wake-up at noon or 1:00 p.m., but he finds time for flying — a joy shared with his two sons and his two planes, a Tri-pacer and a Comanche.

"It's great working at night!" he explains. "I don't have to drive at the rush hour and stores are always open in the afternoon."

In other words, Ray Briem is completely happy with his job.

Thus, Amateur Radio will be welcome at his hillside home overlooking the Pacific. He's starting on CW, determined to make it a friend. With his flair for communicating, KA6QGE is certain to be a station high on the "most wanted list!" □

Two distinguished communicators: (right) Popular Gary Owens of TV and radio receives a plaque from the ARRL for making a Public Service Announcement which plugs Amateur Radio. Presenter is long-time amateur, Loyd Sigmon, W6LQ, who topped KMPC in Hollywood when the DJ joined that station. He is also known for developing the efficient alert system in Greater Los Angeles called "Sig-alert." Credit for initiating the PSA goes to Jim Davis, KA6IUH and Bill Pasternak, WA6ITF. Lenore Jensen, W6NAZ, wrote it. Gary's honors are many: he has his own star on Hollywood's Walk of Fame; has 10 times been named the Top DJ in the United States by Billboard and the National Gavin Awards; is an Emmy winner; was a regular on *Laugh-in* for six seasons; has been featured on more than 600 network TV shows; has done voice-overs on a thousand animated cartoons and more than 500 commercials per year and written three books! (And he still found time to record a PSA for Amateur Radio!) *Photo by Bob Jensen, W6VGQ*

DON'T FORGET . . .
Include first and last names with call signs.

OFF THE AIR

Alaska wants more FD contacts

I'm writing to you hoping you'll put this letter in your magazine. I get very little response from ARRL.

Here's my gripe about the ARRL Field Day Exercise. Almost all ham clubs in Alaska participate in Field Day. We work just as hard organizing and preparing ourselves for this event as the ham clubs do in the lower-48. However, throughout the event, we get very few contacts. This is due to the fact that an Alaskan contact has the same point value as any other. So, the West Coast heads their beams toward the east, and the East heads their beams toward the west. Consequently, us folks up here are shouting for contacts using amplifiers and everything else trying to reach stations on the side of their beam. We're lucky to get a total of 600 contacts using *all* bands and modes.

What's the solution? Well, since this is mainly a USA (remember, Alaska is not a foreign nation as some folks believe) and Canadian exercise, one idea would be to make an Alaskan contact a multiplier to make it worth the trouble for the lower-48 stations to swing their beams up our way. As this Alaskan ham sees it, it would sort of be a trade-off. About one out of every five QSL cards I receive from the lower-48 states how glad that amateur will be to confirm Alaska for various awards. Well, we up here would be overwhelmed to double our contacts during Field Day.

As I stated earlier, I'm just viewing my frustrations at we have up here. If anything is done about this prior to Field Day 1982, you'll make a lot of WL7's, KL7's, AL7's, and NL7's very, very happy!

With best regards,
JAY MEAD, KL7IEN
Wasilla, Alaska □

Novices need incentive

This letter is in response to the article by Bill Welsh on the petition to redistribute HF operating privileges (see page 3, August Worldradio).

Although I think he is on the right track, I think he overlooked the one place where change is most needed.

There is no incentive at all for a Novice to upgrade to Technician unless he or she is interested in UHF or VHF operation.

Mr. Welsh stated, "It would greatly benefit Novices and Technicians if the bottom 50 kHz of the present DX phone bands were added to the 'Novice bands.'" A more productive solution would be to give CW privileges on these frequencies to Technicians, but not to Novices — thereby giving every Novice an incentive to upgrade. Just one small CW band from 14.10 to 14.15 would be enough to make most Novices want to upgrade.

Also, Mr. Welsh did not mention the three new "WARC bands." These new bands give the FCC an opportunity to put incentive into incentive licensing without taking any existing privileges away from anyone.

Yours truly,
RAY ROTON, N5AUB
Edmond, Oklahoma □

Silent Key

I received a letter from my good friend's wife — Frank Johnstone, XYL of ZS2KS in Port Elizabeth, South Africa. Mrs. Hildegard Johnston informed me that her husband passed away on 25 May 1981, 12:30 p.m. Frank was a well-known amateur, both in South Africa and here in the USA, and a long-time friend of amateurs here in Springfield and the Battle Creek, Michigan area. Frank was well-known to many in several countries for his work in the international banking industry representing South Africa.

Frank had been in many countries over the years, combining his work and his Amateur Radio visits to the USA, Japan and several other countries. He was a very serious amateur in his hobbies, which also included being an avid gardener. After retirement from the banking industry several years ago, he took a job with the bookkeeping department of a large South African bus line, much like our Greyhound or Continental bus lines.

It became necessary for him to retire from the South African bus lines because of ill health, having had diabetes, arthritis, high blood pressure and other complications for many years. After suffering two heart attacks, Frank was taken from his loved ones.

I am sure he will be missed by many who remember he had confirmed South Africa for many thousands over the years. I know it brings me great sadness to tell you of Frank's passing.

73,
KEITH A. STORM, WB8LUI
Springfield, Michigan □

Two requests

I'm attempting to compile a list of CB radios convertible to 10 meters, for possible **Worldradio** publication. Please send name of manufacturer, model number and name. Please note that I don't do conversions; I'm only making a list of sets that are convertible.

Also, around 1964, someone — or a club — published reprints of the "List of Stations — American Radio Relay League, First Edition 1914." Anyone know who did and where I can obtain a copy? I think the 1915 ARRL list was reprinted at the same time.

GARY PAYNE, WD6BJK
Fresno, California □

Instant recall

On 6 July of this year, while in QSO with Henry Warner, W1HRQ of Kennebunkport, Maine, I mentioned that I used to be W1DBU in Groton, Connecticut back in the early '30s. He said, "Wait a minute. That call rings a bell." So he looked through his old QSL cards and found my W1DBU card — and sure enough, we had our last QSO on 2 January 1934, when he used to be W2ENZ in Perth Amboy, New Jersey. I also found his old QSL card here.

How is that for a memory, remembering my old call of 47 years ago?

73
OTTO F. DEDRICK, W6NGK
San Pedro, California □

Tower serves dual purpose

This is the second summer I have shared my tower, or maybe I should say my tower has been commandeered for purposes other than my Amateur Radio activities. Perhaps I have a partner for the outside activities while I tend to the inside radio shack activities! Haven't been able to check on his license, however. My partner is a very saucy mockingbird.

The ropes are one end of the Murch and the 80-meter wire antennas I have attached to the tower. Last summer I had occasion to make adjustments to these and got quite an argument from my friend each time for disturbing his domain. He made passes at me and gave me a great deal of chatter.

This summer has been different. He has accepted me as a part of his domain, and even follows me about the yard. He rewards us all with his song and chatter for hours on end. His acrobatics on the tower and the beams (TA33 and 2-meter) are fascinating to watch.

I have been in Amateur Radio only five years, became a Novice at age 60, and have met and made some very interesting friends, but this is perhaps the most unique one so far. Thought you would like to know about it.

73,
JACK LO MONACO, WA1YYK
Agawam, Massachusetts □

American Radio Relay League

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

Over the years in which I have been an active radio amateur and a member of the American Radio Relay League, I've heard constant reference to "that bunch of New Englanders" at ARRL Headquarters.

In previous articles in this column, I have pointed out that while it is true Headquarters is in New England, the majority of those who work at ARRL are not originally from one of the New England states.

In fact, those people who work at ARRL represent a pretty broad cross-section of the United States, and at least every region of the country is represented at any one time.

I say at any one time because contrary to popular belief, Headquarters personnel change just as the individuals at any company change from time to time. In fact at Headquarters the change may be even more than what one sees at an average business establishment.

This is because ARRL is not noted for offering very high wages in comparison to other businesses in the technical field; indeed, wage offerings at Headquarters are generally lower than for similar membership organizations.

So when one refers to "those New Englanders at Headquarters," especially if the implication is those "old-timers" who have been there for years and are out of touch with Amateur Radio today, it could not be farther from the truth.

The same applies to the members of the ARRL Board of Directors.

When I talk to some amateurs about the Board, I often get the feeling that many amateurs — even League members — look on the Directors as the same "old bunch" who have been running the League for the last half century.

This feeling is often expressed because many amateurs believe the ARRL leadership is out of touch with what Amateur Radio is today.

Often the feeling is that the ARRL leadership knows little about the latest advances in radio techniques, and further, could care less about these advances.

I have heard it said of the Directors, as well as individuals at Headquarters, that they are just a bunch of old-time CW operators who do nothing but ragchew on CW or perhaps handle traffic.

Again, nothing could be farther from the truth.

The other day I was reading over the minutes of the Board meeting held in Orlando last March and noted there was no one sitting as a Director who was on the Board when I attended my first meeting as Director of the Pacific Division in May of 1968. In fact, by the time I retired as Director in 1977, there were only two others sitting as Directors who were there when I attended that first meeting.

Other than Honorary Vice Presidents attending the meeting — who do not take an active part in the workings of the Board — the only individuals attending this year's meeting who were present when I was first a Director are now active officers: two Headquarters personnel and one Director who was a Vice Director in 1968.

The two Headquarters personnel are Dick Baldwin, W1RU, now General Manager, and Perry Williams, W1EUD, Washington Area Coordinator. Baldwin has announced his retirement for mid-1982.

The only active officers present who were Directors in 1968 are Harry Dannals, now President, and Noel Eaton, now International Vice President.

What about the average age? I often

hear the Board referred to as a "bunch of old men."

If anything, the average age is lower than when I first became a Director. The age level does represent a group of individuals with many years of experience in Amateur Radio, but one would expect that the leaders of *any* organization are those with at least some time in the particular area of interest.

Yes, generally speaking, the Directors represent many years of experience in Amateur Radio, and the experience is in a wide and diverse cross-section of Amateur Radio interests.

Not all of the Directors are traffic men; in fact, very few are or have been very active in traffic handling. What about the claim that the Directors are all CW operators? Well, yes, many do operate some CW from time to time, but most operate phone, teletype, FM repeaters, VHF, DX, contests, and other aspects of Amateur Radio.

During discussions and debates at Board meetings, the fact that Directors come from different areas of the country becomes apparent as regional viewpoints are often expressed in discussions.

Each Director feels it is his particular area or region which represents the true leadership in technical and operational areas. Every Director is convinced his area first started in SSB operation or FM repeaters — or what have you — and that his members are still the leaders in that particular field.

We Americans have many loyalties: to our nation, to our state and to our local town, county or region. I often saw the debate on a particular issue go according to regional preferences. At times the debate revolved around what might best be called "national issues." At other times, the debate appeared to revolve around the particular operational or technical interests of the individual Directors, crossing every line of interest in Amateur Radio.

Whatever an individual Director's particular interests or area of the country might be, I have always found that amateurs who become Directors are dedicated to Amateur Radio and the ARRL. Their first interest is for the preservation of Amateur Radio.

I saw this dedication many times as all 16 Directors would unite for the common cause in issues that affected all of us — both League and non-League members. An example of this was when we first received attacks against Amateur Radio in general by those who wished to take away our 220 MHz band. There was no question on the part of any Director that we had to rise to the common defense against such an attack, regardless of whether a particular Director might be interested in ever working on this particular band or not.

The ARRL Directors do represent the interests of League members. They are active amateurs who work for the good of Amateur Radio first. They will represent your interests. They do want to hear from all League members in their particular Division.

The next Board meeting is scheduled for early September. Your Director would be happy to hear from you on any issue you may be interested in.

Believe it or not, your viewpoint can be heard and it will make a difference. Remember, your Director is an amateur just as you are. He has the same kinds of interests you have.

If you say nothing, you know for sure that your voice will *not be heard.* □

Contact Worldradio for hamfest prizes.

Be informed

Dick Carmody, WD6CHR

In order that the members of the San Gabriel Valley Radio Club could be better informed regarding the upcoming Los Angeles Section ARRL SCM (Section Communication Manager) election, the two candidates for the office were invited to the June meeting to participate in a debate.

Stan Brokl, N2YQ (incumbent) and "Doc" Nordland, WB6MOQ (challenger) answered questions prepared in advance by those in attendance. The debate was moderated by Stan Spaeth, WB6QFE.

Not only was the audience better informed about who to vote for, but a great deal was learned about this very important office.

Needless to say, this is an excellent program for an ARRL-affiliated club to schedule. Even if your section doesn't have an election coming up, it's an excellent way to learn about the duties of the SCM. □

Cleaning tip

Did you ever feel that the points of contact on your key or paddle might be dirty, making bad contact and misspelling words for you? Don't file them (could be expensive silver). Spray contact cleaner on them and dry with a paper tissue. The final touch: drag a dollar bill between the two contacts — presto! No chirps or misspelling; an old motorcycle racer's tip — it works.

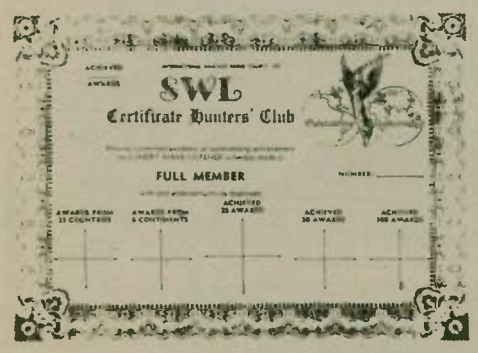
The Carrier, Pleasant Hill, CA □

AWARDS

Scott R. Douglas Jr., KB7SB
Post Office Box 46032
Los Angeles, Calif. 90046

SWL Certificate Hunters Club

Membership in the SWL CHC is available to all interested individuals, both amateur and non-amateur alike. The SWL CHC has been revived to provide a vehicle for the exchange of information and ideas in all areas of SWLing with the prime goal of award hunting and obtaining an amateur license. There are no entrance requirements as there are in the



amateur division. All that is required is the desire to belong and participate. Life membership costs $5, which includes the beautiful 11x14 membership certificate displayed above.

Many Amateur Radio societies and clubs around the world offer equivalent awards like those issued to amateurs for confirmed reports. So join in the fun! The Certificate Hunters Club program is an excellent place to start. For information on the Certificate Hunters Club contact Scott R. Douglas, Jr. KB7SB, P.O. Box 46032, Los Angeles, CA 90046.

Awards from the U.S.S.R.

The Central Radio Club in Moscow offers the six awards listed below with the following rules applied to all.

1-Award fee for each is 1 ruble or 14 IRC's or $3.00.
2-Standard GCR (General Certification Rules) apply.
3-Applications should contain a standard log extract with call sign, date, time, frequency, and mode indicated.
4-Minimum reports of 337 on CW and 3/3 on phone are required.
5-Awards are issued for single modes only.

R-100-O Award: Work 100 stations in 100 different oblasts of the Soviet Union. There are three classes. Class 3 — mixed bands, class 2 — 7 MHz only, class 1 — 3.5 MHz only. Only contacts after 1 January 1957 are valid.

W-100-U Award: Work 100 stations in the U.S.S.R. after 1 January 1959. Five of the contacts claimed for credit must be from the Mirskaya (9th) region.

R-6-K Award: Work stations in all six continents (Europe, Asia, Africa, Australia, North America and South America) plus three (3) contacts with the European part of the U.S.S.R. and three (3) contacts with the Asiatic part of the U.S.S.R. for a total of 12 contacts. Issued in three classes. Class 3 — mixed bands, class 2 — 7 MHz, and class 1 — 3.5 MHz only. Contacts on or after 7 May 1962 are valid.

R-150-S Award: Issued for confirmed contacts with 150 countries which must include UB, UC, UD, etc. Contacts after 1 January 1956 are valid.

R-10-R Award: Work one station in each of the 10 call areas of the U.S.S.R. Contacts after 7 January 1958 are valid.

R-15-R Award: Work 15 of the 18 U.S.S.R. republics within a 24-hour period. Republics of the U.S.S.R. are European, Franz Josef Land, Kaliningradsk, Asiatic Russian SFSR, Ukraine, White Russia SFSR, Azerbaijan, Georgia, Armenia, Uzbek, Turkoman, Tadzhik, Latvia, Estonia, Kirghiz, Moldavia, Lithuania, and Kazakh. Only contacts after 7 January 1958 are valid.

It will take approximately six months to receive your awards, but it will be well worth the long wait! Some of the most beautiful awards that I have received are from the U.S.S.R. Send your application and log extract to Central Radio Club, Box 88, Moscow, U.S.S.R.

US—CHA (United States County Hunters Award)

This award is not affiliated with any club or organization. It is independently offered by Mr. Paul Schuett, WA6CCP. This award was first issued on 11 May 1965 with Clif Evans as the original custodian. Since then almost 900 awards have been issued.

The award certificate (pictured above) measures 17x22 inches and is printed on a parchtone bond. The award is issued in 11 different classes, with the basic award starting with 300 counties worked.

Mr. Schuett does not require that you have the QSL cards. The log sheet is signed by you on the honor system for the stations worked (not confirmed). The cost for the basic award is $4 and you may request endorsements for band, mode or power level. Full details are available by writing to Mr. Paul Schuett, WA6CCP, 13779 North Wells Lane, Lodi, CA 95204. Please include an SASE for the reply.

CHC A-1 Operator Certificate of Merit Recipients

#26/W#19 WB8JSQ Tim Herrick
#27/8P6#1 8P6OR Bill Montagu
#28/W#20 KH3AB William Morris
#29/W#21 AD0S George Carleton

#30/W#22 KH0AC Leonard Kaufer
#31/W#23 WA2JUN Anthony D'Ercole
#32/W#24 WA2PUB Alan Peers
#33/W#25 W2PPG Alexander Calandra
#34/W#26 W3WGS Edward Konop
#35/W#27 W1CUT Laird Campbell
#36/W#28 N6HJ Hank Hyman
#37/W#29 WA6WZO Fried Heyn

The A-1 Operator Certificate of Merit is issued free of cost by its sponsor, the Certificate Hunters Club, to amateurs who have made a significant contribution to Amateur Radio by either deed or operation.

Till next month, 73's and Good hunting!

ARRL revamps award program

In case you were not aware of it before now, the ARRL has completely revamped their Worked All States (WAS) award program, as of 1 January 1981. You can still get the basic mixed award, and be awarded a new, very nicely styled certificate. (But they will not reissue previously earned awards.)

If you like endorsement stickers, the WAS now has 16 different ones to work for. The easier ones are: All SSB, All CW, Single Band (80-10 meters), and All Novice. Interested in a challenge? Try these endorsements: All OSCAR, All SSTV, All RTTY, and All QRP (*applicant's* power not over 10 watts input/5 watts output). If that still wasn't enough of a challenge, then work for these: All 75 meters 2-letter Extra Class calls (1×2, 2×1, and Extra 2×2's), All 6 meters, All Top Band 160 meters, and All 2 meters (no repeater QSO's).

You can receive an engraved plaque for All 432 MHz, (better have a lot of aspirin), and of course there is the beautiful plaque for 5-band WAS (80-10 meters). The challenge is there, so better get started.

If you need more info, check pages 52-53, January 1981 **QST**. If you get an award, let us know for the CLARC Corner. Happy Hunting for Vermont!
—CLARC Corner, OH □

CD members rewarded

Recently honored at the Civil Defense Banquet by the Hon. Mayor Donald F. Fracassi were Sherman Goldman, K8LUY and Robert Karl, W8HS, Southfield, Michigan's Civil Defense communication officers.

Sherman and Karl were given a Certificate of Appreciation from Mayor Fracassi for their outstanding achievements in Civil Defense.

Both men have completed training on skywarning, winter storms, tornadoes and the shelter program. They have been responsible for keeping our emergency radio active and have helped coordinate radio service with Southfield's Police and Fire Departments in times of disaster.

Mayor Donald F. Fracassi, on behalf of the city of Southfield, personally commended Sherman Goldman and Bob Karl for faithfully performing valuable services for more than 15 years.
Southfield Sun, MI □

Hope we can serve you. Your comments and suggestions are welcome.
Chris Wilson

Check sheets

Tony Tomalewicz, WD9FOE

Anyone interested in a FREE check sheet for a 5-band DXCC, WAZ, etc. send a large SASE to Glen Whitehouse, K1GW, P.O. Box 4680, Manchester, NH 03108. He is associated with the Cushcraft Company.
—Ham Gab, Burbank, IL □

Impressive

Louis Chisnell, KA8KOS

I recently had a visitor at my shack and he wanted to see how CW worked. I put out a CQ and was very happy to get Honolulu, Hawaii as I needed it for WAS. The station was Robert G. Hite, WH6AKK, an attorney-at-law. He told me had just moved into the 31st floor of a condominium and because he couldn't put an antenna on the roof, he was working with a 57-inch whip antenna on a bracket he made to fit the window. Our signals were both 579 and very solid copy.

This, to me, is the amazing thing about Amateur Radio — running into such unusual things. Needless to say, my visitor was also impressed.
—Triple States RAC, OH □

STATION Appearance

The winner of our Station Appearance this month is Ronald Robinson, WB2QLO of Parsippany, New Jersey. He shares with us these three photos — two of his home station, one of his work station. His enthusiasm for and participation in Amateur Radio are made clear in his letter, which follows.

As you might gather from the photos, yes, I do enjoy Amateur Radio — both at home and at work. Yes, I have two complete stations. At home I have FT-101EE, dipole; at work, a Swan 270B with six antennas — all homebrew 10-80 meters.

I have been an amateur for about five years on paper, although in my heart, I wanted to be an amateur ever since I was able to reach the dial. I was an avid SWLer for about 10 years and still take a listen when QRM on HF bands. I have 73 countries confirmed as an SWLer, and am an active member of the Budapest SWL Club. Have been a member of the Newark News Radio Club, also. I use an old Hallicrafters S-40 for my receiver — an oldie but goodie. I also use an old Zenith oceanic.

I just recently received my DXCC with 177 worked, and 154 confirmed so far. I really enjoy chasing DX, but also enjoy chasing certificates and awards. At the present time, I'm trying to wrap up Worked All U.S. Capitals; need six more to complete it. I have WAS on 40 and 15 meters, 33 states and seven countries on 160 meters. In the 1980 73 Magazine 160-meter contest, I took first place in the 2 call area. My first contest win.

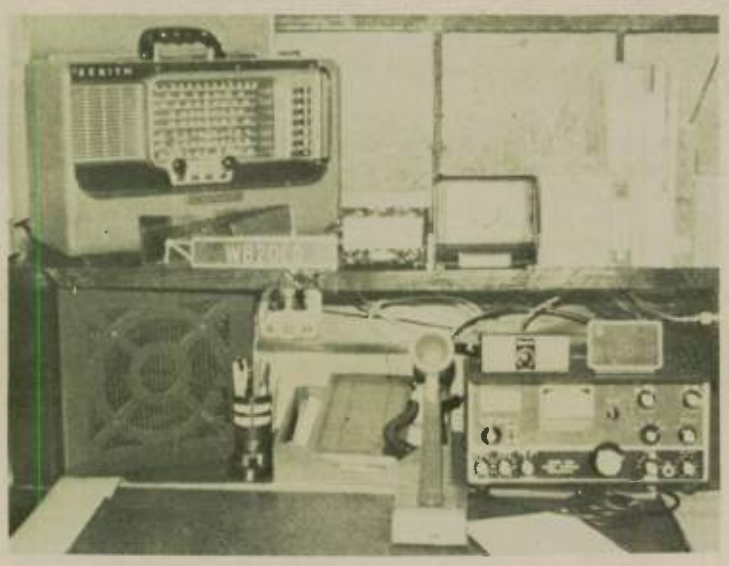
One of my best and most enjoyable operations as an amateur was on a mini-DXpedition in October 1980 — nine days in VP9 land. I had a ball being on the other end of the pile. This year, in October 1981, plans are being made for C6A, Bahamas. I hope to work many of you fellows on the air. I probably will have a new call; I recently applied for the Advanced 2X2 KC2??

I am active in local clubs. I'm a member of the local Civil Defense group and vice president of the Morris Radio Club. Oh, I didn't mean to leave out my guest operator's name — C3PO. He is programmable to make various sounds, sings, flashes various lights, etc. He is not yet able to have QSO, but maybe soon.

73
RON ROBINSON, WB2QLO
Parsippany, New Jersey

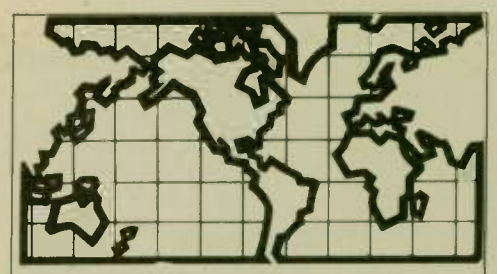
Congratulations, Ron! Enjoy your free year's subscription to Worldradio. □

WB2QLO's QTH hosts a guest operator — "C3PO." This programmable creation may soon be able to QSO via Amateur Radio, says Ron Robinson — owner of the station.



Ron's work station includes an old Zenith oceanic.

Ron Robinson, WB2QLO, sits at his home station. An FT-101EE and Hallicrafter S-40 can be seen among Ron's equipment.



DX WORLD

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

Activities calendar

22-23	August	JARL All Asian Contest (CW)
06	September	Bulgarian DX Contest (CW)
12-13	September	DARC European DX Contest (Phone)
19-20	September	DXPO Atlanta! Ramada Inn Central, Atlanta, Georgia
03-04	October	VK/ZL Contest (Phone)
10-11	October	VK/ZL Contest (CW)
11	October	RSGB 21/28 MHz Contest (Phone)
18	October	RSBG 21 MHz Contest (CW)
24-25	October	CQ World-Wide DX Contest (Phone)
08	November	International OK DX Contest
14-15	November	DARC European DX Contest (RTTY)
28-29	November	CQ World-Wide DX Contest (CW)

W-100-N

Looks like it was another slow month for Worked 100 Nations applications. Well, that's like DX, which also seems to run in cycles. **Worldradio** congratulates the following two amateurs:

126. AI3E Dwight Sipler
127. K0DEQ William C. Morgan

For those of you who are interested in this award, the fee is still only $7.50, which includes processing the award and returning your QSL cards via registered mail. The Rules and Nations List is available for an SASE to my home address. You will note that the list is not a duplicate of the ARRL DXCC list. I also return your cards faster than Newington will.

Niue Island DXpedition

Five members of the Northern California DX Club will be on DXpeditions to Niue Island, (ZK2), this October and November. This will include participation in both of **CQ Magazine's** World-Wide DX Contests.

Gary Cervo, WB6EXW and Rubin Hughes, WA6AHF will operate from Niue Island during the period 21 through 29 October, and Cam Pierce, K6RU, Bruno Bienenfeld, AA6AD, and Hiller Raamat, N6HR will be there from 25 November through 3 December.

Call signs are not known at this time, although licensing arrangements are complete. Operation will be on all bands, 10 through 160 meters, with emphasis on the lower bands during non-contest periods. QSL arrangements will be handled by the NCDXC at P.O. Box 608, Menlo Park, CA 94025.

Here are four of the operators for the 1981 Niue Island DXpedition. From left to right: Rubin Hughes, WA6AHF; Hillar Raamat, N6HR; Cam Pierce, K6RU; and Bruno Bienenfeld, AA6AD. Photo courtesy of Gary Cervo, WB6EXW.

Burma (XZ)

Two stations are reported to be on from this one. The first one on, XZ5A, is the most active, with the second station, XZ9A, coming through also.

Be aware that not only is Burma available for the deserving; it's there for the patient ones. XZ5A works from lists and can be found on 14.225 MHz from 1100 UTC. It is a good idea to show up about two hours earlier to get on the list with whoever is the MC. The lists usually run several hours due to the tremendous demand. After all, it has been about 20 years since the last activity from this one. Also, check 21.275 MHz from 1700 UTC.

As to who runs the lists, look for DU9RG; Bill Bennett, W7PHO; and Lloyd Hilbun, W7RQ, and perhaps others. If you are one of the lucky ones to work either station, you may send your QSL card via Jin Fukuta, JA8BMK.

As of this date, do not submit your Burma QSL card to Newington for DXCC credit. Full documentation is reported to have been sent to the DXCC desk, but there is some question on the legality of the operation as it was authorized by the regional government and not from Rangoon.

San Felix Island (CE0X)

A DXpedition is in the planning stage for mid-September. Rumors have it that Cliff Saccalis, SV1JG; Manos Darkadakis, SV1IW, and perhaps some others will be making the trip.

Desecheo

The Desecheo DXpedition by John Ackley, KP2A and company during the first part of June made over 43,000 contacts in seven days. There were 17 operators, which should account for the high volume of contacts. No doubt all the deserving got this one, with several DXers working KP2A on all bands. It will probably be some time before another DXpedition to this one.

Due to the extreme heat, it took about three days to set up for operation. The generators seemed to have the most problems due to the heat. One unit fell overboard and was rescued. Although it was cleaned and the engine ran, the generator didn't.

Tokelau (ZM7)

The Tokelau DXpedition team consisting of Jim Smith, VK9NS; Harry Meade, VK2BJL; and Ray Chambers, VK2BKD, who held the calls ZM7JS, ZM7ZR and ZM7KD, respectively, made over 10,000 contacts. Now, they are taking a serious look at the possibility of DXpeditions to Heard Island and Mellish Reef. Obviously, Jim is still shooting for the Heard Island DXpedition that had been postponed from last winter (or their summer).

Kermadek Island (ZL/K)

Ray Wright, ZL1AMO is still working on authorization to operate from Kermadek Island near the end of this year. If all goes well, look for ZL1AMO/K this November or December.

Egypt (SU)

Lotfu Morsy El Mahdi, SU1AL is on regularly giving out contacts for the deserving. Look for him near 14.203 MHz from 0100 UTC. He has also been reported on 21.278 MHz during the same time period.

Karl Mayberry, W5JMM/SU is another active one from this country. Check the bands for Karl on 14.200 MHz from 0400 UTC, 21.280 or 21.370 MHz from 2200 UTC.

Cuba (CM/CO)

Close as this one is to home, it is not all that easy to work. Checking through the various reports you might look for the following, (frequency in MHz and time in UTC):

CM8AF	14.010	0400
CM2PE	7.011	0600
CO2OM	14.209	2200
CO4RCB	7.069	0330

Liberia (EL)

Mark Monson, EL5G is looking for takers on 21.300 MHz daily from 0200 UTC. Mark is also a member of the West African SSB Net, which meets on Sundays on 7.060 MHz from 0800 UTC. He has also been reported on CW from 1700 UTC on 21.037 MHz.

In addition to EL5G, you might find Ashley Rennie, EL2AR on 14.203 MHz around midnight UTC; Tom Viselli, Jr., EL2AV on 21.283 MHz from 1300 UTC; Sam Watkins, EL2P on 14.016 MHz from 0200 UTC; and Ben Zimmerman, EL9C on 14.214 MHz from 0730 UTC and 21.261 MHz from 1900 UTC.

Kiribati (T3)

Some time back, Kiribati became a new independent nation consisting of the Gilbert Islands, British Phoenix Islands and the Line Islands. There was no change in the DXCC status as the Gilbert Islands (VR1) became West Kiribati (T3K), the British Phoenix Islands (VR1) became Central Kiribati (T3P), and the Line Islands (VR3) became East Kiribati (T3L). Recently, the government made a modification to the call signs where T3K is now T30, T3P is now T31 and T3L is now T32. This should make the prefix hunters happy.

Need one of those T3 stations? Look for T30AT on 21.243 MHz from 2200 UTC or T32AB on 14.207 MHz from 0600 UTC and on 21.282 MHz from 1800 UTC.

United Arab Emirates (A6X)

Even though Newington accepts no QSL cards for DXCC credit for contacts made with UAE stations since 11 February 1979, you might want to work one anyway. A6XJA is busy from a new location since 17 June. Check 21.330 MHz after 2000 UTC. He has also been reported on other bands and frequencies but none of these are in the American phone band.

Third-party traffic agreements

The United States has agreements with the following nations to permit the handling of third-party traffic via Amateur Radio. Only the valid countries are listed here.

North America

Canada (VE)
Costa Rica (TI)
Cuba (CM, CO)
Dominican Republic (HI)
El Salvador (YS)
Haiti (HH)
Honduras (HR)
Jamaica (6Y)
Mexico (XE)
Nicaragua (YN)
Panama (HP)

South America

Argentina (LU)
Bolivia (CP)
Brazil (PY)
Chile (CE)
Colombia (HK)
Ecuador (HC)
Guyana (8R)
Paraguay (ZP)
Peru (OA)
Trinidad and Tobago (9Y
Uruguay (ZP)
Venezuela (YV)

Europe

ITU Headquarters (4U1ITU)

Asia

Israel (4X, 4Z)
Jordan (JY)

Africa

Ghana (9G)
Liberia (EL)

Oceania

None

If the country is not on this list, do not handle any third-party traffic with that country. Incidentally, this does not have to be formal traffic. Asking an amateur in Germany to say hello to another amateur friend in that country the next time he meets him is technically a form of third-party traffic.

DXPO Atlanta

Mark your calendars for the dates of 19 and 20 September to be at the DXPO Atlanta, (Georgia), to be held at the Ramada Inn Central, Interstate 85 at

Monroe Drive, NE, in Atlanta, The hotel has brand new convention facilities and room interiors.

Speakers include Jim Lawson, W2PV on Limitations and Problems in Modern Receiver Design; the Hensons, Carl and Martha, WB4ZNH and WN4FVU, along with Bob Schenck, N200 with slides of their recent DXpeditions; and Don Search, W3AZD with recent DXCC matters.

There will be plenty of time during the weekend for socializing with your DXer friends, DX visitors, and speakers. An open bar and DX banquet will be Saturday night with hospitality suites both Friday and Saturday nights.

The convention is sponsored by the Southeastern DX Club, who claims a guaranteed special room rate of $28 for single and $33 for double or more. Call the hotel now for reservations at (404) 873-4661, and be sure to mention the DX-PO Atlanta convention. Have a good time!

1980 OK Contest results

A copy of the results for the 1980 International OK DX Contest was recently received at Worldradio. This is an annual event, held the second Sunday in November, sponsored by the Central Radio Club of Czechoslovakia. There were many entries from all over the world, but the USA fell short of being one of the leaders in participation. I will list all American entrants. Perhaps seeing one's call in print will encourage more participation.

Here is Pat McNamara, the first operator at club station EI9CB. The call is assigned to the Limerick City Short Wave Radio Club in Ireland. Pat is its president and starting a collection of Ham Radio Patches. If your club has a patch why not send one to the club: Limerick City Short Wave Radio Club, 7 Colbert Park, Janesboro, Limerick, IRELAND. ***(Photo courtesy of EI9CB)***

Limerick City is sweet and fair,
Quite easily reached on the air,
Talking in prose or in verse,
You simply use your MHz.
— EI9CB, Pat —

All Band:

AK1A	570	939	46	43,194
K9BG	456	746	34	25,364
KC4OV	331	340	49	16,660
W3ARK	325	613	26	15,938
WB3JRU	182	268	40	10,720
K4BAI	190	356	27	9,612
WB5YMS	110	196	27	5,292
AB2E	152	265	18	4,770
N8BJQ	111	184	24	4,416
W1CNU	114	228	16	3,648
K9GDF	52	95	13	1,235
AA6EE	47	56	21	1,176
W3ICM	43	69	17	1,173
K7NW	46	82	13	1,066
N4TZ	31	63	8	504
K2SCU/5	16	23	5	115

7.0 MHz

W4VQ	140	209	13	2,717
W2XQ	48	88	9	792
K7UR	43	67	11	737

14.0 MHz

KB8EC	231	414	18	7,452
W1END	64	106	18	1,908
WB9GOB	48	88	10	808
W4YN	23	46	7	322

21.0 MHz

WB1HIH	167	271	13	3,523

28.0 MHz

N2IT	152	239	18	4,302
WA4QMQ	57	94	6	564
W6ISQ	35	51	9	459

Multi-operator (all band)

N4OL	950	1,486	117	171,522

The first figure indicates total contacts, followed by contact points and multipliers to give the final score.

The team of Bob Harrell, N4OL placed fourth worldwide in the multi-op class. G.A. Rumyantsev, UA1DZ placed first in the single operator class with a final score of 205,897 points. If grouped with the mult-op's, he would have placed third worldwide. Not bad at all!

DX Handbook

Secrets of Ham Radio DXing written by Dave Ingram, K4TWJ was sent to **Worldradio** for review by Anthony R. Curtis of Tab Books. This is the first edition, published in February 1981.

The book is divided into eight chapters: The Challenge of DXing, The Fine Art of DXing, Setting Up The DX Station, Antennas and Propagation, Contesting and QSLing, DX Aids, DXpeditioning and DXers Notebook. I went through the book briefly and have made a few comments. The first chapter, The Challenge of DXing, is a historical review that is incomplete.

The author gives a list of so-called minimal effort DXCC countries in the second chapter. This is strange to me as it includes Iran, Sable Island, Liechtenstein, Serrana Bank and Pakistan, but omits Ukraine, Lithuania, Latvia, European Russia and East Germany. Sardinia is also on his list of easy ones, but Italy isn't.

Chapter 6 falls short on listing the available DX newsletters. The author's idea of the leading publication surprises me, as that publication has deteriorated over the past few years and I'm not even sure it is still published.

DXers Notebook, Chapter 8, includes DX awards offered by the ARRL and CQ **Magazine. Worldradio's** W-100-N Award is not included, nor are the many other fine DX awards offered by Amateur Radio societies in other parts of the world. The chapter also includes postal rates that are out of date.

The handbook also includes four appendices. Appendix A is the ARRL DXCC list. Appendix B includes Great Circle Bearings for Atlanta, Dallas and Sacramento; why those particular cities, I don't know. The worldwide QSL bureaus are listed in Appendix C. Appendix D gives the international prefixes, which is nothing more than what was given in Appendix A. This listing is very incomplete as far as the ITU Prefix Allocations are assigned. These are found in any ARRL logbook.

The *Secrets of Ham Radio DXing* is available from Tab Books (Tab 1259) for $7.95, (Blue Ridge Summit, PA 17214). My own opinion is that this book needs much improvement and is not worth the price they are asking. The photograph reproduction is of poor quality. DXing is something you learn through experience and observation. There is nothing "secret" about good DXing.

The only other DX handbook I know of is that by Don Miller, W9WNV (now

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 Frequency (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".

OCTOBER 1981

UTC	AFRI	ASIA	OCEA	EURO	SO AM
0100	29.9	37.8	37.4	16.5	27.2
0200	23.1	33.7	37.4	15.6	27.8
0300	20.2	29.4	35.0	13.9	24.9
0400	19.2	25.4	31.9	12.3	22.6
0500	17.0	21.7	29.4	12.2	21.1
0600	16.0	18.7	27.5	14.4	20.5
0700	15.4	16.7	25.9	15.6	20.3
0800	14.6	15.6	24.0	15.6	20.3
0900	13.5	15.4	22.0	15.3	19.6
1000	12.2	16.2	20.7	14.6	17.7
1100	11.4	16.8	19.7	13.4	15.7
1200	12.3	16.0	17.9	13.4	16.7
1300	15.9	14.9	16.0	16.1	22.1
1400	20.9	16.1	17.4	21.3	29.5
1500	25.2	18.0	24.1	26.9	35.0
1600	28.0	17.5	22.7	31.0	37.1
1700	30.3	17.0	21.5	31.9	37.3
1800	32.5	17.4	22.1	28.6	37.1
1900	34.4	19.9	25.4	24.6	36.5
2000	35.7	25.3	30.2	20.9	34.7
2100	36.7	32.7	33.9	18.5	32.1
2200	37.1	39.3	35.5	17.3	29.7
2300	35.9	40.9	35.9	16.8	27.8
2400	33.2	40.4	36.6	16.7	26.7

W6ERO), that was published by Cowan (former publisher of CQ Magazine) in 1968.

Diploma YV3

You all have YV3 QSL cards from Venezuela lying around don't you? Here s an award they can be applied to. The award is offered by the Casa Region of the Radio Club of Venezuela for contacting and confirming contacts with YV3 stations since 18 September 1955. The requirements vary depending on where you reside.

Asia	5 Confirmations
Oceania	5 Confirmations
Europe	20 Confirmations
Africa	20 Confirmations
North America	30 Confirmations
South America	30 Confirmations
Venezuela	40 Confirmations

Send your certified list to: **Radio Club Venezolano, Casa Regional, Aptdo. 348, Barquisimeto, VENEZUELA.**

No fee is indicated, so it is assumed the award is free of charge. Now, the problem of collecting the YV3 cards. I have worked a few of them, but as yet I have not received a confirmation from one of them.

Clubs

The Northern California DX Club recently elected a new slate of officers. Congratulations go to:

Merle Parten, K6DC	President
Steve Thomas, N6ST	Vice-President
Ron Panton, W6VG	Secretary
Chuck Patterson, K6RK	Treasurer

Over on the East Coast we also have new officers for the Long Island DX Association with the following:

Jack Gutzeit, W2LZX	President
Tom Arciero, WA2OHD	Vice-President
Arthur Bernstein, N2KA	Secretary
Peggy Arciero, WB2OHD	Treasurer

The Southern New England DX Club elected the following for their 1981 officers:

Bill Poelmoetz, K1MM	President
Jim Dionne, K1MEM	Vice-President

The Delta DX Association picked these DXers to run their club for 1981:

Louis Muhleisen, Jr., K5LM	President
Chip Tilton, K5RSG	Vice-President
Milton Fingerman, N5NO	Secretary
Audrey Collins, WA5YFQ	Treasurer

DXCC Number 1!

Mort Bardfield, W1UQ submitted some rather interesting pictures along with some comments on the late "Rob" Robson, 5Z4ERR, who held DXCC Number 1.

Mort put together a few interesting cards from Rob's collection. Mrs. Robson preferred that Mort not remove the cards from her late husband's shack, even to send to **Worldradio** for publication. Mort believes she will eventually give the cards to the Radio Club of Kenya. Most likely, Rob had worked "Mr. Yasme", Danny Weil, VP2VB under every call and QTH Danny worked with.

Shown in the picture below are some of Rob's cards that Mort photographed for us. Included are XU1YY, VQ6HOS, EK1AD, MF2AA, VQ2PL, 6L6MY, KA1AW, FN8AD, AC4YN, PK5HL, MO1A, JZ0HA, FQ8SN, OQ5BH, ZS8A, FO8HZ, TR1P, FF4AB and MI6CD. Many of these prefixes are no longer in use. Dates of these cards are circa 1946.

As 5Z4ERR is a relatively new prefix, I checked my 1954 Callbook for Kenya. Sure enough, there was Rob, VQ4ERR in Nairobi.

Shown in the shack of the late "Rob" Robson, 5Z4ERR, of Nairobi, Kenya; (top row, left to right): Claire Bardfield, K1YL and 5Z4XL; Mrs. Marion Robson, widow of 5Z4ERR; and Mr. Challo, Licensing Chief, PT&T in Nairobi. (Bottom row): Mel Maruyama, JA2KLT and 5Z4YV; Mr. Challo's two children; and Mort Bardfield, W1UQ and 5Z4UQ. Notice the DXCC certificate with the stickers on the wall.

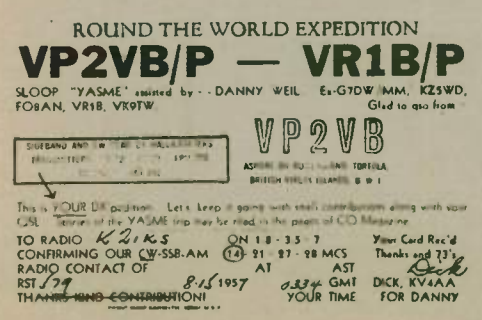
Antique QSL Department

Sometimes the cards shown here are not necessarily antique. The following

The arm of Amateur Radio reaches around the world; **Worldradio** is out to reach you.

card is only 23 years old and was submitted by Ken Leiser, W9DOR. Ken made the contact with XQ8AG in Antofagasta, Chile back on 07 September 1958 on 10 meters. It was in the phone band, and I assume it was on AM as it did not state SSB. The card is orange and cost $60 postage to mail from Chile. By referring to the ITU allocations, the 'XQ' prefix is still assigned to Chile.

I dug through my own QSL collection and came up with a card confirming a contact made with Danny Weil back in 1957. Danny is the one referred to as "Mr. Yasme," (not Lloyd and Iris — they only carried on his tradition). Dick Spenceley, KV4AA was his QSL manager in those days. Notice the "Thanks kind contribution" crossed out. I didn't contribute because I was too cheap. I was rather naive in those days and wasn't much of a DXer. Notice the subtle hint with the arrow pointing to "Your DXpedition."


ROUND THE WORLD EXPEDITION

VP2VB/P — VR1B/P

SLOOP "YASME" assisted by - - DANNY WEIL Ex-G7DW MM, KZ5WD, FO8AN, VR1B, VK9TW Glad to qso from

VP2VB

This is YOUR DX position. Let's keep it going with small contributions along with your QSL. Some of the YASME trip may be read in the pages of CQ Magazine

TO RADIO K2IKS ON 18-35-7 Your Card Rec'd
CONFIRMING OUR CW-SSB-AM (14)-21-27-28 MCS Thanks and 73's
RADIO CONTACT OF AT AST Dick
RST 579 8-15 1957 0334 GMT DICK, KV4AA
THANKS KIND CONTRIBUTION! YOUR TIME FOR DANNY

Saipan is not Guam!

Leonard Kaufer, KH0AC sends the following notice:

"The Marianas QSL Bureau with the address of Box 7388, CHRB Saipan, C.M. 96950 handles cards for the NORTHERN Mariana ISlands *only*, (AH0, KH0, and KG6R,T). This means we handle cards for Saipan Island only. We do not handle cards for Guam (AH2, KH2, and KG6 with three-letter suffix). The address of the Guam QSL Bureau is **Box 445, Agana, GUAM 96910.**

"Guam is a different territory from the Northern Mariana Islands and is located over 100 miles south of us. If you send Guam cards to Saipan, you delay response to you since we must forward all Guam cards to the Guam QSL Bureau.

"What makes it even more difficult for us is that many DX hounds send their cards in sealed envelopes with no indication on the outside of what station has been worked. The envelopes have to be opened and then resealed before being forwarded to Guam."

Len is the Northern Marianas QSL Bureau Manager. Let's give him a break and send him only the Saipan cards. Send your Guam cards to Guam. As Saipan and Guam count as two different DXCC countries, this should not be hard to remember. Better yet, why not take advantage of your ARRL Overseas QSL Bureau, provided you are a League member.

Invalid QSLs

Via *The Long Island DX Bulletin*, this little item was buried in the 'Mailbag' section. Willi Rass, A7XE advises that his QSL manager was unaware that he was home in Germany while his call was being pirated from 13 June through 10 September 1980. Therefore, the QSL cards for that period are invalid. The ARRL has been so advised. The QSL manager for A7XE is now DF4NW.

This raises a very important question. Ey what basis was this QSL manager acknowledging QSL cards for that period of 13 June through 10 September? He certainly didn't have copies of the logs for A7XE, as he was out of the country and in Germany. Any QSL manager who answers a QSL card without a copy of the log or other proof of contact is lowering the integrity of the entire QSL manager system. Maybe the pirate sent him copies of his logs?

Perhaps some QSL managers tire of waiting for the logs to arrive and send the cards out without proof — all in good faith, trusting the station who had sent him the card. Well, that's too bad! We have all been through it. You will just have to wait. The same goes for the call that was copied incorrectly by the DX station, (or omitted entirely). The QSL manager is doing his job professionally if he rejects the card.

I hope no one reads this wrong. Most of the QSL managers are dedicated to their QSL chores and perform a terrific job. They deserve our thanks!

Miscellaneous QSL information

Alex Kasevich, VP2MM of The Caribe DX Association, reports that E. Bobbie Martin, VP2MO is not a QSL manager for any station. He has been reported at times as manager for VP2MGT, which is incorrect.

Neil Zimmerman, W7MAF offers his services as QSL manager for any DX station looking for a manager. Neil can be reached at 1815 17th Avenue S, Great Falls, MT 59405. Neil also had a comment on the IRCs for sale from S83W that were listed recently. Neil offered to purchase some from the gentleman and sent him cash. Neil received a thank you for what he sent, but no IRCs. So, take it for what it is worth. My suggestion is to buy your IRCs from someone you know, or at least from your own country.

Speaking of IRCs, the cost in the United States went up on 1 July 1981, to 65 cents. With that in mind, it looks like the "green stamp" will be cheaper than the IRC route.

QSL Manager Don Brickey, W7OK died of a heart attack on 16 May. Don was QSL manager for several DX stations and QSL cards may still be sent via P.O. Box 95, Las Vegas, NV 89101. Local amateurs will handle the chores until further notice.

In addition to being a QSL manager, Don was an active DXer. Don received Worldradio's Worked 100 Nations Award #3 back in September 1978 at the ARRL National Convention in San Diego.

This was Don Brickey, W7OK receiving his award at the ARRL National Convention in San Diego, California in September 1978.

QSL routes

A4XJH	—G4GIR	KA4DQR/TI	—KA4FHG
A35JL	—K9AUB	KC6XR/C6A	—N5AIL
A35UW	—ZL2UW	KG4GN	—WB1GQQ
AH2L	—WA4EHS	KG4KK	—N6AWD
AH8AA	—W4FGX	KG4WM	—WB1COR
AH8AAT	—W4FGX	KH3AB	—KB7MO
AO5IC	—EA5ZQ	KP2A	—AF2C
C5AAP	—WA4VDE (See Note 1)		(See Note 5)
C31GA	—F6BWJ	KR6Q/OH0	—KR6Q
C31IU	—W8JAQ	KS6O/OH0	—KB6YU
C31LM	—EA3BDW	KT6V/KH9	—W7KHN
C31VK	—F6EXV	KX6OR	—AD1S
C31WK	—KB9AW	KX6ZZ	—DF7NM
CH2FOU	—VE2BCC	LA3WAA	—W2RDB
CJ3VM	—VE3LVN	LU1ZA	—LU2CN
CN8BJ	—K4CEB	LU3ZY	—LU2CN
CR9BE	—JA1UT	N4ADJ/KH2	—WB4CCT
CS0AAW	—CT1AAW	N5RM/C6A	—N5RM
CT2ARA	—CT2AK	NP4AT	—KP4EQF
CT2CY	—N8BKB	OA4AWD	—VE2AQS
CT8USA	—W4PKM	OD5PZ	—F6ATZ
D4CBC	—KA1CY (See Note 2)	OD5RZ	—VE5QY
DA1WA/HB0	—KN6G	OH1LW/OH0	—OH1LW
DA2CK/HB0	—KA2JFY	OH1MA/OH0	—OH1MA
DL7NS/HB0	—DL7NS	OH3VV/CT3	—OH3VV
EA8RV	—K5MHZ	OH0AM	—OH2BH
EA0HAM	—EA2OP	OH0XZ/OJ0	—OH2KI
EL2AG	—WA4VDE	OJ0AM	—OH2BH
EL2AL	—WA1ZFS	OY1KH	—W1JTI
EL2AU	—WA1ZFS	OY7ML	—W2GHK
EL2AV	—WA4VDE (See Note 1)	P29MM	—K4MQG
EL5G	—K3RB	PA3BFX/LX	—PA0CWA
EL7H	—DK3IA	PE1AQS/ST4	—ON6BC
EL8H	—SM3BU	PJ4CL	—WB2LCH
EL0AP/MM	—JH4NPP	SM4CAN/OJ0	—SM4CAN
EL0AV	—DF1EJ	SM4DHF/OJ0	—SM4DHF
EN3D	—UK3DAU	SM4HQO/OJ0	—SM4HQO
F0CQZ/FC	—DK5DC	SM0CCM/OJ0	—SM0CCM
FB8YH	—F3KH	SP0AM	—SP6ZDA
FC9UC	—F5RV	SQ7SPU	—SP7IFM
FC0FRZ	—DK9CG	SV0BC	—WB7NCF
FG7TD/FS7	—F6AZN	SV0BD	—W4OYC
FG0DDV/FS	—W2QM (See Note 3)	T5TI	—I0SSW
FH8CO	—DF2OU	T30EFW	—JA3EFW
FK8CR	—F6EWK	TA1NO	—KB9OO
FO0RB	—W8LCZ	TI9VVR	—TI2EY
FR7BP	—W0AX	TI0HE	—TI2VVR
G3MUV/CE0	—WD4HMG		
GD3TXF	—G3TXF	TJ1AF	—ON7AO
GD5AVR	—DL7PD	TL8CN	—WA4VDE (See Note 1)
GD5BLG	—DL4FF		
GD5CGV	—DL7FH	TL8CN	—WA4VDE (See Note 1)
GD5DUR	—DF4FO		
GD5DVT	—DK8WT	TR8DX	—WA4VDE (See Note 1)
GI3OLJ	—WB7AEX (See Note 4)		
GJ5AGA	—K4II	TU2JT	—F6CXV
GJ5DTV	—ON6TW	TYA11	—DL8DC
GU5DXL	—DL4FL		(See Note 6)
GU5DYO	—DL4FL	U2Q	—UK2GCF
GU5DYP	—DL4FL	UK1PGO	—UK3SAB
GU5DYQ	—DL4FL	UPOL 22	—UA1ABY
H44SH	—AD1S	UX4L	—UA4LM
HC1MD	—K8LJG	VE7AAZ/4U	—VE1BWV
HC8KA	—HC5KA	VE8YQ	—VE4TZ
HC9A	—K8LJG	VK4ANS/LH	—ZL1AMO
HG1W	—HA1KVM		
HG19HB	—HA5PP	VK9YA	—WA9WWT
HH2JR	—KA5V	VP1GK	—WA4JTE
HH2RM	—W6RP	VP2ED	—AD8J
HI8ABG	—K9AUB	VP2EK	—VE1ASJ
HL9WZ	—WA2JOC	VP2ET	—VE1BNN
HT1ZMR	—K7UU	VP2MNQ	—W8OEH
HU1SA	—YS1SA	VP2VDG	—W4KA
HZ1AB	—K8PYD	VP2VGI	—KP4EBQ
HZ7DB	—WD5CQS	VP5CM	—AA4CM
HZ7JZ	—K4GXY	VP5JDT	—W1HCS
HZ7MB	—WD5BQM		
I1DFS/IA5	—I1FNX	VP5KPS	—WA1KPS
I2MK/IH9	—I2DMK	VP8AGY	—G4DEP
I0YKN/IB0	—I0SSW	VQ9QA	—N3QA
I17ET	—I7RJO	VS6CT	—KB9N
IZ6ARI	—I6SF	VU2ST	—JA1VOK
J3AE	—AF5J	VU2YK	—W2YTO
J87BO	—W1JP	W4OMY/C6A	—W4OMY
JA1EAE/4W1	—W6KRP	WD6CDU/KH9	—WD6CDU
JA9IAX/JD1	—JA9IAX	WD9IHO/HK4	—WD4PTO
JT0WA	—OK1DWA		
JW8OX	—SP8IOV	XN3LSS	—VE3GCO
JX2BZ	—LA7JO	XZ5A	—JA8BMK
JX5VAA	—LA7JO	XZ9A	—JA8BMK
K5IU/C6A	—K5IU	Y51TA	—DM4ORA
K6TMB/OH0	—K6TMB	YB6ADZ	—DK4QT
K6XT/NH9	—K6XT	YB0ACP/6	—K6DLV
KA1AA	—WA4TKR (SSB) —KA6OWR (CW)		

(please turn to page 30)

Small wonder.

Processor, N/W switch, IF shift, DFC option

TS-130S/V

An incredibly compact, full-featured, all solid-state HF SSB/CW transceiver for both mobile and fixed operation. It covers 3.5 to 29.7 MHz (including the three new Amateur bands!) and is loaded with optimum operating features such as digital display, IF shift, speech processor, narrow/wide filter selection (on both SSB and CW), and optional DFC-230 digital frequency controller. The TS-130S runs high power and the TS-130V is a low-power version for QRP.

TS-130 SERIES FEATURES:

- **80-10 meters, including three new bands**
  Covers all Amateur bands from 3.5 to 29.7 MHz, including the new 10, 18, and 24-MHz bands. Receives WWV on 10 MHz. VFO covers more than 50 kHz above and below each 500-kHz band.
- **Two power versions...easy operation**
  TS-130S runs 200 W PEP/160 W DC input on 180-15 meters and 160 W PEP/140 W DC on 12 and 10 meters. TS-130V runs 25 W PEP/20 W DC input on all bands. Solid-state, wideband final amplifier eliminates transmitter tuning, and receiver wideband RF amplifiers eliminate preselector peaking.
- **CW narrow/wide selection**
  "N-W" switch allows selection of wide and narrow bandwidths. Wide CW and SSB bandwidths are the same. Optional YK-88C (500 Hz) or YK-88CN (270 Hz) filter may be installed for narrow CW.
- **Built-in speech processor**
  Increases audio punch and average SSB output power, while suppressing sideband splatter.
- **SSB narrow selection**
  "N-W" switch allows selection of narrow SSB bandwidth to eliminate QRM, when optional YK-88SN (1.8 kHz) filter is installed. (CW filter may still be selected in CW mode.)
- **Sideband mode selected automatically**
  LSB is selected on 40 meters and below, and USB on 30 meters and above. SSB REVERSE position on MODE switch.
- **Built-in digital display**
  Six-digit green fluorescent tube display indicates actual operating frequency to 100 Hz. Also indicates external VFO or fixed-channel frequency, RIT shift, and CW transmit/receive shifts. Backed up by an analog subdial.
- **IF shift**
  Allows IF passband to be moved away from interfering signals and sideband splatter.
- **Built-in RF attenuator**
  For optimum rejection of intermodulation distortion.
- **Single-conversion PLL system**
  Improves stability as well as transmit and receive spurious characteristics.
- **Built-in VOX**
  For convenient SSB operation, as well as semibreak-in CW with sidetone.
- **Effective noise blanker**
  Eliminates pulse-type interference such as ignition noise.
- **Compact and lightweight**
  Measures only 3-3/4 inches high, 9-1/2 inches wide, and 11-9/16 inches deep, and weighs only 12.3 pounds.

Optional DFC-230 Digital Frequency Controller
Allows frequency control in 20-Hz steps with UP/DOWN microphone (supplied with DFC-230). Includes four memories (handy for split-frequency operation) and digital display. Covers 100 kHz above and below each 500-kHz band. Very compact.

More information on the TS-130 Series is available from all authorized dealers of

Trio-Kenwood
Communications, Inc.,
1111 West Walnut Street,
Compton, California 90220.

Matching accessories for fixed-station operation:

- PS-30 base-station power supply (remotely switchable on and off with TS-130S power switch).
- SP-120 external speaker
- VFO-120 remote VFO
- MC-50 50kΩ/500Ω desk microphone

Other accessories not shown:

- YK-88C (500 Hz) and YK-88CN (270 Hz) CW filters
- YK-88SN (1.8 kHz) narrow SSB filter
- AT-130 compact antenna tuner (80-10 m, including 3 new bands)
- MB-100 mobile mounting bracket
- MC-30S and MC-35S noise cancelling hand microphones
- PC-1 phone patch
- TL-922A linear amplifier
- HS-5 and HS-4 headphone
- HC-10 world digital clock
- PS-20 base-station power supply for TS-130V
- SP-40 compact mobile speaker
- VFO-230 digital VFO with five memories

KENWOOD
...pacesetter in amateur radio

Specifications and prices are subject to change without notice or obligation.

KENWOOD
...pacesetter in amateur radio

Hear there and everywhere.

Easy tuning, digital display, professional quality

R-1000

The R-1000 is an amazingly easy-to-operate, high-performance, communications receiver, covering 200 kHz to 30 MHz in 30 bands. This PLL synthesized receiver features a digital frequency display and analog dial, plus a quartz digital clock and timer. Its easy-single-knob tuning and high sensitivity, selectivity, and stability make the R-1000 a favorite amongst Radio Amateurs, shortwave listeners, engineers, maritime communicators, and others who demand high quality in a general-coverage communications receiver.

R-1000 FEATURES:

- **Continuous frequency coverage from 200 kHz to 30 MHz**
  Receives shortwave, medium-wave, and long-wave bands.
- **30 bands, each 1 MHz wide**
  Easy-to-use band switch with large knob.
- **Five-digit frequency display and analog dial**
  Accurate digital display with 1-kHz resolution and illuminated analog dial with precise gear dial mechanism.
- **Built-in quartz digital clock with timer**
  Precise 12-hour clock with AM and PM indicators. Timer turns on radio for scheduled listening, and even controls a recorder through remote terminal.
- **Up-conversion PLL, wideband RF circuits**
  Provide exceptional performance and easy operation without the need for bandspread, preselector, or antenna tuning. Excellent sensitivity, selectivity, and stability.
- **Three IF filters for optimum AM, SSB, CW**
  12-kHz and 6-kHz (adaptable to 6-kHz and 2.7-kHz) filters for AM wide and narrow, and 2.7-kHz filter for high-quality SSB (USB and LSB) and CW reception.
- **Communications-type noise blanker**
  Eliminates ignition and other pulse-type noise. Superior to noise limiter.
- **Step attenuator**
  0-60 dB in 20-dB steps. Prevents overload.
- **Recording terminal**
  For external tape recorder.
- **Tone control**
  For desired audio response.
- **Built-in 4-inch speaker**
  For quality sound reproduction.
- **Dimmer switch**
  Controls S-meter and other panel lights and digital-display intensity.
- **Three antenna terminals**
  Wire terminals for 200 kHz to 2 MHz and 2 MHz to 30 MHz. Coax (SO-239) terminal for 2 MHz to 30 MHz.
- **Selectable operating voltage**
  AC voltage selector for 100, 120, 220 and 240 VAC. Also adaptable to operate on 13.8 VDC. (With optional DCK-1 kit.)

Ask your Authorized Kenwood Dealer about the easy-to-operate R-1000 communications receiver.

NOTE: *Price, specifications subject to change without notice and obligation.*

MATCHING ACCESSORIES

- SP-100 external speaker
- HS-5 deluxe headphones

Other accessories not shown:

- HS-4 headphones
- DCK-1 easy-to-install modification kit for 12-VDC operation

HC-10 Digital World Clock

- **Two 24-hour displays with quartz time base**
  Right display: local (or UTC) hour, minute, second, day. Left display: month, date, world time in various cities, memory time (QSO starting time), and time difference (in hours from UTC).
- **Time in 10 cities around the world**
  Plus two additional programmable time zones.
- **"TOMORROW" and "YESTERDAY" indicators**
- **Memorizes present time**
  And recalls later, for logging purposes.
- **High accuracy**
  ±10 seconds/month

DX World

(continued from page 27)

YJ8NMP	—JF2PZH	6G1AA	—XE2AA
YL1P	—UA2ADG	6O1TI	—I0SSW
YL6A	—UA3ACW	6O9DX	—I2YAE
ZB2CN	—JH8SCA	6W8JI	—WA4VDE
ZF2AH	—WA6VNR		*(See Note 1)*
ZF2AU	—W4MLA	6W8XX	—KB9KN
ZF2FC	—WB6NBR	6Y5KG	—VE3KGK
ZL2UW/C	—ZL2UW	8J3ITU	—JH3DPB
ZL9AAB	—VK9NS	8J9ITU	—JA9WKT
ZM7JS	—VK9NS	8P6CX	—K2QIE
ZM7KD	—VK2BKD	8P6KX/J6L	—WB2WSV
ZM7ZR	—VK2BJL	8P6OR	—K5MHZ
ZW7ITU	—PY1NEZ	8P6PF	—VE3LVK
3B8AE/3B9	—3B8CF	8P6MI	—VE3JTQ
3B8DZ	—K5BDX	8Q7BH	—JH4RUG
3B8MS	—VE3TEN	8Q7BI	—JH4RUG
3D2JS	—KL7CQ	8Q7BJ	—JH4RUG
3D2TT	—4Z4TT	8Q7BK	—JH4RUG
4K1B	—UA3XBP	8Q7UT	—JH4RUG
4V2BM	—KA4MRE	8R1AP	—OZ8PG
4X6BL	—N2BQL	9G1NV	—N8AXF
4X6DX	—N2BZQ	9G1RD	—WD8PLH
4Z4TT/KH8	—4Z4TT	9H1FBS	—N5APW
5B4KE	—OE2SCL	9H3BI	—VK2AKP
5N6ENV	—K4PVZ	9J2TJ	—N8JW
5N0KUY	—JI1IMI	9M8PW	—G4DXC
5T5ZZ	—W4LZZ	9U5JM	—WA4VDE
5W1DG	—VK9NS		*(See Note 1)*
5W1DH	—VK2BKD	9X5MH	—WA4VDE
5W1DI	—VK2BJL		*(See Note 1)*
5Z4RL	—WA4VDE	9Y4XX	—WA6KZI
	(See Note 1)		
5Z4YV	—JA2KLT		
6E1MV	—XE1MV		

J28CH	—P.O. Box 814, Djibouti
J28CL	—P.O. Box 215, Arkar, Djibouti
KG4ET	—FPO 35B, Norfolk, VA 23593
PW8AL	—P.O. Box 21, Guajara, Mirim, Brazil 78980
SU1AL	—Lotfu Morsy El Mahoy, P.O. Box 109, Giza, Egypt
TL8GE	—Michel, P.O. Box 156, Bangui, Central African Empire
TU4AY	—Aaron Nov 01BP1651, Aberjzan 01, Ivory Coast
VK9NL	—Kirsti Jenkins-Smith, P.O. Box 103, Norfolk Island, Australia 2899
XT2BG	—P.O. Box 182, Ouagadougou, Voltaic Republic
ZK1CG/KH8	—P.O. Box 38, Rarotonga, Cook Islands
ZZ2AA	—P.O. Box 22, 01.000 Sao Paulo (SP), Brazil
3D2EB	—P.O. Box 2722, Aukland, New Zealand
5N2LED	—P.O. Box 900, Minna, Nigeria
7Q7LW	—LW Sampson, P.O. Box 24, Mtakataka, Malawi
9G1TN	—P.O. Box 625, Tematema, Ghana
9X5WP	—Wes Parker, P.O. Box 1, Nyanza, Rwanda

Notes:

1. The QSL route for these stations applies only for contacts made by Ed Richmond, W4MGN. The address for WA4VDE: Bill Dunbar, Route 5, Box 107, Canton, GA 30114.
2. This applies for CW only contacts made by Dave Fisk, KA1CY.
3. This is a DXpedition by the North Jersey DX Association.
4. If your CB isn't up-to-date for WB7AEX, Charlie Giannini, 10117 162nd Avenue NE, Redmond, WA 98052.
5. Jay Musikar, AF2C handles the Desecheo Island DXpedition operations by John Ackley, KP2A only.
6. For operations at TYA11 by Joseph Bernier, W4LZZ, QSL via John Parrott, Jr., W4FRU.

Thanks to the many contributors to this month's column. Without the help of the following, these would have been blank pages: W1UQ, W1CDC, K2TV, K5MHZ, WB6EXW, KR6O, W6WFV, KI7I, W8LCZ, W9DOR, W9LNQ, KH0AC, DJ9ZB, EI9CB, Southeastern DX Club, Northern California DX Club, Central Radio Club of Czechoslovakia, Lynx DX Group, *The DXers' Newsletter, Amateur Radio Action (Spectrum), DX News Sheet, The Long Island DX Bulletin,* and *The DX Bulletin.*

This September issue should have reached all stateside subscribers by late August. Considering that I submitted this column mid-July, that is a fast turnover in news. Therefore, if you have DX news that you wish to have printed in this column, please have it in the mails to me by the very beginning of the month. That way it will be out the following month. I hope you are enjoying the summer. Very 73, de John, N6JM. □

Jenning's corollary — The chance of the bread falling with the buttered side down is directly proportional to the cost of the carpet.

Montserrat DXpedition was a success

VP2MNQ — operated by Bykie Swainey, WA8NJR; Jim Stitt, WA8ONQ; John Walker, WB8IGY; Wayne McKenzie, W9OEH; and Bob Billings, VP2MX — has successfully completed the first EME contacts on 2 meters with Dave Olean, K1WHS and Laurent Blouin, K1MNS from Montserrat during the ARRL-sponsored June VHF contest. Donald Falle, VE2DFO and Richard Collister Jr., WA1JXN were heard by VP2MNQ but not worked.

The VHF-style DXpedition yielded another first on the evening of Sunday, 14 June when a short tropo opening on 2 meters resulted in the first stateside/VP2M QSOs with several Florida stations and Richard Maddren, KB4NW in South Carolina. The group also netted over 200 contacts on 6 meters to all call areas in the United States plus DX from KP4 to LU.

During low activity periods on VHF, the HF liaison station was kept busy in pileups on 80 through 10 meters. No QSOs were completed on 160 meters.

Equipment used by the VP2MNQ group was a Drake TR-6 and 6-element Telrex on 6 meters, and a TS-700A, Lunar preamp, Clipperton V amp, and an array of Cushcraft 32-19 Boomers on 2 meters. The Drake twins, SB-200, and Cushcraft A3 were used on HF.

QSLs should be sent to Wayne McKenzie, W9OEH with an SASE or IRCs.

Our thanks to Joe Burke, WA8OGS; Steve Whitefield, WA3OJX; and Tom Schuster, K8VVV for their assistance in the preparations, and to Earl Blust, W8HWB for maintaining daily schedules.

The Kiwanis Connection

Writing this in mid-July, I have just returned from the 66th Annual Kiwanis International Convention held in the Superdome, New Orleans, Louisiana. The story which led to the Courage HANDI-HAM System participating in that convention is one which should not only be told, but shouted far and wide . . .

First — about Kiwanis: Kiwanis International is a service organization comprised of some 7,000 Kiwanis clubs around the world with a total membership of over 300,000 men. A member of a Kiwanis club is a man who assumes personal responsibility for humanitarian and civic projects that public authorities are not able or prepared to perform. Some of the Kiwanis Goals are:

- to help alleviate barriers to communication;
- to keep our promises to children and youth;
- to bridge differences in understanding through common endeavor . . .

Kiwanis clubs are very active in providing services of every type for their communities. Sometimes you might see a baseball diamond built by a Kiwanis club; or a park outfitted with recreational equipment; or your community may have a hearing aid bank, thanks to a Kiwanis club. There are all kinds of community projects that a service club of this calibre can become involved in. It is, perhaps, providential that Kiwanis would have become interested in the Courage HANDI-HAM System recently . . .

Several things have come together in the past year to form the basis of cooperative effort between the Kiwanis International and the System. Last year, a Courage Center staff member, Bill Hopkins — a very active Kiwanian — was elected Governor of the Kiwanis Minnesota/Dakotas District. This same year, the President of Kiwanis International has been Merald Enstad, from Fergus Falls, who is familiar with the HANDI-HAM System. The major emphasis for Kiwanis projects was established: "Communications Disabilities" — that is, Kiwanis clubs are encouraged to engage themselves in projects leading to the alleviation of communiciations barriers.

All of these things pointed toward the System approaching Kiwanis with some special requests. The outcome has exceeded our fondest hopes.

Last year we approached the Kiwanis International Foundation with a request to underwrite the costs involved in printing our general information brochure and our quarterly newsletter, *HANDI-HAM WORLD.* The Foundation enthusiastically granted us the funds for these two projects.

Then, we approached the Foundation with a special request — a large sum of money to publish and distribute a booklet aimed at describing Amateur Radio to a handicapped population and detailing the HANDI-HAM System's services. This booklet would be designed to encourage handicapped persons to become "Radio ACTIVE" by getting on the air as Amateur Radio operators, with the help of the System.

The result of our request is such a booklet, entitled, *"How would you like to be . . . radioACTIVE?".* This 16-page, full color booklet has been completely funded by the Kiwanis Foundation. Furthermore, 30,000 copies of the booklet have been sent to the 7,000 Kiwanis clubs urging them to make this effort a part of their major emphasis by visiting handicapped persons in their community and giving them a copy of the booklet. Thus, Kiwanis clubs all over the world are helping the HANDI-HAM System serve more people by helping find the people in their communities who might be interested in becoming . . . radioACTIVE!

And, now, to the convention . . .

At the request of the Kiwanis Foundation, Tom Winn, W0MGG, Maureen Pranghofer, KF0I, and I attended the convention to demonstrate Amateur Radio to the Kiwanians attending. We set up a complete Amateur Radio station INSIDE the Superdome on Field Day weekend. Equipment consisted of an Omni-A, Hercules linear, KDK-144, Triband beam, Cushcraft 11-element 2-meter beam, and some handhelds. On 2 meters

e had no trouble at all "getting outside" e dome. On HF, however, we had all nds of problems. We were heard well ough, but with all of those arc lamps d steel inside the Dome, we just uldn't hear much.

At any rate, we did have the opportuni- of explaining Amateur Radio to many iwanians, and the operation, overall, as a huge success.

As you must know if you're a steady ader of this column, HANDI-HAM ser- es are provided at no charge to han- capped students and members of the stem. We are able to provide these ser- es thanks in large measure to the con- uing support of individuals and of ganizations like the Kiwanis. If you uld like more information on Kiwanis, if you would like a copy of the booklet, *How would you like to be . . . radioAC- VE?*" please drop me a line. Address is: **urage HANDI-HAM System, Bruce L. mphrys, K0HR, 3915 Golden Valley ad, Golden Valley, MN 55422.** □

Deaf break ound barrier

dy Hille

To the deaf, Amateur Radio can literal- mean the world.

For the last couple of years, Jack Lat- , KA7BUT of the Scottsdale Amateur dio Club has been teaching Amateur dio operation to four deaf men sociated with the Naomi K. Craig Com- nity Center for the Hearing Impaired, erated by the Valley Center for the af.

First, Lattin had to invent the equip- nt and the means to teach Morse code a universal language — to the deaf.

With the help of friend Clyde Baker, 7BQ, he has succeeded admirably, ating a system in which the deaf erators "hear" dots and dashes by plac- a finger on a vibrating speaker.

During the weekend of 27-28 June 1981, o of Lattin's deaf students — now nsed ham operators — participated th the Scottsdale Amateur Radio Club an annual Radio Field Day.

According to Lattin, this marks the t time deaf Amateur Radio operators ve participated.

The beauty of the system, Lattin ex- ained, is its simplicity and low cost. af people have no way to communicate th the outside world from their homes, less they can afford to pay $90 per nth to rent a teletype-telephone tem.

"Three percent of the Arizona popula- n is deaf," he said, "but only one- rth of 1 percent are able to afford the Y (teletype-telephone)."

A message sent in Morse code would ke six times longer to put through a Y, which makes long-distance rates ohibitive, Lattin said. The four licensed erators are now "copying" 12 to 15 rds per minute.

"That's quite an accomplishment," he ded. "They realize the potential. And en they're on the air, nobody knows ey're handicapped."

The deaf operators who will teach ers are Bruce Weir, president of the lley Center for the Deaf; Jim Goodson, a center board member; Alan Wilson and Laurence Plate.

Lattin and the other radio operators envision a countrywide network of "radio shacks" in deaf centers. Lattin said this is "a definite possibility," and that Weir is planning a nationwide tour to promote the plan.

Amateur Radio also can benefit the blind and the deaf and blind, whom Lattin calls "the forgotten people."

Lattin has spent one and a half years teaching Morse code and Amateur Radio operation to a deaf and blind person, J.C. Buckner of Scottsdale.

"He's coming along very, very well," Lattin said.

The program's potential has created a waiting list of people wanting to learn.

Scraping up money for equipment, much of which Lattin assembles from donated parts, has been a problem. However, Lattin said, "You learn to improvise when there's no money."

Dottie Brown, K7ESA — an SARC member who, like Lattin, spends many volunteer hours at the center — is helping raise money for the program. In 18 months, she's raised $900 by collecting aluminum cans. "The junk man knows me well," she joked.

Although it costs money to get on the air, Amateur Radio equipment for the deaf is relatively inexpensive. The Morse code radio is the cheapest, Lattin said.

On Thursday, 2 July, deaf Amateur Radio operators shared their experiences and demonstrated their on-the-air proficiency to members of the Arizona Amateur Radio Club. Their modified equipment was displayed, along with the latest ham technological advances.

— *The Arizona Republic* □

Let Worldradio know what you do in Amateur Radio; many others will be interested in your experiences.

Vern Hansen,
WB6UWQ/AAA9W

The following article, entitled "Restored Wind Generator Powers Ham Broadcasts," appeared originally in the Littleton, Colorado newspaper **The Independent,** *28 May 1981. The article tells about C. R. "Andy" Anderson, WA0UUG/AAR8AA, and his wind-powered energy project.*

The propeller which turns in the wind above "Andy" Anderson's home in Columbine Hills is more than just an energy experiment. It's a look back at history for a glimpse into the future.

Anderson grew up on a farm in southwest Nebraska in the late 1920s and early 1930s, when some of the ranchers not yet served by the Rural Electric Association ran radios and a few lights off wind-powered DC generators.

Anderson said he was always fascinated by anything mechanical and never had a chance to learn how the wind-chargers worked.

Retirement gave him some time to spend on genuine interests, and he began asking friends and acquaintances if they knew where he could get an old wind turbine. An Amateur Radio operator came back over the airways one day nearly two years ago to say he knew where one was in a rancher's junk pile in North Platte, Nebraska.

When Anderson got the relic, parts were missing and it was rusted so badly its colors were not visible. In cleaning and restoring it, Anderson found out he had a Model 85 Wincharger manufactured in Sioux City, Iowa. It has a 32-volt DC generator.

After a year's work, Anderson was able to completely restore it and mount it on a 25-foot tower in his backyard. It produces enough power to run Anderson's radio and a light to see by during radio transmission. It wouldn't be a practical system for someone looking for a way to cut Public Service bills, he said, but it serves a useful purpose for Anderson, a member of the Military Affiliate Radio System. (MARS, as most amateurs know, is an organization of licensed Amateur Radio operators trained to handle communications for military commanders and other officials during local or national emergencies.)

The volunteers train for emergency situations by sending and receiving messages for military personnel and their families. A message from Denver might take 10 days to get to its destination in Korea by mail. It can complete a chain of radio relays within three days unless the final exchange must be handled by mail.

If an emergency existed, local power could very well be down. Anderson's radio would run (as it does at all times) off four 6-volt golf cart batteries charged by the wind. He could achieve the same end by using a gas generator such as hospitals use during power outages, but it wouldn't give nearly the satisfaction as the experiment sparked by boyhood memories. □

Brett Flathers, KJ0K in his ham shack. ***(Photo by Bob Tims, WD0AQZ)***

16-year-old earns Extra

Arnold Sexe, WB0OPZ

Sixteen-year-old Brett Flathers, son of Mike and Linda Flathers of Worthington, Minnesota received his Extra license this spring and now has received his new call KJ0K. Brett's former call was WD0APT. Brett began his Amateur Radio hobby when he received his Novice ticket in April of 1977. He upgraded to General in July 1977 and received his Advanced license in 1978.

Brett operates a Kenwood TS-180 with an AT-200 tuner and a TH6DXX beam and half-wave dipole for antennas. Brett works SSTV often and is considering adding a computer to his equipment. For 2-meters, Brett uses a Yaesu Memorizer and 2-meter beam. Brett has certificates for WAS and WAC. Now that he has his new call he has applied for his DXCC award.

Brett is an active member of the Worthington Amateur Radio Club and a life member of ARRL. Next year he will be a junior at Worthington Senior High School. □

MARS test completed

Submitted by Fred McGee

A test exercise of the Military Affiliate Radio System (MARS) originated recently from the Joseph F. Bartsch Army National Guard in Moundsville (West Virginia) under the supervision of Edward Muiznieks of New Martinsville, who termed the communications operation a success.

According to Lt. Bernard Muiznieks, a member of the West Virginia National Guard's 152nd Military Police (MP) Center in Moundsville, the National Guard in West Virginia does not have a MARS communications system, but he is hopeful that the recent exercise may lead to a statewide system.

Mr. Muiznieks, who has had a Navy MARS license for some 20 years, is owner of the New Martinsville TV Sales and Service, and has been interested in electronics and Amateur Radio for many years.

—The Region Commentary, WV □

Packet radio

Ken Moore, W6WIS

This report is addressed to RTTY and computer enthusiasts and anyone else having an interest in printed record communications.

Can you visualize a single VHF FM channel supporting something like 225 simultaneous contacts (450 users) including a repeater (same channel) where currently a single channel will support only one contact at a time (two or more users talking to each other)? This comparison is based on simple mathematics comparing packet radio with conventional RTTY. Not only this, but a user may read into or out of the packet radio system with a conventional teletype machine using Baudot, ASCII, or any flavor of computer device. The user may type into the system at 10 wpm or 60 wpm and be completely compatible with the system. Also, the user's printer will only print out the information addressed to him.

Imagine a repeater (or communications node, as this station is defined in the packet system) having only one antenna and no complex duplexers. The repeater need only be a conventional transceiver, with a few minor modifications, an electronics control package, and a power supply. Wouldn't this be simple to install in an emergency?!

So what is packet radio all about? Packet radio is the term applied to Amateur Radio data link communications by the Vancouver Amateur Digital Communications Organization (British Columbia). Bursts of data or "packets" are sent at a 1200 baud rate as compared to 60 wpm RTTY at a 45.45 baud rate. Each packet transmission consists of a preamble giving station identification, the addressee, routing information or instructions, followed by a frame of information (data) which is presently defined as 72 characters or one line of printing. This is followed by a frame check sequence and a stop flag. The routine information is inserted automatically once the operator has inserted the information with his printer.

So how does this data get transmitted? A packet station requires a specialized terminal unit (TU) which is programmed to accept Baudot or ASCII or EIA RS232 (computer) according to the users input/output device. This, in turn, feeds into a model 202 data modem (stated as readily available from surplus sources). The information to be transmitted is formatted and held in a buffer (stored) while the communications node is interrogated automatically by the station transceiver. Upon receipt of a "clear to send", the information is zapped to the communications node station at the 1200 baud rate where it is again buffered before routing to the addressee or the next repeater in the routing to the ultimate destination. The information is stored upon final arrival where it is then converted to the proper machine code to print out to the addressee. At each relay point, the data is automatically checked for accuracy and regenerated for the next communications link.

The process sounds lengthy but it all happens in a matter of seconds. These packets or data bursts are zapping back and forth in an orderly controlled fashion. Two transmissions originating simultaneously will interfere and therefore not be acknowledged so they will automatically be retransmitted but at a random time separation which assures they will not be simultaneous on the next transmission.

So how is this "revolutionary" new system going to get launched? It has already been started. There is already a "packet network" in Vancouver, British

(*please turn to page 48*)

Base Your VHF/UHF Station on ICOM

Enjoy local contacts and have the lure of far off DX on a band that is capable of worldwide communications on just a few watts. The **ICOM IC-551** (10W) and **IC-551D** (80W) series transceivers provide full 6 meter coverage in a multimode package. Talk to your ICOM dealer concerning options.

ICOM's 2 meter multimode transceiver, the **IC-251A**, provides the latest technology in communications on one of ham radio's most active bands. Have fun ragchewing with your friends, coordinate events or use the **IC-251A's** sideband capability as an Oscar link. Simplex SSB on 2 meter is growing - be there.

The **IC-451A** provides space age technology for space communications. Satellites, EME and local modes of communications are available by basing a system on ICOM's full featured 432 MHz transceiver.

2112 116th N.E., Bellevue, WA 98004 / 3331 Towerwood Drive, Dallas, TX 75234

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

ICOM

...Simply the Best

AMSAT OSCAR K6PGX

Dr. Norman L. Chalfin

As you are reading this, UOSAT may already have been launched. The planned launch date was 15 September at 4:19 a.m. from the Western Test Range of NASA at Lompoc, California. UOSAT was to have a secondary payload ride with the Solar Mesosphere Explorer Satellite on a Delta rocket. The Satellite is a JPL project for NASA in which studies are being made of the ozone layer around the Earth.

The reason for the lack of certainty in the above expression of the event is that I waited even beyond my deadline for this issue for material expected from the AMSAT UK group at the University of Surrey in England, who are the designers, builders and controllers of the UOSAT. Since it has not arrived, we must plan for its inclusion in a forthcoming column (probably the next issue).

Should you hear unusual signals in the HF bands, on 2 meters, 70cm or — if you are appropriately equipped — on the 1.2 or 10 GHz bands, the signals may be the UOSAT. It is only a downlink satellite, so you will be unable to make any contact with it. When it is in operation you will hear beacon signals from it in CW, or synthesized digitally generated voice signals, or Slow Scan TV signals on 2 meters.

If you refer back to the March 1981 column on page 34 of **Worldradio**, there is a listing of the telemetry frame format. The general data beacon will have an output at 145.85 MHz. The modulation is NBFM so that anyone with a 2-meter FM transceiver set to receive on 145.85 should be able to receive these signals. The data is transmitted 1200 bits per line afsk on the channel so that making a recording on a cassette or other tape would make it possible for later translation on an appropriate machine.

The engineering data beacon will be transmitting on 435.05 MHz. The modulation will be bi-phase PSK.

HF beacons will transmit on 7.050 MHz, 14.002 MHz, 21.002 MHz and 29.510 MHz. Microwave beacons will transmit at 2.4 GHz and 10.47 GHz.

SSTV will be transmitted on the 2-meter band with a 256 × 256 pixel format in a digital array with 16 gray levels. The transit time per frame is about three and a half minutes. Among the material we were awaiting from England, there was to have been included details of conversion equipment so that the images could be viewed on TV screens just as present SSTV images are.

For all amateurs — regardless of their band preferences — there seems to be something available to engage in satellite experimentation. At the very least, you will find something to listen to.

For those who like a real challenge, try to pick up the beacon on 1296 MHz which is being beamed from the San Francisco Bay Area to South Central California. Should you pick it up, contact Paul Schuh, N6XT. This is the beacon which is anticipating the SYNCART project activity when the proposed synchronous satellite becomes a reality.

AMSAT/OSCAR-7, as of this writing, must be presumed no longer operable. Bud Schultz, W6CG and George Dillon, W6ELT have tried repeatedly to transmit signals through the translator with only a couple of dots of capability to respond. During the weekend of 11 July, telemetry was reported from reliable sources. Keep your fingers crossed!

You may want to keep the AMSAT/OSCAR-7 story alive in your memory. There is a set of 21 frames of the spacecraft being assembled and launched. The set is available from K6PGX, P.O. Box 463, Pasadena, CA 91102 for a $5 donation to AMSAT plus 69 cents postage in the United States. Foreign postage for four ounces should be provided for overseas mailing. The set includes a full script.

The individual titles are listed below:

1. WA4DGU constructing the 2 to 10-meter transponder.
2. 2 to 10-meter transponder before encapsulation.
3. 70cm-to-2m transponder receiver.
4. 70cm-2m transponder transmitter.
5. 70cm-to2m transponder modulator.
6. Command decoder.
7. Wiring harness.
8. Spacecraft interior.
9. Spacecraft with solar panels in place.
10. 435.1 MHz beacon transmitter.
11. Morse code telemetry encoder.
12. Experiment control logic.
13. Battery charge regulator.
14. Nickel-cadmium battery.
15. Hybrid/diplexer module.
16. K3JTE, K6GSJ, W5CAY, DJ4ZC, K6HIJ, VK3ZPI, and W3GEY at Experimenters' Meeting.
17. Vibration test.
18. Installation in the Delta launch vehicle.
19. Spacecraft after installation in launch vehicle.
20. Launch!
21. Figure "7" drawn in the sky following launch.

If your historical interests go beyond that, there are slides available of the OSCAR program including OSCAR 1 through Phase IIIA. For further information, send an SASE with 35 cents postage for a complete listing. Please use a #10 envelope. Also included with the list will be information on black and white prints that are available. The slides are all in color.

ESA council affirms AMSAT slot

In a telex to AMSAT DL Headquarters in Marburg, West Germany, ESA (European Space Agency) Director General Erik Quistgaard confirmed that AMSAT will obtain its launch in 1982. The co-passenger aboard the *Ariane* will be ECS-1, the European Communications Satellite which will provide commercial service.

What was not specified in the telex was a particular date, though AMSAT officials suspect the so-called "nominal" launch window is generally centered on October 1982. There has been a strong suggestion that the launch might be advanced. If the advance were made, the launch of AMSAT's Phase IIIB might come as early as April 1982. However, a more realistic date — according to Engineering Vice President Jan King, W3GEY — is June 1982, "if any advance takes place."

In related actions, AMSAT DL President Karl Meinzer, DJ4ZC, was in Paris recently for the initial mechanical/electrical interface meeting with ESA officials. The meeting transpired with only positive results. Meanwhile, technicians at Marburg had begun the construction of an adapter cone to mate Phase IIIB to the SYLDA. The SYLDA is the container in which ECS-1 will ride atop *Ariane's* third stage. AMSAT will ride on the very top of the SYLDA and thus be on the very top of *Ariane*, rather than the configuration used on LO2. There Phase IIIA rode on the side of the application technology capsule (CAT) and just beneath Firewheel.

The experimenters who built the ill-fated Firewheel satellite at the Max Planck Institute have recently announced that they, too, have a replacement satellite for the vehicle lost on LO2. The Institute is developing a new, multi-spacecraft experiment to probe the solar wind. This will be a partial follow-up to the lost Firewheel. Called AMPTE (Active Magnetospheric Particle Tracer Explorer), the experiment will release quantities of lithium and barium into the solar wind and the "tail" of Earth's magnetosphere. The magnetosphere is a very large region of space around the Earth in the shape of a torus (donut), and which is responsible for the famous Van Allen Radiation Belts which are high energy particles trapped by the belts. The "tail" of the magnetosphere is the elongation of the torus "downwind" due to the interaction of the solar wind and the magnetosphere. AMPTE will explore the mass transfer from the solar wind into the Earth's magnetosphere and circulation of the matter inside the tail and magnetosphere. Present anticipated launch date for AMPTE is 1984 aboard a NASA Thor-Delta from Cape Canaveral.
— from ASR, 13 July 1981

The AMSAT QSL card (see photo) is available at this time. A sample and order blank will be sent to any one requesting it with an SASE (18 cents). The QSL is a simple clean design in which the space adventure is clear. Over a NASA Apollo 16 image of our blue planet Earth hovers a yellow green image of the Phase III spacecraft obtained from AMSAT Deutschland.

The image of the Earth is blue and the Phase III spacecraft is green in this AMSAT QSL card available to AMSAT members.

The kick motor points to the upper right. Since the flat, black 2-meter antennas don't show up against the blackness of space, what results is a technically correct orientation of Phase III with respect to Earth. The "holes" in the clouds just to the left of the "swirl" are Lakes Superior and Michigan.

The QSL data section is also kept simple, but is especially optimized for satellite QSOs. The RS(T) portion is eliminated from the formal data, but may be added by those who still require this data. There is also a space on the back for stick-ons indicating, if you wish, club affiliations and awards.

We strongly believe the distinctive nature of this QSL is in keeping with the distinguished interests of our ardent supporters.

Flash flash flash

A contingent of ARRL officials made an unprecedented contribution to AMSAT for the Phase III program. Representing the ARRL Foundation, Mr. George Dupont, WA1SVY presented AMSAT President Tom Clark, W3IWI with a check for $56,000. Also on hand for the presentation at the AMSAT Laboratory at the Goddard Space Flight Center was ARRL Atlantic Division Vice Director Hugh Turnbull, W3ABC.

AMSAT officials present included Vice Presidents Richard Zwirko, K1HTV and Jan King, W3GEY; Office Manager Martha Saragovitz; AMSAT Staff Engineer Gordon Hardman, ZS1FE; and a surprise, honored guest — Dave Liberman, XE1TU, President of AMSAT Mexico.

T-shirt limerick winners aired

The decision of the judges is in and the winners of AMSAT's "Ham-in-Space" T-shirt limerick contest are:

First Place: Brian Tandrow, KR6B of Simi Valley, California.

Second Place: Doug Loughmiller, KO5I of Paris, Texas.

Third Place: Kaz Deskur, K2ZRO of Endicott, New York.

Honorable mention goes to P.J.A. Gowen, G3IOR; Bill Clepper, Jr., W3HV; and Dave Olean, K1WHS.

Brian's winning limerick was:

There once was a ham from LA.
Who said, "For this shirt I must pay,
Unless I can rhyme
About pigs, one more time . . .
And help get Phase III on its way."

Congratulations to the winners. Your Hams-in-Space T-shirts will be on their way. Thanks to all the participants, and keep thinking T-shirt, Hams-in-Space and Phase III. □

Silent Key

Harold J. Wheelock,
W6SWC, 1912-1981

Hal left Cedars-Sinai Hospital on 20 April 1981, to recuperate at home with his newly implanted pace-maker, but on Saturday, 25 April 1981, Hal wasn't going to be with us any more to brighten our days with a wry pun or the flip of a coin. No longer would Hal be available to serve the lab (Jet Propulsion Laboratory) with his outstanding skills as a technical writer.

Hal wasn't very active as an amateur, but he put his superb expertise to use for us when the first airborne test flight of OSCAR 6 was being wrapped up by Booth Hartley, N6BH and Maurice Piroumian, WA6OPB. In fulfillment of a carefully laid plan, **73 Magazine** was standing by in New Hampshire with a tape recorder ready to receive the story of this historic first test on the West Coast of the Satellite Communications System. An HF net had been set up by the JPL Amateur Radio Club to provide both mission coordination and a data dump for Hal's article when Booth and Maurice landed in Palo Alto at the end of the day.

Seated at his trusty typewriter in a quiet corner in my home (W6HCD) awaiting the results of the all-day test flight, Hal listened carefully to the tapes of the report, then attacked the typewriter with ferocity, having the fastest fingers in the West! When the first six pages of the story had accumulated, I phoned **73** at midnight (their time) and began dictating. The data flow was almost in-sync as Hal formulated the story and simultaneously typed it out. The well organized article was published in **73 Magazine**, November 1971, on page 73. You would never know that Hal had to write it under pressure in real time — a fantastic accomplishment, and a unique contribution to the JPL Amateur Radio Club.

Our fine colleague came to JPL in 1952 with a BA from USC (University of Southern California). His skills in written communications as a key member of the Technical Documentation Section were fully utilized by Dr. William Pickering for many years. Hal was Section Manager at the time he became a Silent Key. We all miss you, Hal.
—Written by A. Nash Williams, W6HCD

CLUBS

ARNS/newsletter digest

ARNS (Amateur Radio News Service) is just a bit of a misnomer. It began in Philadelphia in 1965 for the purpose of publishing articles helpful to the production of a club newsletter. Any aspect of getting the club paper out from start to finish, submitted by any ARNS member, is printed. It was to be a sharing of ideas from each member to all the other members. The success of this depends on contributions by the membership.

Most of the bulletin, however, is composed of articles from various newsletters across the country. If you don't care to buy several club newsletters just to see how other clubs put their final product together and what they print, this is a fine sampling for you all in one publication. You don't have to be an editor to join them; if you just want interesting reading and short articles you can still join.

There is a $1 initiation fee with a $5 membership which includes a subscription to the ARNS Bulletin. Mail to: Frances Norrick, WB9WPS, SEC, ARNS, Route 6, Box 239, Kankakee, IL 60901. □

Recording for blind

Jennifer Roe, WA6OHX

Lenore Jensen, W6NAZ and OM Bob, W6VGQ are tackling quite a project. They are recording the *1981 ARRL Handbook* for the blind.

—Simi Settlers ARC □

New club in Caribbean

A new radio club has been formed on the island of St. Maarten in the Caribbean. The club (Sint Maarten Amateur Radio Club) was organized in 1980 and meets monthly. The group operates its own repeater — PJ7R, on 146.16/76 — and has applied for a club station with the call of PJ7A. When funds permit, they may have a club station on the air and available to visiting members.

Club dues are $10 per year. Club bylaws and constitution, as well as repeater information and a club membership list, are available to members. Charter members include Iris, W6QL and Lloyd Colvin, W6KG.

For further information, contact any of the club officers: Robert Gilmoor, PJ7GIL, president; Simon Carty, PJ7CS, treasurer; Ed Benjamin, PJ7EB, secretary; and Mort Bardfield, PJ8UQ, overseas secretary. □

Handicapped need your talent

Vince Luciani, K2VJ

Considering the tremendous technical talent each club holds, there is always need for a better "mousetrap" operating aid for handicapped members of the hobby. You know the blind "see" their meters, and you may know the deaf "hear" code. Do you know how quadraplegics operate their ham sets? You may believe there is need for the kind of technical expertise which develops new techniques.

You can do this in your own club if you get together on it. It just might be a fine way to inspire the membership your club membership into a togetherness bit, and might well lead to substantially increased membership when the inevitable publicity starts coming in.

Net works half-marathon

Members of the Lincoln Amateur Radio Club of Lincoln, Nebraska got a chance to use their skills in a new activity on Sunday, 12 April, when they supplied communications between checkpoints for sponsors of the Union College half-marathon. The club was also asked to provide race and emergency first aid communications; however, no emergencies developed, so the net — WR0AEV (146.25/85) — was concerned only with the movement of the runners, and assisting crowd control and timers.

Twenty-five amateurs took part in the event.

Crescenta Valley ARC

The Crescenta Valley Amateur Radio Club meets monthly, on each second Thursday, except May and December. The meeting place is the basement of the Glendale Federal Savings building, located at 2350 Honolulu Ave., Montrose, California. Meetings begin at 8:00 p.m.

A breakfast meeting is held the fourth Saturday of each month, 8:30 a.m., at Lloyds Restaurant, 1004 Foothill Blvd., La Canada, California.

The club address is P.O. Box 593, La Canada, CA 91011. The club also has their own repeater — WA6FEQ/rpt, 146.625/146.025. □

Bean-feed a success

Submitted by Harry Hall

The Annual Bean-feed and Swapfest of The Mesilla Valley Radio Club, Las Cruces, New Mexico has been held the last Sunday of April for the past 17 years. This year the weather and attendance was very good. Members from Albuquerque's Roadrunner and Breakfast Clubs, as well as amateurs from El Paso, Texas were present. New Mexico pinto beans and other food was served all day. Everyone had a most enjoyable time and plans for next year's bean-feed are being made. □

If a foreign amateur visits your area, do a picture story for WORLDRADIO.

Luciano Colombo, I2BEL (right) sits next to Ralph Swanson, WB6JBI at a recent meeting of the Anaheim Amateur Radio Association. Luciano was in Southern California on a business trip, and took advantage of the chance to have eyeball QSOs with some of those whom he's worked from his home station in Varese, Italy. He was quite active in providing emergency communications during the devastating earthquake that rocked Italy in November 1980. (*Photo by Joe Moell, WA6JFP*)

MARITIME MOBILE

Since September is back to school time, let's get back to some basics on marine high frequency antennas. This month we'll look at antenna possibilities for your powerboat. Next month we'll consider antennas for sailboats.

Powerboats

To operate on frequencies from 10 meters to 80 meters, there are several antennas that will work well for each band of operation.

Mobile whip antennas are one way to go. These antennas are relatively easy to tune for single band operation by simply lengthening or shortening the whip assembly that screws into the coil. Hustler high frequency mobile antennas, 3275 North "B" Avenue, Kissimmee, FL 32741, are quite popular.

AHF antennas, 2814 South Baywater Avenue, San Pedro, CA 90731, are also favorites among mariners. The AHF antennas also feature additional loading coils or marine band frequencies.

Cubic Communications, 305 Airport Road, Oceanside, CA 92054, also produces several varieties of mobile antennas that may be used aboard your boat. One interesting antenna is their Model M-34 that features four coils simultaneously mounted on the mast, which means no coil changing in heavy seas when you change bands.

On the other antennas mentioned

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.

VISIT YOUR LOCAL RADIO CLUB

ARIZONA

Metropolitan Amateur Radio Club
J.C. Penny Restaurant, El Con
Tucson, AZ
Call in on 34/94 K7CC/R
Every Saturday morning - 8:00 a.m.

CALIFORNIA

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

Lake Elsinore Valley Radio Club
Wildomar Elem. Sch. (corner Palomar Rd. & Central)
Take Baxter Rd. turn off 71 Freeway
Monitor 146.55 simplex
3rd Thursday/monthly — 7:30 p.m.

Marin Amateur Radio Club (Founded 1933)
Coop Meeting Room
71 Tamal Vista Blvd.
Corte Madera, CA 94925
1st Friday/monthly — 8:00 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

Sonoma County Radio Amateurs, Inc.
Box 116
Santa Rosa, CA 95401
3400 Chanate Rd.
1st Wednesday/monthly 8 p.m.

S.C.A.T.S./WB6LBU
S. CA Amateur Transmitting Society
P.O. Box 1770, Covina, CA 91722
Cortze Park Rec. Hall
1st Monday/monthly — 7:00 p.m.

Stockton Amateur Radio Club
University of the Pacific, Room 122
2nd Wednesday/monthly — 7:30 p.m.
Club repeater net roll call:
Wednesdays 8:00 p.m. — 147.165/765

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

Indian River Amateur Radio Club
P.O. 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.

GEORGIA

Atlanta Radio Club
Box 77171 Atlanta, GA 30357
1st Thursday/monthly — 7:30 p.m.
Community Rm./Perimeter Mall Shopping Center
Call (404) 971-HAMS Net Sun. 9:00 p.m. 146.22/82

Columbus Amateur Radio Club (CARC)
David Nulty, N4ATI, Secretary (404) 687-3272
The Quonset Hut next to Food Stamp Center
Buena Vista Road at the "Spider Web"
2nd and 4th Thursday/monthly 7:30 p.m.

ILLINOIS

Radio Amateur Megacycle Society
Irvingwood Acacia Church
3900 N. Plainfield
Chicago, IL 60634
3rd Friday/monthly — 8:00 p.m.

Tri-Tower Radio Amateur Club
P.O. Box 302, Hazelcrest, IL 60429
Above Hazelcrest Police Station
Net every Wed. 8 p.m./146.49 MHz
1st & 3rd Friday/monthly — 8 p.m.

INDIANA

Allen Co. Amateur Radio Tech'l Society, Inc.
P.O. Box 10342, Ft. Wayne, IN 46851
Allen-Wells Chapter House • Amer. Red Cross
1212 E. California Rd., Ft. Wayne, IN 46825
3rd Tuesday/monthly — 7:30 p.m.

Fort Wayne Radio Club
Ron Koczor, K9TUS
2512 Glenwood Ave., Fort Wayne, IN 46805
The Salem Church
3rd Friday/monthly — 7:30 p.m.

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
3rd Tuesday/monthly

NEW JERSEY

Glouster County ARC, W2NMD
PO Box 370, Pitman, NJ 08071
American Legion Post
Delsea Dr., Rt. 47, Clayton, NJ
1st Wednesday/monthly — 8:00 p.m.

Old Bridge Radio Assoc. (OBRA)
Cheesequake Firehouse — Route 34
Old Bridge Township, NJ
Daily 8 p.m. Net on 147.72/.12 MHz
3rd Thursday/alternate (odd) months 8 p.m.

NEW MEXICO

Eastern New Mexico ARC
First National Bank, Clovis
Box 206 • Clovis, NM 88101
(505) 763-6960/356-5993
2nd Tuesday/monthly — 7:30 p.m.

NEW YORK

Genesee Radio Amateurs, Inc. (GRAM)
PO Box 572, Batavia, NY 14020
State Civil Defense Center, Batavia
(behind NYS School for the Blind)
3rd Friday/monthly — 7:30 p.m.

Staten Is. Amateur Radio Comm. (SIARC)
Northfield Savings Bank (side entrance)
Richmond and Castleman Avenues
Call KA2CUS (698-2006) or WA2KQN (981-0372)
3rd Thursday/monthly — 8:00 p.m.

OHIO

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

C.A.R.S. (The Clyde Amateur Radio Society)
Gary A. Kauffman, WB8MUG, Secretary
2nd Tuesday/monthly 7:30 p.m.
Community Rm., City Building, Clyde, OH
Repeater 147.075/.675 MHz

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

NOARS (Northern Ohio ARS, Inc.)
P.O. Box 354, Lorain, OH 44052
K8US (216) 988-2345/near OH T.P. Exit 8
3rd Monday/monthly — 7:30 p.m.
K8KRG/R 146.10/.70 — 144.55/145.15 —
449.8/444.8

OREGON

Clatskanie Amateur Radio Club
Route 2, Box 553
ClatsKanie, OR 97016
ClatsKanie Grade School Library
2nd Tuesday/monthly — 7:00 p.m.

TENNESSEE

Lakeway Amateur Radio Club
Roy A. Zeigler, Activities Mgr.
Rt. 11 Box 61, Morristown, TN 37814
State Area Vocational School
Last Thursday/monthly — 7:30 p.m.

Oak Ridge Amateur Radio Club
Dick Church, N4ARO (615) 482-9054
Oak Ridge Civic Center
W4SKH/R 146.28/.88
2nd and 4th Monday/monthly — 7:30 p.m.

TEXAS

Garland Amateur Radio Club (GARC)
146.775/146.175 K5QHD/R (Info Net Mon. 8 p.m.)
Garland Women's Activity Building
713 Austin Street, Garland
4th Monday/monthly — 7:30 p.m.

VIRGINIA

Southern Peninsula Amateur Radio Klub (SPARK)
P.O. Box 9029, Hampton, VA 23670
Call Steve Silsby, WA4BRL (804) 599-6877
VEPCO Bldg. (Pembroke and G St.)
1st and 3rd Wednesday/monthly

besides Cubic, when you change bands, you must go out and change coils.

Another unique mobile antenna that has been tested by this author is the new Anixter Mark, Incorporated, 4711 Golf Road, Skokie, IL 60076, line of high frequency fiberglass mobile whips. They offer sparkling white flexible whip antennas approximately six feet long for each band you plan to operate on. There is no tuning necessary — the whips seem to have a wide enough Q to work well on the phone portion of each band, providing they have a good ground system. If you plan to operate exclusively on 10 meters, there are literally hundreds of top quality CB antennas that work nicely when pruned slightly for the 10-meter band.

Tuning the loading coil mobile antenna requires a good 50 ohm dummy load to first tune your transmitter (if it requires tuning), and then a sensitive SWR bridge to tune out the reflected power while adjusting the top whip assembly. With a good ground system attached to your transceiver and to the ball mount that your antenna is screwed into, it's quite possible to tune down the SWR so it is flat.

All-band trap verticals may also work aboard powerboats. Although these trap verticals were originally intended for home installation, a good coating of epoxy marine paint will keep them looking ship-shape for several years.

The only fiberglass trap vertical specifically designed for marine installations is manufactured by Morad, 1125 Northwest 47th Street, Seattle, WA 98107. This antenna may be ordered specifically for five Amateur Radio bands, and they will build the antenna specifically to the exact frequency you wish to operate on.

A well-constructed aluminum trap vertical that works out very well aboard boats (that we have tested) is manufactured by Butternut Electronics Company, P.O. Box 1411, San Marcos, TX 78666. The Butternut needs a coating of paint before you leave it aboard, but it seems to be the easiest to assemble and the fastest to tune.

And then there are the excellent high frequency all-band vertical antennas manufactured by the antenna giants of the industry. Each of these antennas will work well if protected from the salt environment.

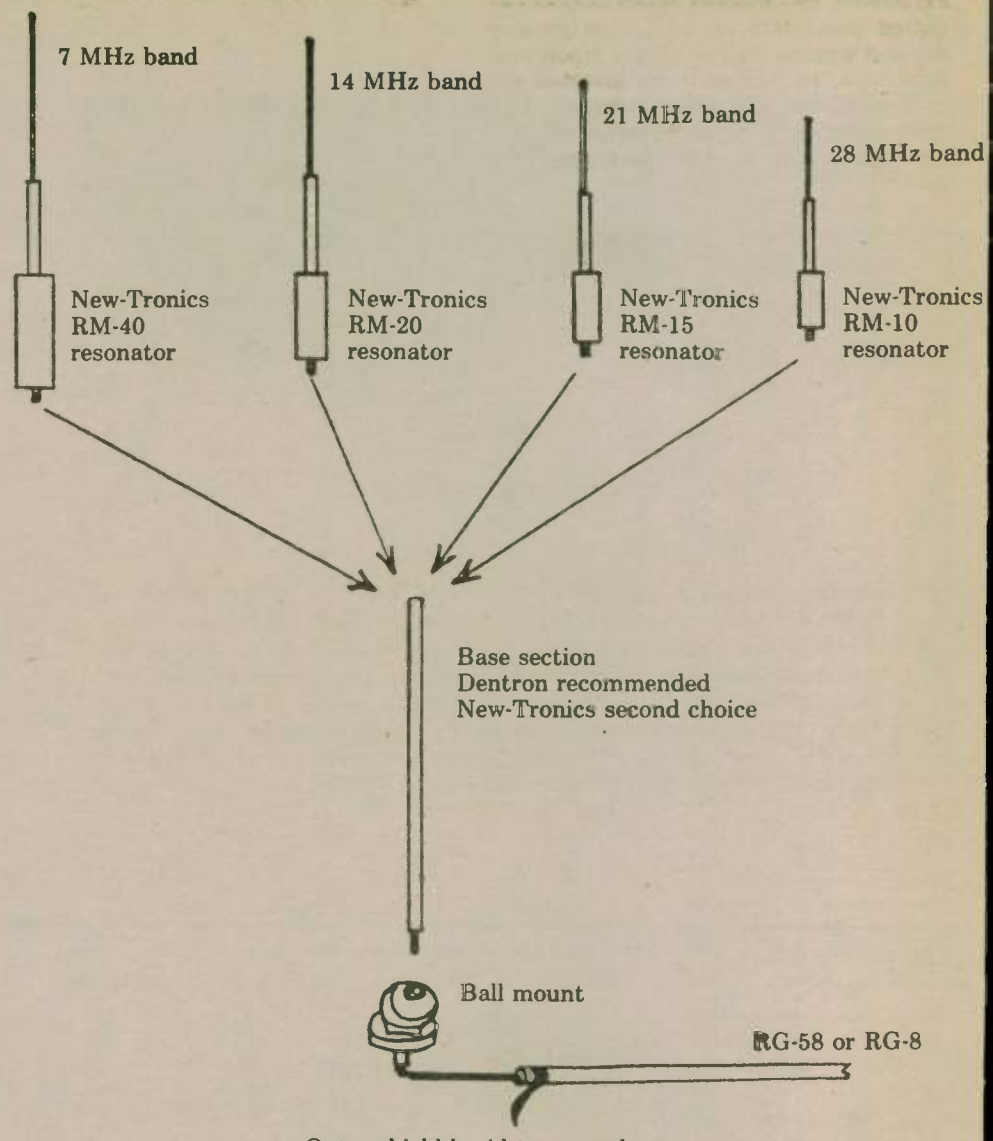
Vertical antennas, just like mobile antennas, still require a good seawater ground or a ground radial system that we will describe in upcoming months. The all-band trap vertical will also require a top section mount to keep it from flying off in heavy seas. And if it's aluminum, it will require painting.

The vertical whip is another way to go when wishing to operate on all bands with your maritime mobile set. Shakespeare Antenna Corporation, RFD 3, Newberry, SC 29108, offers a 23-foot white fiberglass vertical antenna that may be externally tuned between 2 MHz and 30 MHz. This antenna contains no loading coils, so you will require a long wire tuner to resonate it. It, too, will require a good seawater ground or ground radial system. Only antenna tuners with low impedance wing-nut long-wire connection on the back will work with this antenna. It's almost impossible to try and tune this antenna with an inexpensive 50 ohm coax cable tuner.

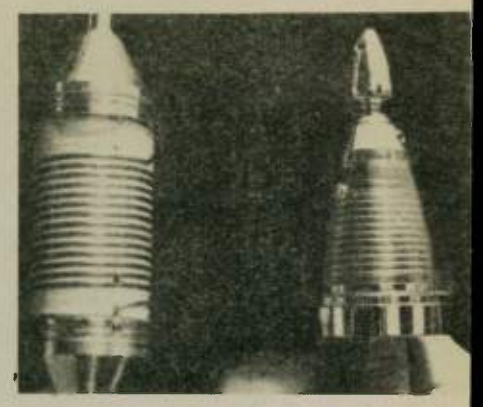
Other high frequency antennas that will work well aboard boats are the inverted vee and the simple dipole antenna. These are cut to frequency using the formula 468/F in MHz = a half-wavelength end to end, in feet. Each leg of the dipole or inverted vee will be a quarter-wavelength long, and no external ground is necessary. This antenna is a good performer, but since it is of a dipole design, the antenna is directional. Your main signal will be off of the side of the dipole, with minimum signal at the ends.

Another variety of the favorite dipole antenna is the trap dipole antenna that will work on all bands without the use of an antenna tuner.

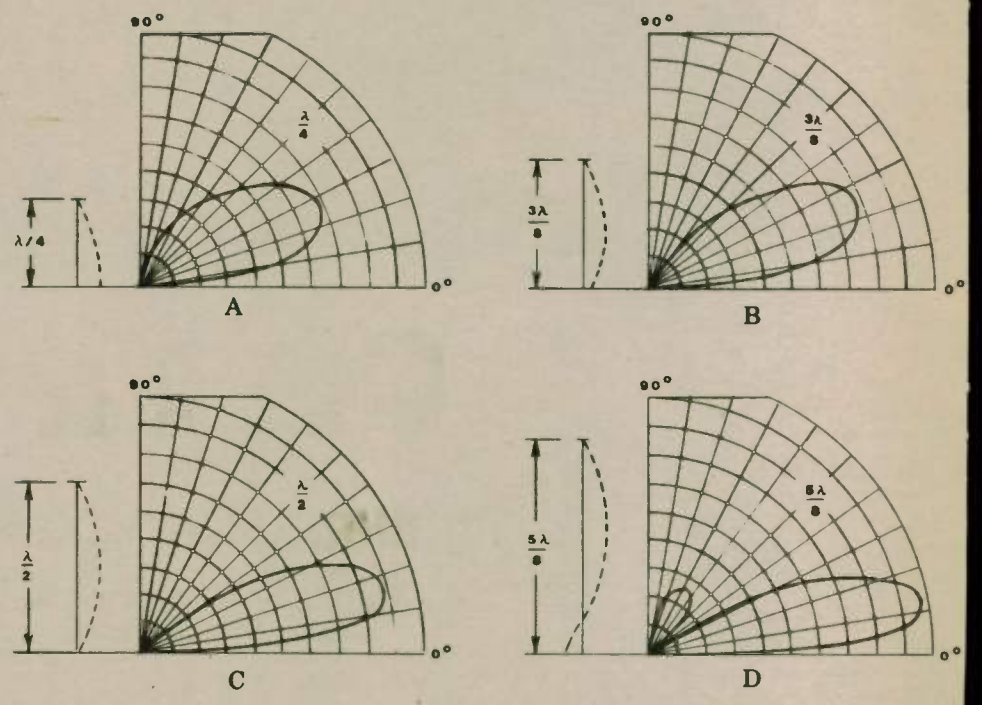
Tested by this author has been the Rex Bassett multiband dipole antenna (1633 Northeast 14th Avenue, Fort Lauderdale,



A. Mobile whips for high frequency. Courtesy Atlas.



B. A clear view of the mobile coil.



C. Vertical radiation patterns for trap vertical antennas from quarter- to five eighths wavelengths long, over seawater.

FL 33305). The Bassett dipole antenna required absolutely no additional grounding and worked well in both a dipole configuration, as well as in an inverted vee configuration. We also mounted this antenna aboard in an inverted L configuration, and it, too, performed admirably well.

D. Never mount a TV antenna on your vertical!

E. Multiple dipole, by Mor-Gain. Six bands in one.

VNW, 10 Canal Street, Bristol, PA 19007, also produces several broad-band folded dipole antennas that, when connected to antenna tuners, work just great. Your inexpensive 50 ohm tuner will work nicely with these antennas aboard.

If you're going to build your own dipole antenna, it's good to use a balun. There are really too many manufacturers of baluns to list each one separately, but the larger the balun, the less the losses. Also, make sure the balun is constructed well to guard against moisture seeping in.

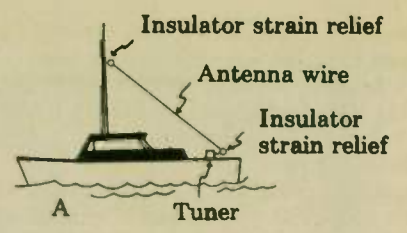
If you have a good ground system, you may even wish to consider a random long-wire antenna for marine installations. Once again, the long wire may become directional, and will most definitely require a top-notch long-wire antenna tuner for its operation.

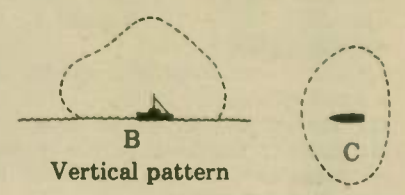
An interesting source of antenna testing information may also be obtained from a company called ARP, Box 164, Cataula, GA 31804. They offer a comprehensive journal that includes tests of Amateur Radio equipment and Amateur Radio base and mobile antennas, ideal for marine installations. Subscription rates are $13 for one year, and their testing procedures are above average in that they do not solicit commercial advertising.

Next month we'll take a look at sailboat high frequency antenna considerations. In the meantime, if I have left out any favorite marine type high frequency antennas — either base or mobile — be sure and let me know. Those that I have listed above have been *personally* tried aboard boats, and all exhibit good characteristics in getting the signal out into the air where you want it.

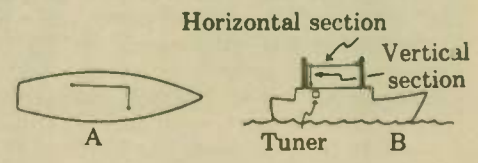
Next month: High frequency sailboat antenna considerations. □

Share your knowledge with your fellow amateur and Worldradio reader





Radiation patterns for 45° long wire



Long wire antenna installations

F. Courtesy Motorola.

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

Jammers and the FCC

The August issue of **Worldradio** carried another article on yet another couple of suspensions of amateur licenses by the FCC. For years, the amateur community in general was so devoted to the advancement of the electronic communications art, and the development of new electronic circuits and techniques, that we had very little trouble. We were considered "self-policing" by most. The FCC mostly had to be concerned that our experimenting did not cause problems or interference with other services, nor harm anyone.

"Old-timers" can tell of "bootleg activities;" however, the activities of these people seldom caused the great disruption that is so common today. Wanton jamming of others makes very little sense to anyone but the jammers themselves. Hundreds of articles have been written and published attempting to assist in alleviating this very serious problem. We will not soon forget the month we ran a full column on the "Profile of a Jammer" and when we received our copy of **Worldradio**, discovered that a psychologist had a full story on the same subject. Naturally, we were relieved to see we had essentially said the same things. Truth is truth, no matter how said, or by whom.

The big problem is, that no matter how profound, no matter how true, and no matter how logical, if it is not read and acted upon by the proper individuals, little will change. The circulation of **Worldradio** has grown considerably since the HAPPY FLYERS column began in 1976. The problem is not how many read the information intended to help alleviate jamming; it is that those who read the material often feel the contents apply only to others, not themselves. After all, think some jammers, they only jam those who *deserve to be jammed.*

It is actually logical to assume that most individuals (or groups of individuals) have reasons they believe justify their actions. We have attempted, along with others, to cover some of these reasons. Some of the reasons we uncovered in our apprehension of certain jammers actually had roots in facts that make one wish to understand why the party was jamming that particular individual, net or repeater. I belonged to a DF committee in the San Francisco Bay area that located over 30 individuals in less than a couple of months, who had been caught in the act. Some of the people caught by members of our committee (and/or by myself), "blew our minds." There is NO way many of us would have believed some of these people capable of such action. One fine gentleman I knew very well — and who worked many hours on our committee helping us locate other jammers — would, himself, jam one certain individual he had reason to hate. I was the one who caught him in the act. I was astounded! He was embarrassed, but still felt justified. He also felt right about helping us catch the other so-called jammers, since what "they" were doing was obviously wrong.

In actuality, almost everyone we have ever caught and been able to talk with, has been able to verbalize reasons for what they are doing. Frankly, I have felt that some of these individuals have been greatly wronged by others, just as they explained. We even checked into the stories of some and found them to be true! We are not talking about jammers who necessarily fit the description of misfits in society either. Janie and I will never forget one we helped find in one of our DF speaking trips to a state back East.

Most of the serious DFers of the entire surrounding area were on the way to this DF meeting. Jammers know it is usually better to jam when known "DF experts" are too busy to take the time to go after them. (Many jammers carefully listen to the activities on a repeater before they jam, so they *can* know how safe they are.) In this case, most of us could hear the jammer on the input, but in fact, we were all on the way to the meeting. However, what the jammer did not realize about the state of the art is that switched antenna

DF units used by HAPPY FLYERS and others make it possible to locate a jammer in only a matter of minutes. A slight detour, and we had located the jammer. It was a club president's wife!! At the meeting I was asked to tell the president of the club. It seemed wiser to let the local people handle the problem after we left.

The point of all this discourse is that finding jammers is no longer much of a problem for those who are properly trained and equipped. As a matter of fact, the FCC has begun an impressive record of citing jammers, suspending licenses (including commercial radio licenses), and even some cases of impounding radio equipment. This means that locating jammers and giving the information to the FCC is again becoming viable. (More on that later in this column). This, of course, means we can reduce some of the jamming as the likelihood of apprehension *and punishment* become greater. This of course will be a great relief to many of us.

Treating effect instead of cause?

If we really wish to help solve one of the major problems of the Amateur Radio fraternity, perhaps we should give a little more thought to the "cause" of jamming. Since each one of us is likely associated with some part of radio, radio organizations, and/or radio activities, we then can consider the possibility there is something we might be able to do. If we put ourselves in the place of some of these jammers, how would we feel about that which troubles them if it happened to us? This is not to infer two wrongs ever make a right, but often one must admit we, too, might consider some type of action.

During the last two years, Janie and I have been involved in medical research. The "effect" of this medical problem was that the afflicted wet their bed. Most people attempted to treat this "effect" by cutting back, or eliminating fluid intake in the late afternoons and evenings. As it turns out, bedwetting is a sleep problem. We designed a recording device to plot sleep profiles, and now the "cause" can easily be seen on a paper graph. Once the "cause" was identified, proper action could be taken to correct the cause rather than just *reduce the annoying symptom*. In the case of the bedwetter's sleep problem, one of the most important things one could do was to INCREASE the amount of liquid given a bedwetter (and do it AT bedtime). We have had a success rate of 100 percent for over two years.

Why the above story? Just this — to restore Amateur Radio to a viable, useful entity, we must do more than just apprehend the jammers. We must try to get at the CAUSE of their jamming. This will not always be possible. There are some out there who do have a terrible mental problem and need professional help. But a great number of people could be induced to "rejoin the friendly skies" by some effort on our part.

Are there people who come on the air and say or do things in ways that annoy you? Have you ever commented to them on the air, or to others in private, how much you are annoyed by them? One never knows who is a friend to the person. Often your unkind words can get back to the individual and hurt their feelings. This is especially true if there was really nothing wrong with what they said or did that you didn't like. We come in all different sizes, shapes and colors. We eat different foods, like different music, have various hobbies, sleep different hours, drive different cars, fly airplanes, hate airplanes, like RTTY, hate RTTY, like CW, hate CW, like the ARRL, hate the ARRL, skate, ski, water ski, sky dive, hang glide, or hate any of the foregoing. The point is that we each should be free to enjoy, so long as it is not harmful to others. We believe the constitution did not intend to give anyone the freedom of speech to yell "fire" in a crowded theater, nor "bomb" at an airport. Just because we have a radio doesn't mean we should be able to use it in a way that infringes on the rights of others. I am not speaking of jammers either.

Let's take a repeater frequency as an example. Suppose we had a frequency pair through our area coordinating committee for the purpose of coordinating search and rescue activities and individuals (actual SAR and practice missions, etc). If someone transiting the area were to come on the repeater when it was quiet, looking for a QSO, it would be rude for someone listening to grab a mic and say, "Get off the air, this channel is only for Search and Rescue traffic." If a couple of people were to QSY to this "special repeater frequency," not knowing it is *normally* used for SAR, find it vacant, and conduct a QSO, what would it hurt? If all parties exercised common courtesy, no one should go away with bad feelings.

Repeaters and scheduled nets share a common problem. Some feel their "right" to any amateur frequency legal within their class of license, means no one should have a repeater on a frequency or hold a scheduled HF net anywhere. To put this in a different light, you have a "right" to buy a plane ticket to San Francisco. However, this right is abridged in many ways. Only so many can get on a single jet; when it is full, they will not sell you a ticket, nor force someone to get off. They charge, so one must pay via some accepted method. It may depart late, something might malfunction and (for instance) it might become uncomfortably hot (or cold). Rights do not always mean the ability to do everything we want to, when we want to, and the exact way we want to. This goes both ways.

If that person comes on your "special frequency," remember your "rights" to go to other frequencies. Personally, I think too many amateurs forget another very valuable right — the "ON/OFF SWITCH." In the Bay Area, we have had a group of very foul-mouthed individuals on a certain repeater that I used belong to (about 16 years). When I joined that repeater as member #33, we mostly had single-channel FM radios, as that was all that was available to most of us. The on/off switch was my only alternative to an occasionally distasteful conversation.

Today, with my nice synthesized radios, I just never listen to that frequency. I hated to leave my old friends at the time, but found many new and wonderful friends elsewhere on the bands. Many of my old friends have done the same.

What can each of us do?

In addition to jammer location and FCC action, we must take positive actions when possible. One of these possibilities is to act with courtesy at all times. Remember, each time you speak on Amateur Radio, you are an ambassador to an unknown listening audience. Enough trouble on our bands by so-called "bad guys" could theoretically lose all of us our "rights."

Another possibility might be to apologize to some of the people we have been rude to in the past. Take a club or net stand that reflects a desire to be fair to all. Some of the comments I have heard from net members while I was involved in DF work would have made it impossible for us to have taken legal action in the specific case of jamming in progress. Remember, there are laws concerning entrapment.

Enforcement volunteers

Various forms of legislation and rule modifications are underway to take advantage of the great talents and manpower available within the amateur ranks. We have written on some of this. This could be a great opportunity, but must be approached with skill and caution. I spent considerable time on the phone with an ARRL staff member recently on this subject. 73 Magazine has run a number of fine articles on DF and jamming of late. The HAPPY FLYERS have a record of volunteer work in this field. I have personally offered to donate time to any government agency, committee, or etc., and this last week did again offer to fly to ARRL headquarters and donate whatever time is necessary to help put together a complete package to help those interested in correcting jamming problems in their community. (They explained that they wished to use our DF book as part of a free package they are putting together.)

Due to the almost four years Janie and I spent traveling and speaking on DF and jamming all over the world, I hope someone does actually take advantage of the things we learned. We have seen many plans tried, and know what happened in many areas. This could save some people a lot of experimenting. □

The Exchange

Armond Brattland, K6EA

In last month's Exchange column, we ran the first part of this article — "What Ground?", written by Robert Ruyle, WØFCH. Here is the conclusion of that article.

How to lower ground resistance

One might be thinking, now how do I go about lowering the resistance of my ground that was used as an example in the ohm meter method? Electrical codes in many cities require that the resistance of a ground rod should not exceed 25Ω. But the lower the better — around 10Ω is best.

As you can see, the ground at my QTH is not low enough and therefore I must take steps to reduce it. The first thing I could try is to put my ground rods deeper. This is done easily if you use "Copper-Weld" sectional rods that are threaded on both ends so that you can drive them — full length — into the earth, then screw another on top with a special coupler and drive it the full length again. Low resistance soil is often encountered 20 feet to 40 feet below the surface. In a typical test, a ground that measured 270Ωat eight feet measured only 10Ωat 40 feet.

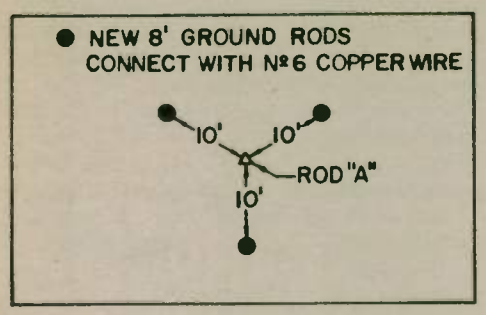


Figure 8

Another possibility would be to drive several other eight-foot rods and connect them to our present ground, as shown in *Figure 8.* If the new rods are kept six feet from your present ground and from each other, three more rods should cut the ground resistance to about one-third its present value. They act like resistors in parallel.

If this didn't work or wasn't possible — as in a rocky soil — you could chemically treat the ground around the rod. This should be done by digging a circular trench about a foot and a half away from the rod, a foot wide and a foot deep. Fill this trench with magnesium sulfate, copper sulfate, or ordinary rock salt. See *Figure 9* for an illustration.

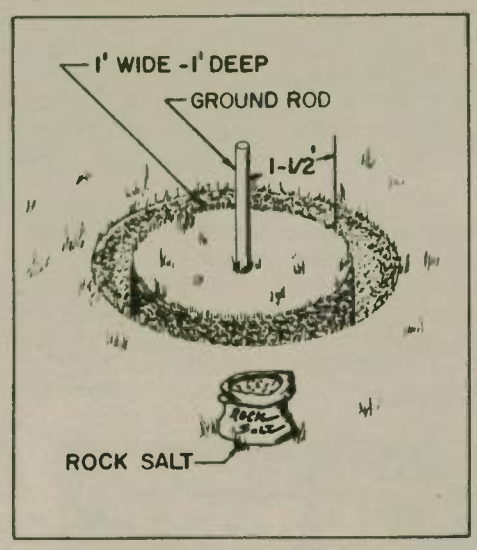


Figure 9

This method works best where the ground resistance is quite high. The improvement fades, however, with time and unless the treatment is renewed every few years, your ground resistance will creep back up to its original value.

Conclusion

To many people, ground seems like a simple thing. You just drive a rod into the earth and this gives you what you are looking for. With these facts, I hope you will take a more critical view of your ground system. BEST CHECK THAT GROUND!

●●●●●

The National International Net (NIN)

Back here in the middle of the United States, there are times when it is not possible to work either the East Coast or the West Coast on 21,150 kHz. If skip conditions preclude one working directly to any particular location, you must ask for a relay. The manner of seeking such help varies, depending on what you think those listening understand. It should not be that way — there is a proper Q-signal for seeking such help: "QSP". In commercial practice it meant a free relay of your traffic. Let us use "QSP" rather than: "PLEASE RELAY TO _____," as we hear some stations seeking help. There may be a few of the commercial-international "Q-sigs" that might make little sense to some, but "QSP" should not be one of such. Thus, when back here, I may hear: "QSP LONG BEACH CALIF?" Why not take a chance and answer: "QSP QRV." If you wish to break into the traffic handling game, you must start by being willing to try your hand at *being a relay station.* You state QSP (will relay) and QRV (am ready) in two simple Q-sigs. By using such signals, you learn the full meaning of Q-signals.

But what to do with a radiogram after you "QSL" (acknowledge receipt of it)? That is what bothers many and causes them to merely check in "QRU" (nothing for you) and to then excuse themselves and *run away.* If it's a net, the others may lose your help to "QSP" between two net members who can't hear each other. Sooner than you wish, if other net members *"hit and run,"* the net becomes a "QRU net" and not a place for those having traffic, so the net withers away and goes off the air. Then when you need it, the net is gone.

You have indicated you wish to handle traffic, so let's take you at that — WHAT TO DO when you have picked up a radiogram to QSP? First try making calls on the net frequency; in this case, "NIN de *ur call* QSP Long Beach Cal QTC 1."

Anyone hearing will know you have one for Long Beach, California. But if you do not receive an answer, then what? If you have a Novice license, you may have some telephone connection with a higher class licensee than handles traffic. Handle it over the telephone line — in time — so your contact can put it out on other nets. Work up those connections with other higher class traffic handlers. Keep a card index and know just what you can do with radiograms you pick off Novice bands. Whatever you do, make your effort soon after receiving it, or as soon as possible; don't put the radiogram away to "grow whiskers." If unable to move it in any other way, come back to the net on the Novice frequency at the next session and "service it back" to the station that gave it to you — don't just sit there with it!

If you are at least a General, you will know the radiogram can be forwarded into some section net, or other traffic nets you can operate into. This is repeated often — obtain a copy of the ARRL Net Directory. Send an 8½ × 11 inch envelope with at least 45¢ in stamps addressed to yourself. That amount is being increased, so ask your postmaster about the cost of 14 pages of third class mail sent from 225 Main St., Newington, CT 06111.

While writing ARRL, tell them that some people may object to fine print on red paper; it's hard for old tired eyes to see. Now when you receive your Directory, fire up your rig and see just how many of the nets you hear can help you, as *possible takers* for your future traffic handling activities. Keep in touch with those who show an interest in wishing to help you. Among the nets now listed on page 11 of such Net Directory, note three lines down, under the heading of Wide Coverage Independent Nets — Amateur Radio Telegraph Society (ARTS). They are on *daily* around 7,060. You should find them operating a little earlier in the East. Out west, they usually fire up about 1400Z. Write the manager, Bill Bonnell, W5TI and expect some help!

A traffic net should not sound like a round-table

Back in the Midwest especially, one notes that QRM builds up on some traffic nets while they are in operation. To those seeking a QSO, net operation may sometimes sound like an informal round-table, or contact between several stations about the same frequency. The FCC long ago gave nets the privilege of using the net designation instead of using a call of the net control. That is one way to assure that those looking for a QSO will choose another frequency. Give it a try — it just might be what the net needs to bring in

some additional volunteers. A snappy designation might be good bait.

Speaking of "volunteers"

One hopeful idea on the legislative agenda is that amateurs might be working with the FCC, helping to catch violators and also supervising examinations for FCC Amateur Radio licenses. How far it will go in relieving the overworked and undermanned Bureau depends on what form or how much of the bill submitted by Congressman William Dannemeyer — H.R. 2203 — comes through the committees. This is being written so long ahead of time, I can only say I wrote a few letters to try and help, and hope you did also.

Bring your traffic to the National International Net 21,150/2300Z Sundays!

The frequency and time are set — help yourself!

Breaker! Breaker!

How do you "break in?" Let's consider the thoughts of Al Torres, KP4AQI, taken from the November 1978 issue of **Worldradio** — still very much up-to-date.

Break, breaker and broke

"The Webster dictionary defines the word 'break' 18 different ways. Let me give you a few: a) to cause to come apart by force; b) to make unusable or inoperative by disrupting; c) to disrupt the order or completeness.

"What can you break? You can break a glass; you can take a break; you can have breakfast; you can break a conversation. If you do that you are the 'breaker.'

"What kind of breakers do we have? We have circuit-breakers, ice-breakers, bottle-breakers and 'ham'-breakers.

"Most people let the ham breakers get into a conversation because they don't know what they're going to say. (It's like answering the phone; you do it because you don't know who's calling.) So to say 'break' in the middle of a conversation shows lack of consideration for your fellow amateur.

"Now, let me suggest a concept. The word 'break' implies importance; we should use such word to report emergencies only. A traffic accident justifies the word 'break;' a 'break-break' implies a very serious emergency like someone bleeding to death.

"If you feel like getting into an existing repeater conversation, wait for the talker to drop his carrier and before the beep say your call. You are now telling those fellow amateurs that you want in. You are also saying you do not have an emergency to report. Common courtesies will be the executive ingredient for such action.

"If someone decides to 'break,' be prepared to help him immediately. If someone double-breaks, be prepared to go into full emergency conditions. In both cases the 'breaker' should have priority, and further conversation should cease.

"You will find that by just saying your call before the 'beep,' people will greet you by name (if they know who you are), will let you in for the existing conversation, and will not be extremely upset that you broke into their conservation.

"So in simple but strong words; *Thou shall break no more; big breakers become eventually broke . . . W8XYZ . . . beep.*
— The FM Scanner, Dayton, OH

"BK" should not be used in a directed traffic net!

As an active traffic handler, Chuck Clark, K4ZN has written the Traffic Column for a considerable number of years. In April 1979 under **How to do it**, he states the approved method for breaking into a traffic net. Why is it being replayed at this time?

First, because I also check into a number of traffic nets; I'm tired of hearing so many calling "BK" when they check in. Second, Chuck has given it much thought and has written it so well that I hope at least a few traffic beginners will heed his reasoning and conclusions. So here it is:

How to do it

"So you want to check into a CW net? Have your station ready when the net is called to order (QND) by the net control. If you must tune up on the air, don't do it right on top of the net but find a clear frequency nearby to do your tuning. It should take only a few seconds anyway.

"If CW net operation is new to you, wait until the initial check-in rush is finished, then call net control. If you have full break-in, just give a call. You will be able to hear if you are doubling with anyone.

"If you have to switch between transmit and receive, send some brief identification — like the suffix of your call, or even a single letter. Net control will acknowledge by sending back what you sent. For that reason, it's unwise to send BK. If three or four others do the same, when net control replies with BK, all will jump in at once.

"For one's initial call, there is no need to transmit anything more than one's own call and one's traffic, something like this: K4ZN QTC 4RN 1K. That means 'K4ZN has one message for the fourth region net. Over.' If you don't have traffic, say QRU instead of QTC.

"Generally, net stations will send more than the abbreviated procedure given above, will add something like GE BOB, will give the net control's call as well as their own, for example. No harm in that normally, but when traffic is heavy it's best to keep it to a minimum. In fact, it's a good idea even when traffic isn't heavy. Most CW nets are strictly traffic nets and do not ordinarily countenance ragchewing while the net is in session.

"Once you have listed your traffic, you merely do what net control tells you. When you are off frequency, remember the frequency shift is nominal. UP 5 means up *about* 5. You are expected to find a clear spot and pass the traffic.

"Don't come back to the net and tell net control the spot chosen is occupied. Look for a clear spot, even if it's some distance away. The station to receive the traffic should pick the frequency and make the initial call, as the receiving station is the one who will have to fight the interference.

"When net control calls, it will ordinarily be by sending the suffix of your call. Reply by sending it back, or by sending HR (here), C (yes), a couple of dits, or something, so it will be clear you're not out in the kitchen raiding the refrigerator. Then, after net control's directions are received and understood, send G (going) if you're sent off frequency and tune to the indicated spot.

"After clearing the traffic, wait a few seconds on the same frequency. Someone else may have been sent to give you traffic or to take other traffic you have listed. If no one else calls you, return to net frequency and, when it won't interfere with others, send the suffix of your call. Net control will replay by repeating it.

"Ordinarily you do nothing else at this time, as it is assumed you did what you were told to do. If you failed to make contact, tell net control something like this: NO W8XWJ UP 5 if you weren't able to find the station, QNP W8XWJ if you heard the station but not well enough to copy. Net control may direct you to pass the traffic on the net frequency, or may assign another station to act as relay (QNB).

"When there is no further need for you on the net, net control will call you again and say something like QRU QNX (nothing for you, you are excused from the net). You are free to leave, but may continue to monitor if you wish. At this point you are required by FCC rules to make full identification and, in addition, to give either the call of the net control station or the net identification, like this: W4NCS DE K4ZN or HBN DE K4ZN. You can add 73, CUL, GE or other such greetings if you wish, but on a busy net keep it short.

Patience pays off

Over a year has passed since Gladys, W0MFW and this scribe wrote a number of letters to various Veterans Administration heads and to government officials. It was shocking to us that modern facilities such as the hospital in Long Beach, California did not furnish page turners for the veterans suffering with paralysis — especially when the quest was for an Amateur Radio operator's license.

We feel sure that amateurs everywhere share our thankfulness that the keen mind of veteran Frank Lowry is now busy, working toward the day when he will be a licensed operator. His letter addressed to us here on Lake Bemidji is printed so you also can drop Frank a line and let him know you are waiting to be a contact.

For those in the Long Beach area able to visit Frank, his address is: **Frank Lowry, Fl Bed 7, Veterans Administration Hospital, 5901 E. Seventh Street, Long Beach, CA 90822.** He deserves all the help you can give him. His letter follows:

Dear Armond & Gladys,

I do want to advise you that my page turner arrived and the "bugs" have been worked out, and I've been using it the past few weeks. My thanks again for your effort and Mr. Mondale's.

It is a coincidence that the page turner was manufactured in your neck of the woods, by the Lakeland manufacturing works in the Brainerd area. It has proven so successful that the Veterans Administration has ordered several more for people in my condition.

I have been working the past few days on my Novice license. Thank you again and all my love from my wife and Jean.

Sincerely yours,
Frank Lowry

(The "Mr. Mondale" is former senator and Vice President Walter F. Mondale.)

(*please turn to page 46*)

TRAFFIC

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Record keeping

Suggestions were given here last month from the *New Jersey Traffic Bulletin* by Pete Skorupsky, WB2IQJ, on how to keep records of traffic. Not everyone does it that way. I don't. Keeping each message on a separate sheet would take up too much space in my files. My annual traffic total is around 3-4,000. That would represent a stack of messages a foot high. A few handle that much in a month. Pretty soon they would have more space given to message files than to their station itself.

I usually get about a dozen or so messages on an 8½-by-11-inch page, typed single-spaced. I leave a half-inch or so margin on the left, and a blank space after each message. I type the entire address on one line if possible, so most messages take only about four lines, plus one line skipped — a total of five. Yes, there's the occasional "night letter" of 40 or 50 words that takes up more space, but there are also five-word ARL messages to compensate. In this way, a month's work takes maybe 12 or 15 pages.

After copying a message, I add the service notation, indicating the call of the station from which the traffic was received, the date and time in six figures, military style; for example, 4 September 1981, 1257Z is written 041257. The notation is simply something like this: W3CUL 041257.

When I send a message, I make a similar notation, but in the left-hand margin in pencil, of the station, date and time. Also in the left-hand margin I make a note of the routing of any messages, usually the call sign of the station that should receive it, or the abbreviation for the state or net.

Delivered messages are indicated by marking "phoned," "mailed," or "delivered" in the left-hand margin, with date and time. "Delivered" in this case means delivered personally when the addressee is a neighbor.

As soon as a piece of traffic is cleared — that is, sent or delivered — circle all the service notations. In that way, I can see at a glance what is cleared and what still has to be handled, and what has to be done with each message in the latter category.

Originated messages — messages received from a third party, that is — are written out on the same page; I have never found it necessary to record the address and phone number of the sender, but some amateurs who have more originations from strangers would need to do this. The annotation could be made in the same place where the service notation would be made on a received message, and it too could be circled when the message has been sent on its way. Since I don't make such a notation ordinarily, I circle the date in the preamble instead.

Operator's messages — what commercial circuits would call "dead-heads," messages sent by the operator, or addressed to the operator — would have only one service notation, either the station from which or the station to which the message is sent or received. Other messages have two service notations.

Once a page has been completed, I total the traffic on it, simply by counting the various circled annotations, and write the totals at the bottom. At the end of the month, I have merely to total up the figures for each page to prepare the report for the SCM. It usually takes only a few minutes.

A page number at the top, followed by the last message number used on the preceding page and the running total of traffic handled during the current month, all serve to make sure nothing has been missed.

A sample log page (much neater and more legible than the real thing) is shown in *Figure 1*. The letters at the bottom indicate the totals for the page: O, Originated; R, Received; S, Sent; D, Delivered; T, Total; GT, Grand Total. The figures in the upper left-hand corner are: T-8, page 8 (T indicates "traffic"); 45-179, last message on preceding page was number 45, so first one from this station on this page will be 46; and the total traffic this month to date is 179. I start a new series of message numbers at the beginning of each month.

I use regular 8½-by-11-inch typing paper. Some traffic handlers prefer to use continuous rolls as supplied for Teletype machines, to save having to insert paper. The roll is fastened under the table and run up to the typewriter (the "mill"), leaving enough slack so the carriage of the typewriter can move back and forth without wrinkling the paper.

None of what is written here is a recommendation, but only a narration, a few ideas passed along to stimulate thought, one solution to the paperwork problem. The solutions of others are invited. One thing is certain, though; if you abhor paperwork, don't become a traffic handler. Traffic handling is one place where the FCC rules still require log keeping:

"Section 97.103(b)(2). A notation of third-party traffic sent or received, including names of all third parties, and a brief description of the traffic content. This entry may be in a form other than written, but one which can be readily transcribed by the licensee into written form."

Note that this applies not only to formal traffic, but to *all* third-party traffic, including — especially — phone patches. Keeping copies of formal traffic as described here meets the requirements of the rules. Amateurs who handle phone patches might wish to offer suggestions on how to record phone patches.

```
                T-8 june 1981 45-179

3RN             nr 442 n4edh arl 3 ormond beach fla jun 21
WB3CAI          mr john lonsdorff 1409 fourth ave york pa 17400 717 854 3376 — arl forty
221313          six — victoria                                          k4scl 211823

W3CUL           nr 46 r k4zn 22 moncks corner sc june 22 al w3vr — rough time yesterday
221040          with skeds x lots of racket even on twenty so lot of dads wont get
                messages until today 73 — chuck

W3CUL           nr 47 r k4zn 19 moncks corner sc june 22
221042          mrs nora douglass 1305 dewey st conway pa 15027 869 4012 — dont let
                things scare you honey — x in god we trust is more than just a slogan x
                love — bill mcgrath

delivered       nr 324 r wa4eyu 10 jacksonville fla june 21
211245          bill mcgrath c/o k4zn — thanks very much for your message x all our love
                — the abbotts                                           wa4eyu 211226

                01 R2 S3 D1 T6 GT 185
```

Figure 1

Count the check!

Here is another goodie from the *New Jersey Traffic Bulletin*, from the editor, Dan Ostroy, K2UL, entitled "Some Thoughts on K2UL's Favorite Obsession," somewhat condensed:

"One of the first victims of sloppy traffic handling is the *check*, or word count. How many times have you heard two stations disagree about the count and then the sender will say something like, "You must have received it right because the band is in good condition, so just change the check." Or the receiver will say, "I still count 20 instead of 21, but I guess I have it all so I QSL." They forget that any time two stations disagree on the count something is *wrong*.

"Worse yet is the flagrant abuse of the check count in 'QNS' reports. Sending the net report in standard NTS message format is a good way to insure that it gets to its destination, and helps the traffic totals too. But standard format calls for a *number* in the check. Every time I hear someone send a net report with the letters QNS (or "double x-ray") for a check count, I go BANANAS! Sure, if you're the originator and are sending it directly to the net manager, chances of missing anything are pretty small. But suppose you put it on some local 2-meter net and it goes through five or six hands before reaching its destination. The possibility of error is greatly increased when nobody is bothering to count the words each time. The check count is the *only* way for the receiving operator to verify receiving the entire message complete.

"Want to get a bad reputation? Failure to count the check is going to lead some people (like me) to question whether you bother with it on other, more important messages. I for one will not acknowledge receipt of a message without a correct check count. If someone asks me to relay a net report and is too lazy to count the check, I'll do it, get lazy-bones to agree that it's correct, and insert it in the preamble at the proper place before I'll acknowledge it. It's hard enough to get a message through the system error-free. Let's increase the odds by sticking to good message-handling practices. Don't leave out the check. And don't forget to count it on messages you receive. It's a bad habit to get into.

"Finally, I'd like to ask all net managers reading this article to insist that your net control stations put a *number* in the check of their reports. Newcomers learn from observation. When they see veteran traffic handlers raping the check count, they can only assume that what they are hearing is proper procedure; after all, the net manager does it. Set a good example for the future TCC corpsmen of America. Insist on checking the check."

Traffic handler's library

The last two pages of this issue of the *New Jersey Traffic Bulletin* contain two very useful lists: the ZIP codes for New Jersey, and the telephone exchange prefixes, all given in numerical order. So,

if an amateur in Rahway was unable to deliver a message with ZIP 07866, phone 625-1234, a glance at the list would show these numbers are for Rockaway, and so most probably the message should go there, not to Rahway.

Active traffic handlers usually collect many such aids in the course of their operating. The ZIP code lists are found in both the *ZIP Code Directory* and a smaller book, the *List of Post Offices*, both of which are kept at every U.S. Post Office (maybe you can talk someone there out of an old copy). It's harder to get the telephone exchange listing, but most states have amateurs who work for the telephone company and can obtain it. Here in South Carolina it is printed in our Section Net Roster.

Other useful items are road maps, telephone directories, city directories and the *Callbook*. Often, using such aids with a little ingenuity will make it possible to deliver traffic at once instead of sending a service message and waiting a couple of days for an answer. Dan has a quiz in the same issue of *New Jersey Traffic Bulletin* that lists nine incorrect addresses and challenges the readers to correct them, then elsewhere gives the key to correcting them, using ZIP codes, phone numbers and a knowledge of New Jersey's geography. It is not reproduced here as it is mainly of local interest. But one involving nation-wide traffic might be of interest and just might appear here in some future issue.

International traffic

Earlier this year, this column told of the desire of amateurs in several countries of northern Europe to extend their system of traffic nets across the Atlantic to make liaison with the National Traffic System. The difficulty, of course, is the prohibition contained in Article 41, Section 2(1) of the International Radio Regulations, a prohibition inserted in 1932 at the request of the governments of these same countries among others, forbidding amateurs to handle third-party traffic.

How do they get away with it? Their radio administrations do not consider traffic from one amateur to another third-party traffic, even if it is relayed. Probably 50 percent of our traffic would not be third-party traffic, according to that norm. Unfortunately, it is not the norm used by the FCC. Here is how the FCC defines it:

"Section 97.3(v) **Third-party traffic.** Amateur Radio communication by or under the supervision of the control operator at an Amateur Radio station to another Amateur Radio station on behalf of anyone other than the control operator."

This definition obviously identifies amateur-to-amateur-to-amateur traffic as third-party. But it also identifies several other activities of amateurs as third-party traffic, and so prohibited unless there is an agreement, such as telling another station someone is calling, or assisting two stations that are having difficulty contacting each other, or taking lists for a DX station. And really, there is no need to take such a strict interpretation, when the very countries in whose interest the prohibition was made do not so interpret it. Allowing amateurs to handle some traffic internationally on a routine basis could prove valuable in the event of a disaster requiring assistance from amateurs. In such cases, special agreements are often made to permit third-party traffic. Having trained operators available who are used to working together and who have well-established circuits for routing traffic would eliminate much of the hassle that usually accompanies such operations.

A petition for rule-making has been filed with the FCC asking that Section 97.3 (v) be amended by adding five words at the end, making the last phrase read " . . . on behalf of anyone other than the control operator *of an Amateur Radio station.*" This would make it possible for us to handle amateur-to-amateur-to-amateur traffic on a routine basis but would maintain the purpose of the prohibition of the International Regulations. It could help if any interested amateurs would write to the FCC expressing support of this petition. □

QRP on 2 meters

Bob McGarvey, WB2EVF

On the subject of 2 meters, I can't remember anything taking the amateur fraternity by storm the way the ICOM IC-2AT has managed to do. The Tempo 1 was the first of the major synthesized 800-channel hand-helds and sold very well. Then came the Yaesu FT207-R and Kenwood TR-2400, which also captured a good share of the market. All still are selling, but the ICOM has captivated the VHF buffs.

First off, it came on the market at a lower price than its name competitors, and even included an installed touchtone pad. Then it established a good record of user satisfaction. It is an excellent example of energy conservation.

Running only .15 of a watt, it is possible to work a repeater quite a few miles away with the IC-2AT. And that's with a rubber ducky. High power is but 1.5 watts.

There's an object lesson here for those who think they have to run a lot of watts no matter which band they're using. QRP has come into its own on the low bands and now the ICOM has cinched the case for 2 meters.

Amateur Radio once more is telling the world you can communicate without big power, a big rig and a big antenna.
— *The Home News* □

Kurt N. Sterba

There are, among amateurs, some who say that reflected power is not lost power. Rubbish!

If the amount of reflected power should rise to a certain level, you can actually feel heat in spots on the feedline. That should prove it. You cannot heat your hand and the ionosphere at the same time.

A recent magazine article said it made no difference what length the feedline was. Funny, the author works for the same company that for years was circulating an engineering paper saying that SWR readings taken through a random length of coax were meaningless. Let's get together, fellas.

Then the author of a book published by a major company made a cruel cut. He referred to cutting feedline lengths as some sort of CB nonsense.

Well, the laugh may be on the big ham guys. What may have happened is that the CBs got together, pooled their money and sent one of their good buddies to college.

Between classes in Advanced Truck Driving, he was in the cafeteria and while looking over the shoulder of someone reading a book saw this, "The impedance at the input (transmitter) will be the same as the load (antenna) if the line is exactly a half-wavelength long, no matter what the impedance of the line itself."

What this says is that a half-wavelength line will "mirror" at the bottom what it sees at the top.

Now, logic should tell you that if the engineering tomes make a big point of this property of the half-wave line, that a length NOT a half-wave will NOT do that. Right?

Therefore, we must agree that a random length of feedline will not be as accurate as a half-wave line. This holds true for any multiple of a half-wave line.

WARNING: When we speak of the half-wave lines (and multiples thereof), that takes into consideration the velocity factor of the line; so in reality the physical length of a half-wave line will be shorter than that of a free space half-wave.

While one could use the published velocity factor for the different types of coax and cut lines that way, it would be far preferable to use a noise bridge and know you are right on the button.

Lengths of feedlines do have special features. For example, if you had a 100 ohm antenna and a 50 ohm feedline, a quarter-wavelength of 75 ohm feedline at the antenna would act as a matching transformer. If you had a 36 ohm antenna and a 75 ohm feedline, a quarter-wavelength of 50 ohm line would act as a matching transformer.

Let's go back to the original premise. The magic of the half-wave line is that no matter what impedance it should be itself, it will show at the bottom what it is seeing at the top. (And that is true for multiples of half-wave.)

The first step is really to know what impedance the antenna actually is. Then the noise bridge can tell you whether the antenna is short (capacitive reactance) or long (inductive reactance). If this column has made any contribution to your knowledge or antenna system improvement, this is it. I can assure you this is true, and I caution you against listening to anyone who says to the contrary.

And yes, the noise bridge is a most invaluable station accessory. If the price of an item not used every day should cause you to balk, get together with some pals, buy one and take turns using it.

Next, SWR is caused by the mismatch between the antenna and the feedline. Nothing you can do, no matter what knobs you twist at the station end will change the condition existing at the feedpoint. Period.

Here's an example of false economy: replacing a three-element Yagi with a four-element Yagi, using cheap coax. You just threw away the gain of the extra element. Use the best coax you can afford. Oddly enough, the more loss there is in coax the more distorted readings become regarding SWR. Crummy coax can tell you things are just fine when they are indeed rotten.

To avoid confusion let me point out that all this talk about velocity factor is limited to feedlines ONLY and does not apply to antennas themselves. There is one book out on the market that just balls the whole thing up.

In the dimensions for the folded dipole, the book shrinks the length by about 18 percent, claiming the velocity factor of the two wires in the folded dipole makes this happen. NOT SO, NOT SO.

In the same book, a folded dipole is made out of zip cord wire and fed with zip cord. What's going on? While it's true that a dipole can be fed with zip cord (sort of), better the top portion should be just one wire rather than two. There is a lot of bum stuff being passed around. A folded dipole would be very close in length to a regular dipole.

It also bears repeating that the chart lengths for antennas are only starting points and you should expect to prune or add to the length.

I wonder how much confusion a phrase on page 58 of an antenna book by a famous writer caused. There it was stated that the electrical length of lines was always shorter than the physical length. NOT SO! The physical length (which you would measure with a yardstick) will be shorter than the electrical EFFECT obtained by that line.

Here is the true story. To obtain the electrical properties of a quarter or a half-wave line, the actual physical dimension of the cable will be shorter. It will be shorter by the percentage as expressed by the velocity factor so noted in the literature about the particular cable under consideration.

Now let's put you to work. If you've found any mistakes in books on antennas, help others by alerting them. You may have spotted errors and avoided problems because of your experience; a newcomer may not be so lucky. He may be struggling with his 107-foot antenna (as we saw in our book) on 80-meter CW. Send in your finds.

Your pet theory and technique will find a place on these pages; your questions will be answered. If I don't know the answer, I'll check with someone who does.

(Invitations to duels at sunrise with coconut cream pies at 10 paces will be ignored.)

Before signing off, let's finally do away with some often heard but not trues. While cross-polarization can really hurt at VHF frequencies (that is, one antenna vertical and the other end having horizontal antenna), it matters not at HF. The signals just turn, twist and jumble around. When you hear someone say the signal came in better on a vertical or a horizontal, it is probably due to the angle of the signal coming in rather than the polarization.

Some books say that on a wire antenna, end fed, the radiation main lobe will be in the direction of the wire. Not so until the wire becomes several wavelengths long. Putting up a short long-wire antenna may see the main lobe at 90 degrees to the wire or a not-so-short going out at 45 degrees.

May your load always be resistive.

(Needless to say, Kurt N. Sterba is a made up name. He must remain anonymous for the protection of himself and the public. When people disagree with him he becomes violent. As he put it, "When I get to Phoenix, and you're there, argue with Lew McCoy instead.")

I have now saved the best for last. Only those who have read all the way through will get this message and therefore be a whole lot up on the others. First, do NOT make right angle (or 90 degree) turns with open wire line. And, regarding the Zepp antenna (so named because it was first used on the Zeppelins) which is a long-wire fed with open wire, one side connected to the flat top and the other to the other side of the insulator holding up the flat top (in other words, nothing), my friend Lil Paddle quotes from the Albion aerial book which says, "Despite its time-honoured status, this arrangement is very uncertain in its behavior. Put bluntly, it usually does not work."

The two above items may save you a lot of grief. □

Watch your ground!

Be sure all of your equipment is grounded before operation. A good ground will aid in prevention of electrical shock. Also, a good ground is one of the first things you should check for if you are experiencing TVI. Make sure you ground the key, watt meter, tuner, and any part that the RF signal passes through to the antenna. Also, DO NOT work on your rig while it is on because of high voltage — sometimes in excess of 800 volts.

—The Transceiver, Topeka, KS □

A true believer

Joe Addison, W0PKD

I have had the opportunity to operate Amateur Radio during several emergency conditions in Salina (Kansas), Clay Center, Hays, Wakeeney, and elsewhere during storms and floods. I am a great believer in being ready at all times for emergencies. So much so that I keep a 12-volt storage battery at home and fully charged at all times.

Kansas Amateur Radio □

The Exchange

(continued from page 43)

Welcome aboard Fred!

Early in June, I received an interesting letter from Fred Gartzke, K6YD — now a regular subscriber after receiving several sample issues. Fred publishes *Zero Beat*, the official bulletin for the Southern California NTS Section Nets: SCN 1 and 2 and SCN V, which serve the counties of Santa Barbara, Los Angeles, Orange, Inyo, Riverside, San Bernardino, San Diego, San Luis Obispo, Ventura and Imperial. This is a heavily populated area in California — millions of people, thousands of amateurs.

The nets have four daily sessions:

SCN-1 at local time — 7:00 p.m. on 3598 kHz; SCN/RTTY at 8:00 p.m. on 3637.5 kHz (FSK); SCN-2 at 8:15 p.m. (slow CW) on 3598 kHz; and SCN/V at 9:00 p.m. on WD6AWP/R, 147.045/.645 (FM). All are Pacific Time.

Traffic to and from SCN territory is handled by liaison stations to Sixth Regional Nets RN6 (CW) on 3655 kHz at 7:45 p.m. and 9:30 p.m.; and RN6D (SSB) on 7275 kHz at 10:45 a.m., 1:45 p.m. and 3:30 p.m.

Good to hear from you, Fred, with news about the new net members. No doubt *Zero Beat* contributes much to the success of the nets in Southern California. □

CONSTRUCTION

Chuck Clark, K4ZN
Assistant Director, Roanoke Division, ARRL

Troubleshooting

Some of us old-timers throw up our hands in horror at the thought of what the younger generation of amateurs is coming to: not only do they use store-bought gear, but they don't even repair it themselves. Why, when we were young, we disparagingly point out, we were the only ones who could repair it because we designed it and built it. And then someone bursts the balloon by pointing out that many of us old-timers send our rigs to the factory for repairs, too, but we keep that quiet.

It is a fact that amateur equipment today is much more complicated than it was 40 years ago, and that many of us don't have the time to troubleshoot even if we are able. In addition, circuit boards used nowadays are often difficult or impossible to repair, and many a piece of equipment these days requires special laboratory test equipment to check it out.

And yet it often pays to check over a malfunctioning piece of equipment ourselves before we send it off and have to do without it for a month or so. It could well be something we could fix ourselves, saving a considerable sum of money and putting the equipment back into operation immediately. Even if we do have to send it off, we can often tell the service department more about what is wrong and thereby perhaps get a better and quicker repair job.

"But doesn't that void the warranty?" How often we hear people worrying about that even long after the warranty has expired. The advertisers have succeeded in brainwashing many of us, making us believe the warranty is there to protect us, when it's really to protect the manufacturer.

Test equipment

When one looks at test-equipment catalogs, or visits an electronics service shop, one is awed by the thousands of dollars worth of meters, scopes, signal generators and the like, and may be led to conclude that it's best to leave all servicing to people who are properly equipped. While there are service functions that require elaborate test gear, it remains true that over 90 percent of our problems can be solved without it. Often, all a person needs is five senses and a little cause-and-effect reasoning.

A good doctor examining a patient looks at something besides temperature, blood pressure, pulse. Often things like color of lips, dilation of the pupils of the eyes, and posture can indicate what is wrong. In the same way, often we can see the trouble just looking at the chassis. A smell of fried resistor could be a clue to what is wrong. Or a close examination with a magnifying glass could discover a badly soldered connection. The eyeball check should always be procedure number one.

After our five senses, the most important test instrument is the volt-ohm-milliammeter (VOM). Even the best-equipped service shops probably use this instrument far more than anything else. It isn't hard to build one, but you can buy one about as cheaply. Even a cheap one can usually handle most measurements one needs. Still, good ones cost only a little more, and are more versatile, so money spent here is well invested. The more expensive models have more sensitive meters, making it possible to measure low-power circuits more accurately. For example, if a tube draws one milliampere plate current through a 100,000 ohm resistor, the voltage drop is 100 volts. If you use a DC voltmeter with a 150-volt scale to measure the drop, you put the meter resistance in parallel with that 100,000 ohm resistor. If you have a meter with 1000 ohms per volt, it will have an internal resistance of 150,000 ohms on a 150-volt scale. 150,000 ohms in parallel with 100,000 ohms gives a 60,000 ohm net resistance, and so the meter would read only 60 volts instead of 100. But if you used a 20,000 ohm per volt meter, typical of the better instruments, the meter resistance would 3 megohms, the net resistance would be 97,000 ohms, and the instrument would read 97 volts.

Still better is the electronic voltmeter, also known as the vacuum-tube voltmeter (VTVM), or in the solid-state version, the FET VOM. These instruments usually have 11 megohms resistance on all voltage scales, and load the circuits even less than most ordinary meters.

Digital or analog? Here's one place where more expensive is not always better. Digital meters are more accurate than analog meters generally speaking, at least when new. But often high accuracy is not needed. Often one simply watches the movement of the needle of an analog instrument without paying much attention to the actual value being indicated. All we may need to know is whether what we did raised or lowered the output, for instance. The analog meter is generally more useful than the digital, but of course it's nice if you can have both.

With a meter, soldering iron and hand tools, you have all you need to repair most of the troubles you will encounter. Other instruments may be helpful occasionally, in about the following order: dip oscillator, tube and transistor testers, oscilloscope, frequency counter. A signal generator can be nice to have, but often the dipper will do well enough. However it's simple to build a wide-band signal generator that you can use for signal tracing. The circuit is shown in *Figure 1.* It gives an audio tone that contains harmonics up to 30 MHz or so. You can use it to inject a signal anywhere in the circuit and see if it goes through. Start at the output and work back. Where the signal disappears is where the trouble is. Radio Shack has one already built, if you don't want to make your own.

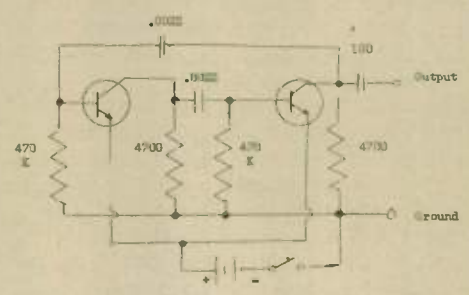


Figure 1

A simple transistor tester was described on page 68 of March 1978 **Worldradio**. The schematic is reproduced here as *Figure 2.* When a good transistor is properly connected and the switches are correctly set, an audio tone should be heard from the speaker. This tests bipolar transistors, field-effect transistors (both junction and MOS types), and unijunction transistors.

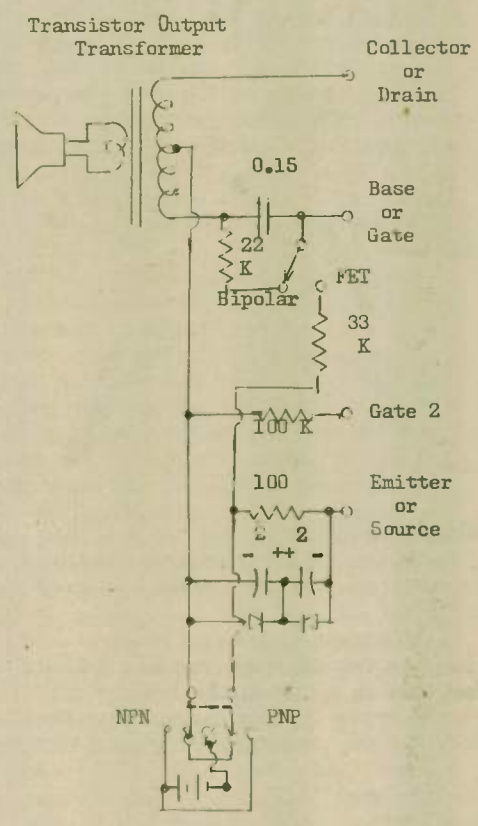


Figure 2

Diodes can be tested by an ohmmeter. A good diode will show a high resistance (at least 100,000 for germanium, megohms for silicon) in one direction, and a low resistance in the opposite direction. With so many strange diodes — like tunnel diodes, PIN diodes and Gunn diodes — the ohmmeter test may not work, and you can ruin some of these types by using an ohmmeter on them. But the ordinary types you find in a power supply rectifier circuit can be tested by an ohmmeter, and they are the ones that usually need to be replaced.

Many servicemen prefer to test tubes by replacement. They try a good tube in the socket where they suspect trouble. But if you don't have a replacement tube and don't want to buy one until you're sure you need it, you'll have to test the tube some other way. You can take it to the store and test it on the tester there.

But of course, that tester's primary purpose is to sell tubes. You don't make yourself popular with the owner if you use the tester and then buy your tubes elsewhere, say at a surplus outlet for a dollar instead of the $7.50 catalog price tag on a new one in that store. You can get tube testers on the used equipment market, and from surplus dealers. Or you can build one yourself as shown in *Figure 3*, and more cheaply because you don't need to make it test every type of tube made, just the ones you need.

Most amateur equipment with tubes uses a 6.3 or 12.6 volt heater supply, so a 12.6 volt center-tapped filament transformer will do the job. You install the kinds of sockets you need for these tubes. If you have tubes with heater voltages connected to different pins, you can install two sockets like the two octal sockets shown in *Figure 3*. The other pins are brought to the moving contacts of three-position switches, so that they can be connected to the plate circuit, the grid circuit, or ground. To test a tube, set the heater voltage to the proper value, set the switch controlling the cathode pin to ground, set the control grid to the grid circuit, set the other elements of the tube (or of that part of the tube if it's a combination type) to the plate circuit, and ground all the elements in any other part of the tube. Plug the tube into the correct socket, let it warm up, then push the test button. An audible tone should be heard from the speaker if the tube is good.

You will need a tube specification chart or manual to determine the proper settings for each type, but as this is merely a go/no-go test and you aren't trying to measure anything, all that is needed is to connect each element of the tube to the proper circuit, and apply correct heater voltage, so it isn't hard to do.

Admittedly, this tester is not as sophisticated as commercially-available types, but it does a fair job of finding duds. As a matter of fact, no tester is 100 percent reliable as an indicator of tube quality. For a tube good enough to be used in one application might perform unsatisfactorily in a more critical one. That is why many servicemen prefer to test by substitution, as already mentioned.

Using the test equipment

When you have all this equipment, how do you use it? Electronic repair is an art, not an exact science. That's why some technicians can diagnose a problem more quickly using only a VOM and their senses than others with a whole laboratory of sophisticated instruments. The most important need for a serviceman is to be able to think, to reason logically. You determine exactly what the problem is, what affects it, what does not. You study the schematic and see which circuits could be responsible. You check those circuits. Sometimes the trouble is obvious once you know where to look. Sometimes you finally give up and ship the rig to the manufacturer who also can't find out what's wrong and sends it back with several new parts and a bill and it still has that wobble when the cat tiptoes into the room. But here are a few suggestions.

Say the tubes light up but no sound comes from the speaker and there is no output from the transmitter. Check the plate voltage. It's zero. Look into the power supply. Smell anything? If so, look at the power transformer. It it's cooked, there's the problem. Or maybe it's a resistor and you breathe a sigh of relief — 75 cents instead of 75 dollars. Smell nothing? Use your ohmmeter to check the rectifier diodes. You'll probably find one of them open, and maybe another shorted.

You can order replacements from the factory if you wish, but you might prefer to go to the local store and buy them there so that you can get back on the air at once. Just be generous and get something rated well over what you expect it to handle. Don't forget to check the fuse — maybe a blown fuse is all that's wrong.

Check the rest of the circuit before you put power on the new diodes. You might have a shorted capacitor, too, and the new diodes will blow as soon as you turn the switch on. Use your ohmmeter to measure the resistance between the high voltage terminal and ground. It should show nearly a short circuit one way, and, on reversing the leads, you should get a low resistance at first, then a rise as the filter capacitors charge. Where it stops depends on the circuit. If there is no resistance across the circuit it should go up into the hundreds of thousands at least. But it might stop at 50,000 or so if there is a resistor across the circuit. Look at the schematic to determine whether that is the case.

If you get RF output but no audio, you know that the trouble must be in some circuit on the receiving side. You can use your signal injector as mentioned above.

One old and crude test is to touch the grid of the first audio stage with a pencil or screwdriver. If the audio circuit is OK you get a loud hum in the speaker. Touching other grids will give a progressively weaker hum. Sometimes you can locate the trouble that way. But there are so many possible problems that there is no room to discuss more here. Whole books have been written on the subject. Still, the answer is not to be found so much in books as in logical reasoning from effect to cause, and then in eliminating possible causes one by one, until you find the actual one.

Safety

Except in the power supply, most solid-state equipment presents no hazard to the person repairing it. Tube equipment, however, uses higher voltages — high enough to be a serious hazard. So be careful. Don't work on the gear while it's plugged in. And in particular, discharge all capacitors before you do anything inside the chassis. Do it, even if the power has been off for hours. You'll be surprised how long a good capacitor can hold a charge. I've pulled big, fat sparks off them even after 24 hours. □

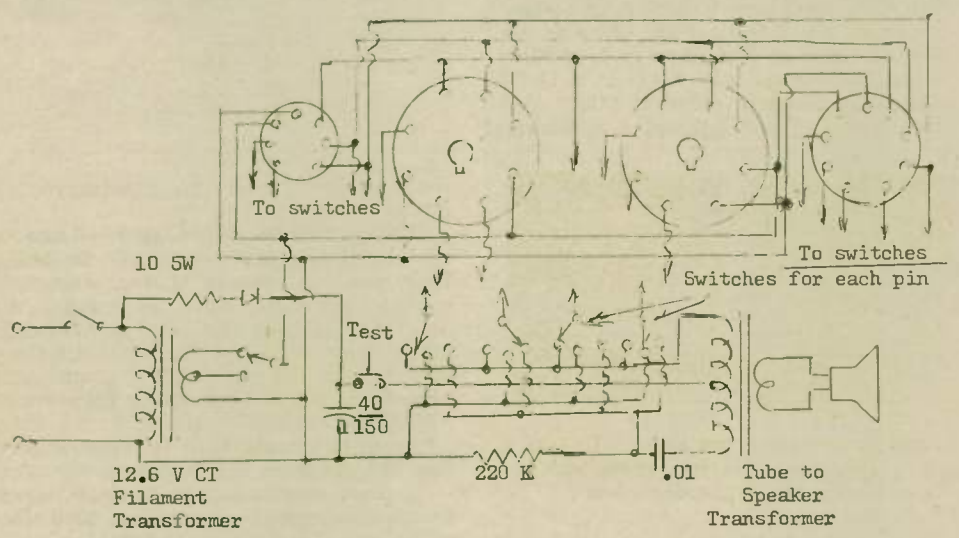


Figure 3

Packet radio

(*continued from page 32*)

Columbia. It is currently being linked to Seattle, Washington through one intermediate repeater. A group in the San Francisco Bay Area is planning implementation on 145.650 MHz.

Packet radio is made possible by the development and economical availability of the Intel 8273 and similar communications data link control devices. Intel AP-36 application notes may be requested from Intel.

The Vancouver group is making the printed circuit board for the TU available at $30 each to interested parties. This unit plus the 202 modem and a transceiver puts you in business as a network station. Of course, there is some software involved, but lots of good help is available to assist you! Then there is the need for the more complex controller in the communications node which really dictates the need for an organized group to get this digital communications system implemented in Southern California. Also, in the future there is the potential of an HF packet system using a 300 baud rate of transmission.

The preceding is based on a talk given by Doug Lockhart, VE7APU, of the Vancouver Amateur Digital Communications Group on 12 November 1980 at the Carson High School lab. Doug pointed out that here is an opportunity for radio amateurs to advance Amateur Radio communications to an advanced state of the art! For more information write to: V.A.D.C.G., 818 Rondeau St., Coquitlam, B.C. V3J 5Z3.

The Short Circuit, Los Angeles, CA □

Syrup station

The Calhoun County Amateur Radio Club will operate a special events station, NN4R, during the annual Syrup Sopping Festival in Waldo, Alabama. Operation will be 19-20 Sept. during the hours 1300 UTC-0200 UTC each day. Frequencies will be 3.965, 7.280, 14.280, 21.380, and 28.680 ± QRM.

An attractive certificate will be sent to all who QSL. To receive award, send QSL and $1.00 or 2 IRCs to NN4R, PO Box 1624, Anniston, AL 36201. □

What do you do when you want to go mobile but are too young to have a driver's license? Fifteen-year old Glenn Stilwell, KA6HWH, solved that problem by going bicycle mobile. Amateur Radio comes naturally to Glenn as his father is a DX Honor Roll holder. The rig came from "The Radio Place" in Sacramento — the store owned by Glenn's dad, Gary Stilwell, who was W6NJU until he changed to KI6T.

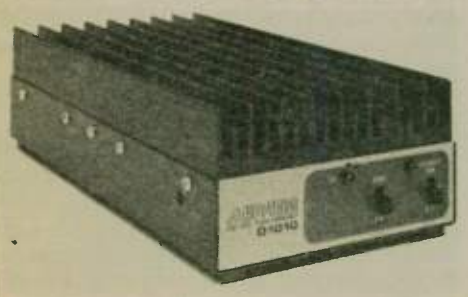
If you are tired of getting out of your vehicle to change bands, what is the answer? Invent your own mobile antenna! That's just what Fred Shmitka, K6AQI (shown with his XYL) did. The antenna works on 40-20-15-10; the only effort required is turning the bandswitch on the transceiver. The company that sprang from the problem is Multi-Band Antennas of Canoga Park, California. Just goes to prove the old adage that necessity is the mother of invention. While on a short vacation, the Shmitkas stopped at Worldradio on their way through Sacramento.

PRODUCTS

Amplifier

Mirage Communications Equipment, Inc. is pleased to announce the release of our new 70cm amplifier to our ever-growing product line of amplifiers and peak-reading watt/SWR meters.

The D1010 amplifier is a solid-state "all-mode" amplifier designed to be used in the 430 to 450 MHz amateur band. It will amplify a 10 watt radio to more than 100 watts output — a 2 watt radio to 25 watts output. The D1010 can be keyed with as little as 300 milliwatts. This makes it a versatile amplifier for all low-power transceivers and HTs.



The D1010 is biased as a linear amplifier; therefore, it will amplify FM, SSB, CW and ATV signals.

Other features include remote operation with the optional RC-1 remote head, external or internal keying circuitry, overtemperature protection and the typical rugged and stylized packaging that has become so familiar with all Mirage products.

The D1010 carries a five-year warranty on all parts except the RF power transistors which are warranted for one year. The D1010 will be an asset for any station, whether on OSCAR, mobile, remote base or SSB/CW DX.

The basic D1010 specifications are:

Freqency range	430 to 450 MHz
Power in	300mW to 15 watts
Power out	10 watts in 2 watts in gives 25+ watts out
Modes	FM, SSB, CW, ATV
DC power	13.6VDC at 20 amps (full output)

As with all Mirage products, they are only available through our worldwide dealer network. For further information contact, Mirage Communications Equipment, Inc. P.O. Box 1393, Gilroy, CA 95020. □

Ohm's Law calculator

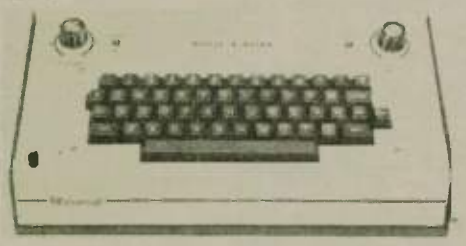
Radio Shack, a division of Tandy Corporation, now offers an inexpensive slide-rule-action Ohm's Law Calculator. This new circuit design and analysis aid can be used to calculate voltage, current, power or resistance according to Ohm's Law, which states the fundamental relationship between these parameters. In addition, the reverse side of the calculator can be used to calculate the equivalent resistance of two resistances connected in parallel.

The Radio Shack® Ohm's Law Calculator (271-1211) is available now for just 49¢ at Radio Shack stores and participating dealers.

This convenient time and trouble-saving device is made in the USA on heavy-coated stock for long life and resistance to wear and damage. It measures just 3⅛ by 6¼ inches, and is corner punched for convenient insertion in a ring binder. □

Morse-A-Keyer CW keyboard

A low-cost, dependable CW keyboard is now available from Microcraft. It features an industrial quality keyboard, rugged steel case, and a 16 character first-in first-out buffer which allows you to type slightly ahead of the text being sent. Also included are an internal speaker, side-tone monitor, and buffer full LED.



Speed range is 5 to 45 wpm standard, but can be easily increased by changing one resistor. A reed relay is used to key your transmitter and to provide isolation between the keyboard and associated equipment.

The Morse-A-Keyer is available as a partial kit, complete kit or factory wired and tested.

The partial kit consists of a PC board, construction manual and board parts. The builder must supply an ASCII coded keyboard, 5V and 120mA supply and miscellaneous hardware. Cost is $69.95 plus $3 S&H.

The complete kit sells for $159.95 plus $5 S&H and the factory wired model for $205 plus $5 S&H.

Shipments are made world-wide and requests for quotes are invited. Microcraft Corporation, P.O. Box 513, Thiensville, WI 53092; (414) 241-8144. □

Handi-Con V

The Handi-Con V (HC-V) is a self-contained VHF-HI converter intended for use with fully synthesized 2-meter hand-held transceivers. The multiband operation will expand receiver coverage to 2400 possible channels. A replica of either the 154-158 MHz Public Service or the 159-163 MHz Marine Band is created at the receiver input. This allows reception of fire, police, sheriff and other emergency services or coastal/inland marine communication, Coast Guard, and National Oceanic and Atmospheric weather services, respectively.

Frequency selection is achieved as normal through the keyboard or thumbwheel switches of the transceiver. Connection is made by simple series insertion between radio and antenna using standard BNCs. Operation with transceivers using threaded antenna mounts is achievable with readily available adaptors.

The passband of the HC-V includes the 2-meter band enabling multiband as well as multichannel monitoring with transceivers that have scanning capabilities. The combined sensitivity is much less than 1 microvolt for most transceiver/converter combinations.

An internal clamp network provides protection from accidental transmitter RF to both converter and transmitter for up to 5 watts for up to five seconds. The 'off' position disables all converter circuitry and returns to normal transceiver operation without having to disconnect the HC-V. A low loss to the antenna is maintained with a 50 ohm characteristic impedance.

The HC-V operates on a single AAA battery with an estimated battery life of up to six months or more at a use duty-cycle of 30-40 percent. The case size is 2¼" × 1½" × 1⅜".

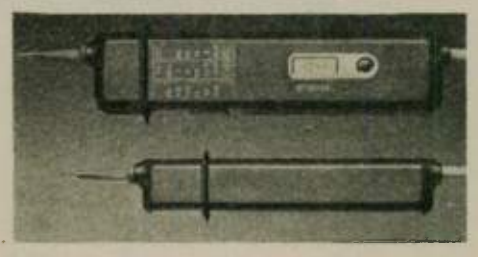
The Handi-Con V is priced at $44.95. Address inquiries to M-Squared Engineering, 1446 Lansing Ave., San Jose, CA 95118. Phone (408) 266-9214. □

Digital multimeter

The Steinel hand-held digital multimeter Digi-check is an outstanding hand-held multimeter. Besides all the standard features that a digital multimeter has, the Digi-check gives you the following extras.

First, its small size, its whole unit — including an integrated battery charger and power supply — is about the size of a logic probe.

Second, like a logic probe, its 3½ digit display is built on the probe. This way, you don't have to move your eyesight from the circuit to take a reading.



Third, it has a memory button. To take a reading from a hard-to-reach point, you can take advantage of this memory feature.

Fourth, the meter readings are dimensioned, you know exactly what type of reading you are taking.

Brief specification: DC voltages — 0.1mV to 500V; AC voltages — 10mV to 500V; Resistance — 0.1 ohm to 20 Meg.; Automatic polarity indication; Auto zero; Input impedance — 10 Meg ohm even in AC range; Power requirement — built in Ni-Cd battery with charger. Size and weight — display unit without tip: 185 × 44 × 17mm; battery unit without tip: 135 × 32 × 16mm.

Price — Meter only: $169. Optional carrying case: $10. All prices in U.S. dollars.

For more information, or to order, write: Energy Electronics Products Corp., 6060 Manchester Ave., Los Angeles, CA 90045. □

VHF band expander

The NEW MFJ VHF Band Expander, Model MFJ-312 will convert any 2-meter synthesized, VFO, or VXO rig to receive the VHF highband police, fire and weather frequencies. If your rig covers 144-148 MHz, just insert the MFJ-312 in line with the antenna, connect power, and turn on the converter; now you are ready to receive 154-158 and 160-164 MHz in two ranges. If your rig covers a larger or smaller band segment than 144-148 MHz, then with the MFJ-312 you can receive a correspondingly larger or smaller segment of the VHF highband.

On the first range, 154-158 MHz, you have direct frequency readout from your rig. If your rig indicates you are receiving 145.55 MHz, just turn the converter on and you are receiving 155.55 MHz. On the second range, 160-164 MHz, slight interpolation is required to know the MegaHertz range but kiloHertz are still read directly (i.e., 144.55 = 160.55 and 148.55 = 164.55).

A push button switch turns the 312 on and off; in the off position the converter is bypassed and you are ready to transmit (very low insertion SWR). If you forget and transmit with the converter on, it won't burn out (up to 25 watts).

Enjoy all the benefits of your rig, such as: squelch, excellent sensitivity, selectivity and stability. If your rig scans, you can scan the police band. If your rig will search, this will enable you to find new and exciting frequencies in the police/fire band. The MFJ-312 also works on handhelds.

This new VHF Band Expander is small (only 3" × 4" × 1") and has a mobile mounting bracket for installation in your car. It is black and eggshell white and operates on 9-18 VDC. A red LED indicates on.

If ordered from MFJ, there is a 30 days money back trial period. If you are not satisfied, you may return it within 30 days for a full refund (less shipping). MFJ also provides a one year unconditional warranty.

The MFJ VHF Band Expander, Model MFJ-312 is available from MFJ for $59.95 plus $4 shipping and handling.

The MFJ-311 is also still available. It is the same as the MFJ-312, except it only covers 154-158 MHz. The MFJ-311 is available from MFJ for $49.95 plus $4 shipping and handling.

To order, call toll free 800-647-1800 or mail order with check or money order to MFJ Enterprizes, Inc., P.O. Box 494, Mississippi State, MS 39762. □

Military time clock

Benjamin Michael Industries, Inc. proudly announces the addition of the Model 173DM to its line of professional military time format clocks.

The 173DM features dual, independent digital clock movements housed in a solid walnut case. The unit is suitable for placement on any desk, communications console, briefing table, etc. Military time is displayed on the left clock face while the more standard 12-hour format with AM/PM indicators is used on the right. Each clock is independently set, allowing each to display a different time zone if desired. This arrangement makes the 173DM ideal for applications requiring the use of both Universal Coordinated Time (Zulu) and local time.

Both large displays are of the LCD type for excellent visibility and ultra-low power consumption. The 173DM features Quartz Crystal accuracy and over one year of operation on a single readily available battery. The absence of a power cord makes the unit ideal for desk top use and eliminates the need for resetting after commercial power failure.

Price of the 173DM is $69.95 and delivery is from stock. □

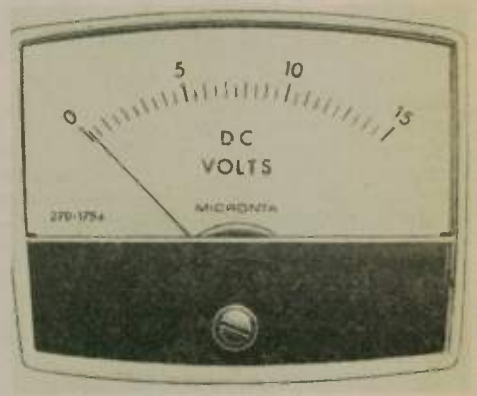
Panel meter

Radio Shack, a division of Tandy Corporation, is now offering a precision panel meter in the company's Micronta® line of electronic measurement devices for amateur and professional designers and circuit builders. The handsome new Micronta® precision panel Voltmeter (270-1754) is available now for just $8.95 at Radio Shack stores and participating dealers.

This remarkable panel meter features a jeweled D'Arsonval movement with a full 90 degree deflection, and boasts ±2½ percent (full scale) accuracy. The meter reads from 0 to 15 volts DC; a current-limiting 15K ohm resistor (supplied) must be connected in series between the panel meter and the voltage being measured. A zero-calibration adjustment screw is provided on the meter's front face. Internal resistance of the meter is 85 ohms (±10 percent).

The 0-15 VDC range of this meter is especially appropriate to automotive voltage measurements, voltages occurring in battery-operated equipment, and voltages appearing in digital and microcomputer equipment and systems.

While providing an easy-to-read 2¾-by-2¼-inch face, the 1¼-inch deep meter mounts easily in a 1.85 inch (47mm) hole with two additional mounting screw holes. A mounting template is provided with the meter (printed on its rack display card).



The meter housing offers excellent insulating characteristics. Insulation resistance is 10 megohms at 500 VDC; maximum breakdown voltage is 1000 V(RMS).

The clear legible meter scale is graduated in half-volt increments, with legends at 0, 5, 10 and 15 volt positions, as well as a "DC VOLTS" label on the face of the meter.

The high quality, tremendous versatility and exceptional value of this panel meter suggest it for both amateur and professional use. □

Communications terminal, Video monitor

Model 7009 — Drake Theta 7000-E (terminal)
Model 7009 — Drake TR-930 (monitor)

The Theta 7000-E provides a wide range of transmitting and receiving speeds, 5 to 50 wpm in CW with autotrack on receive. Standard RTTY speeds of 60, 67, 75 and 100 wpm Baudot Code, and 110, 150, 200 and 300 Baud ASCII Code, with shift select of 170 Hz, 425 Hz or 850 Hz and high/low tune pair select.

The Theta 7000-E has seven 64-character memory channels, with battery back-up, split screen, type ahead buffer, word wrap-a-round, automatic letter code insertion, audio monitor, test messages of "RY" and "QBF", CW identification in RTTY mode and other features not mentioned.

For more information, write to R. L. Drake Co., 540 Richard St., Miamisburg, OH 45342. □

Line amplifier

Model 1230 — Drake LA-7

Line output, input levels as low as 15mV rms (47 Kilohm) will result in an output of 1mW nominal into a 600 ohm balanced line. Output level adjustable by internal pre-set level control. Interfaces low level audio to RTTY terminal unit or phone line that requires a 600 ohm balanced/unbalanced input.

For more information, write to R. L. Drake Co., 540 Richard St., Miamisburg, OH 45342. □

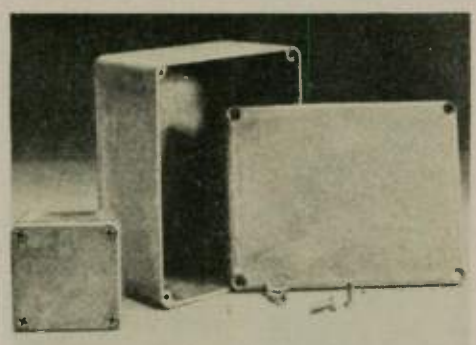
Contact Worldradio for hamfest prizes.

Diecast boxes

This is a new line of improved diecast aluminum alloy boxes. Good RF shielding makes smaller sizes excellent for RF connectors. The countersunk lid has an interlocking flange and the box is drilled and tapped for screws provided.

Boxes have an attractive ground and tumbled finish which may be painted if required. Quantity discounts provided when ground and tumbled surface not required.

These boxes are available at all Hammond distributors or we'll send a free catalogue on request. Write to: Hammond Manufacturing, 1690 Walden Ave., Buffalo, NY 14225. □



CONTESTS

1981 RTTY Art Contest

The Southern Counties Amateur Teleprinter Society's "1981 Worldwide RTTY Art Contest" will last from 1 September through 30 November 1981. All worldwide licensed radio amateurs and members of their immediate families (except as otherwise provided in these rules) are eligible to participate in this contest.

1) Entries must have been originated by means of manual inputs to a teleprinter using standard communications keyboard, and may be submitted only by the originator of the art, or by the amateur on behalf of a family member.

2) Submitted art may be of any subject suitable for transmission via Amateur Radio.

3) Entrants may submit as many entries as desired.

4) Each entry shall be given a short title.

5) Submitted art may contain overline shading.

6) Tapes of entries shall be formatted to permit a reasonably short running time, and to be compatible with machines which do and do not downshift on space. Compatibility with machines which interchange the bell and apostrophe is not required. At least three functions must be used between each line, normally: carret LF LTRS.

7) Each line of the art shall be limited to a *maximum of 68 characters (including spaces).* Prints must be in one single part, no splices. Tapes must be limited to a maximum running time of 40 minutes at 60 words per minute for the art itself, exclusive of any other information on the tape, and contain no splices.

8) Each entry must have been transmitted for the first time via Amateur Radio after 1 September 1981 and must be accompanied by a confirmation of at least one receipt of its transmission, identifying the title of the art and the call letters of the receiving and transmitting stations. All confirmations must be in writing (not by RTTY transmission), and must have been obtained by the entrant from the receiving station. Entrants may obtain necessary transmission of their entry by an Amateur Radio station.

9) The tape and prints of each entry shall carry the full name of the author, call letters of the submitting station, and mailing address. This information shall be written upon a beginning leader of the tape and also punched in the tape to appear on page copy when reproduced.

10) Entrants must submit one five-level paper tape and five prints of each entry and by such submission agree that the tapes and prints may be used, duplicated and published for any purpose. Tape submissions shall be of the 11/16th width only.

11) Tape, prints and transmission confirmation information should be securely packaged and sent to: RTTY Art Contest, c/o Norm Koch, K6ZDL; P.O. Box 1351; Torrance, CA 90505, USA. Entries must be postmarked on or before 30 November 1981. Entries will not be acknowledged nor returned. Winners will be announced as soon as possible after the closing date. (Since mail-damaged tape will be of little value, it is suggested tapes be wound tightly upon a hard core.)

12) Entries will be judged on the originality of the author in selection of subject matter, on excellence of technique in producing the art and formatting the tape, on overall appearance of the art when viewed from a distance, on suitability for publication, and on the entrant's compliance with these rules.

13) If an individual is the first place winner in a given year, they will not be eligible for nor considered for first place in the immediate following year. They will be eligible for first place every other year. This does not preclude a station from entering and being considered for second, third or honorable mention places.

14) A committee of judges, made up from those amateurs who have exhibited an interest in RTTY art, will select first, second, third and honorable mention winners. Winning entrants will receive a plaque for their particular places. Winning entries will be published in various Amateur Radio journals. The decisions of the judges shall be final, and no correspondence will be entered into regarding their decisions.

15) Officials and judges of this contest and members of their families shall not be eligible to participate herein.

1981 California QSO Party

The 1981 California QSO Party (CQP), sponsored by the Northern California Contest Club, commences at 1800 UTC on 3 October 1981, and ends at 2359 UTC on 4 October 1981. Efforts are being made to have all 58 counties in California on for the contest duration. Three trophies will again be offered: one for the highest scoring out-of-state single op; one for the highest scoring California single op; and one for the highest scoring California county DXpedition. One rule of particular note for this contest: each station may be worked once per band per mode.

Begins: 1800 UTC 3 October 1981
Ends: 2359 UTC 4 October 1981

Single ops may operate only 24 hours; off times must be clearly marked in your log and must be at least 15 minutes long. Multi-ops may operate the full 30 hours. Stations may be worked once per mode per band. All contacts must be simplex; no MCW. All CW contacts must be made in the CW sub-band.

California stations that change counties are considered to be new stations and may be contacted again for points credit.

Exchange: California stations send QSO number and county. Out-of-state stations send QSO number and state/province/country.

QSO points: Each complete phone contact is worth 2 QSO points. Each complete CW contact is worth 3 QSO points.

Multipliers: California stations use states and VO/VE 1-7 and VY1/VE8, for a possible total of 58. Out-of-state stations use the number of different California counties for a possible total of 58.

Total score: The total score is the number of QSO points multiplied by the total number of multipliers.

Suggested frequencies: Novice CW: 3725 7125 21125 28125; **CW:** 1805 3560 7060 14060 21060 28060 (Try CW on the half hour) **SSB:**

1815 3895 7230 14280 21365 28560 (Try 160M at 0500)

Deadline for score submission: All logs and summary sheets must be sent to NCCC c/o Dennis Egan, N6QW, 811 Byerley Ave. San Jose, CA 95125 by 1 November 1981. Please include an SASE with your entry.

Awards: Certificates for highest scoring station in each California county, each state/province, and each country. Trophies to the highest scoring out-of-state single op, highest scoring California single op, and highest scoring DXpedition to a California county.

California counties and abbreviations:

Alameda	Ala	Orange	Org
Alpine	Alp	Placer	Pla
Amador	Ama	Plumas	Plu
Butte	Butte	Riverside	Riv
Calaveras	Cala	Sacramento	Sac
Colusa	Col	San Benito	SBen
Contra Costa	ConC	San Bernardino	SBer
Del Norte	DelN	San Diego	SDgo
El Dorado	ElD	San Francisco	SF
Fresno	Fres	San Joaquin	SJ
Glenn	Glenn	San Luis Obispo	SLO
Humboldt	Humb	San Mateo	SM
Imperial	Imp	Santa Barbara	SBar
Inyo	Inyo	Santa Clara	SCl
Kern	Kern	Santa Cruz	SCr
Kings	Kings	Shasta	Shas
Lake	Lake	Sierra	Sie
Lassen	Las	Siskiyou	Sisk
Los Angeles	LA	Solano	Sol
Madera	Mad	Sonoma	Son
Marin	Marin	Stanislaus	Stan
Mariposa	Marip	Sutter	Sut
Mendocino	Mend	Tehama	Teh
Merced	Mer	Trinity	Tri
Modoc	Modoc	Tulare	Tul
Mono	Mono	Tuolomne	Tuol
Monterey	Mont	Ventura	Ven
Napa	Napa	Yolo	Yolo
Nevada	Nev	Yuba	Yuba

WAHM Award

The Hamfesters Radio Club will be operating on the General phone portion of 10 and 40 meters, and on the Novice portion of 10 meters from 1700 UTC on 10 October to 1700 UTC on 11 October. Any amateur who works this club on either of those days will receive a Worked All Hamfester Member Award (WAHM).

Exchange: Call, RST and state or country. Hamfesters Radio Club members will call "CQ WAHM."

Requirements:

Illinois to Illinois — you must reach 10 Hamfester members.

Outside of Illinois, inside the United States — you must reach 5 Hamfester members in Illinois.

Outside the United States — you must contact 3 Hamfesters located in Illinois.

All amateurs who wish to obtain the WAHM Award must make contact with Illinois-located Hamfesters.

On net operation, contact must be made with members.

Applicants wishing to receive the WAHM Award must submit a list of contacts containing call, frequency, date and handle of Hamfester members to: P.O. Box 42792, Chicago, IL 60642.

DO NOT SEND QSL CARDS IF YOU WISH THEM TO BE RETURNED. □

QRP ARCI CW QSO Party

Starts: 1200 UTC Saturday, 17 October. **Ends:** 2400 UTC Sunday, 18 October. Participants must be off air at least 12 hours in not less than six hour periods.

Exchanges: Members: RST, state/province/country, QRP #. Non-members: RST state/province/country, power output. Novices and Technicians add /T or /N after QRP # or power.

Stations may be worked once per band for QSO and multiplier credits. Each member contact counts 5 points regardless of location. Each non-member United States or Canadian contact counts 2 points. Non-member Novice and Technician contacts count 3 points. Non-member stations other than W/VE count 4 points.

Multipliers: 4 to 5 watts output X2, 3 to 4 watts output X4; 2 to 3 watts output X6; 1 to 2 watts output X8; less than one watt out X10.

Bonus multipliers: If 100% natural power (solar, wind, etc.) with no storage X2. If 100% battery power X1.5.

Scoring: QSO points × total number of states/provinces/countries × power multiplier × bonus multiplier (if any) equals claimed points **per band.** Add band totals for grand total. Please enclose separate worksheet showing the above calculations and time(s) off air.

Suggested frequencies: 1810, 3560, 7040, 14060, 21060, 28060, 50360. Any VHF/UHF contacts must be direct — no repeater contacts. **Novice frequencies:** 3710, 7110, 21110, 28110. All frequencies plus or minus to clear QRM.

Calling method: CQ CQ QRP DE CALL SIGN

Awards: Certificates to highest scoring station in each state/province/country with two or more entries. Certificate to highest scoring Novice/Technician overall.

Logs: Send full log data plus separate worksheet showing details and time(s) off air. No log copies will be returned. Please indicate if you are a Novice or Technician. All entrants desiring results and scores please include a #10 envelope with 1 oz. U.S. postage or IRC. It is a condition of entry that the decision of the QRP ARCI Contest Chairman is final in case of dispute. Logs must be received by 20 November 1981 to qualify. Logs received after deadline or missing information will be used as check logs.

Send logs and scoring information to: QRP ARCI Contest Chairman; William W. Dickerson, WA2JOC; 352 Crampton Drive; Monroe, MI 48161. □

YL Anniversary Party

CW: Starts Wednesday, 21 October 1981, at 1800 UTC; Ends Thursday, 22 October 1981, 1800 UTC.

Phone: Starts Wednesday, 4 November 1981, 1800 UTC; Ends Thursday, 5 November 1981, 1800 UTC.

Eligibility: All licensed women operators throughout the world are invited to participate. YLRL members only are eligible for the cup awards. Non-members will receive certificates. Only YLRL members are eligible for the Corcoran and Hager awards.

Procedure: Call "CQ YL."

Operation: All bands may be used. No cross-band operation. Net contacts, repeater contacts, and contacts with OMs do not count. A station may be counted only once in each contest for credit.

Exchange: Station worked, QSO number, RS or RST, ARRL section or country. Entries in log must also show time, band, date, and transmitter power. (Please know your ARRL Section. A section list is available with SASE to YLRL Vice President.)

Scoring: A. CW and phone will be scored as separate contests. Submit separate logs for each contest.

B. All YLs within an ARRL section: Score 1 point for each QSO with another station located within an ARRL section. Score 2 points for each contact with a station not located within an ARRL section, i.e., DX. (Definition of DX: All stations not located within an ARRL section.) DX YLs shall score 2 points for each contact with another DX station. Multiply the number of contact points by the total number of different ARRL sections and countries worked.

C. Contestants running 150 watts or less on CW and 300 watts PEP or less on SSB, at all times, may multiply the results of (B) by 1.25 (low power multiplier).

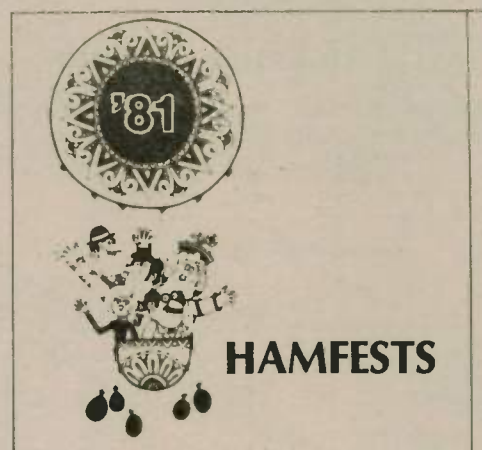
Logs: All logs must show ARRL Section or country to qualify for awards. Do not send carbon copies of logs. Please print or type. Logs must be signed by the operator, and no logs will be returned. Remember to file separate logs for each contest. Logs must show claimed score, be postmarked by 14 November 1981, and received no later than 19 December 1981, or they will be disqualified. Send logs to Kay Eyman, WA0WOF, R.R. 2, Garnett, KS 66032.

Duplicates: For each duplicate contact that is removed from the log by the vice president, a penalty of 3 additional and equal contacts will be exacted.

Awards: A. **Highest CW score** — Gold Cup YLRL member. **Highest phone score** — Gold Cup YLRL member. First, second, and third place CW and phone score (not combined) will receive a certificate. Highest CW log and highest phone log in each U.S. and VE call district and country will receive a certificate.

B. Corcoran Award: A plaque given for the highest combined CW and phone score for *YLRL members within an ARRL section.*

C. Hager Award: A plaque given for the highest combined CW and phone score from North and Central America, including the Greater and Lesser Antilles, for *YLRL DX members only.* A duplicate plaque given for the highest combined CW and phone score from any other part of the world for *YLRL DX members only.* □



Midwest ARRL Convention

The 1981 Midwest ARRL Convention will be held at the Salina Bicentennial Center in Salina, Kansas, the weekend of 2-3 October.

Among the displayers will be major manufacturers such as Ten-Tec, Collins Radio and Kantronics. Tables for the flea market space will be $2 per table.

Various programs are to be offered, including: Robots; The IC inside and out; Public service; Antennas and propagation; RTTY; 160 meters; Dr. Brinkley; AMSAT; SSTV; ARRL; and DX. The DX program will be presented by Hugh Vandegrift, WA4WME, with his 24 Great DXpeditions Program.

Several prizes will be given away, including an OMNI C by Ten-Tec, and an Ohio Scientific computer, Model C1P series 2. First prize for pre-registration is a Tempo One with TT/pad by Henry Radio. You must have an Amateur Radio license to win any device that will transmit a signal. You do not have to be present to win any of the above.

A buffet-style banquet dinner will be offered, at a cost of $10 per person, and a microwave oven will be given away to one lucky person attending the banquet. Entertainment will be provided. As for ladies' programs, a wide variety are being planned, to include a fashion show and luncheon.

Registration for the Midwest Convention is $7 per person. Send registration to: Robert Kresky, WA0YML, 1924 Page, Salina, KS 67401. □

Southwestern ARRL Convention

The Scottsdale Amateur Radio Club presents the Southwestern Division Convention, to be held 9-11 October 1981 at the Safari Resort in Scottsdale, Arizona.

Technical sessions, exhibits, prizes, a ladies' program, a Western steak dinner and a tour of Senator Goldwater's shack will be featured. Flea market tables (one table, two chairs, Saturday only) are $5 each. Advance registration is $6; $7 at the door.

For information on prices of other programs, or to order tickets, write to SARC Convention Committee, P.O. Box 3073, Scottsdale, AZ 85257. For hotel reservations, contact Ramada Safari Resort, 4611 North Scottsdale Rd., Scottsdale, AZ 85251; (602) 945-0721. □

Colorado

The Boulder Amateur Radio Club will hold BARCFEST/81 on Sunday, 27 September 1981, beginning at 9:00 a.m. at the Boulder National Guard Armory, 4750 North Broadway at the Boulder, Colorado city limits. Admission donation of $2 per family includes swap place and door prize drawing. There will also be a snack bar and auction.

Talk-in on 146.10/70 and 146.52.

For further information, contact Mark Call, N0MC, 4297 Redwood Ct., Boulder, CO 80301; 303-442-2616. □

Florida

The 1981 Suncoast and South Florida ARRL Section Convention will be held at the Sheraton Sand Key Hotel on the beach at Clearwater, Florida on 3 and 4 October.

The move back to the beaches this year features a luau instead of a conventional banquet, and the swap shop is under the "Big Top" — a 50-by-100-foot tent in the hotel parking lot.

The convention is sponsored by the Florida Gulf Coast Amateur Radio Council — an association of 12 amateur clubs and QCWA chapters all over the Florida Suncoast.

For more information, contact Jack Whitley, W4CZS, chairman, at (813) 367-2049. □

Georgia

The 8th Annual Lanierland Amateur Radio Club Hamfest will be held 27 September at 9:00 a.m. in the Holiday Hall at Holiday Inn, Gainesville, Georgia. Free tables and inside display area for dealers and distributors. Large parking lot for flea market. Boat anchor auction. Many prizes and activities. Food next door. Doors open at 8:00 a.m. for dealer set-up.

All activities and facilities are free to all. Only proceeds to club are from sale of prize tickets at $1 each or 6/$5.

Talk-in on 146.07/67.

For information and free space to dealers contact: Paul Watkins, W4FDK, Route 11, Box 536 Gainesville, GA 30501; (404) 536-8280.

Illinois

The Sangamon Valley Radio Club of Springfield, Illinois holds its 6th Annual Hamfest on Sunday, 27 September 1981 at Sangamon County Fairgrounds, New Berlin, 12 miles west of Springfield on Rt. 36. Indoor display and covered pavilion for flea market. Exhibits, kids activities and food available. Overnight camping. First prize: ICOM synthesized handi-talkie.

Tickets: $2 advance, $2.50 gate. For more information write: SVRC, c/o Red Cross Bldg., 1205 S. Sixth, Springfield, IL 62703. □

Kentucky

The 11th Annual Greater Louisville Hamfest and the 1981 Great Lakes Division Convention will be held 26-27 September in the East Hall of the Kentucky Fair and Exposition Center in Louisville. A gigantic indoor exhibitors area and flea market — completely air-conditioned — will be part of the event.

For more information, write to: The Greater Louisville Hamfest, P.O. Box 34444, Louisville, KY 40232; phone 502-634-0619. □

Maryland

The Columbia Amateur Radio Association, will hold its 5th Annual Hamfest at the Howard County Fairgrounds (15 miles west of Baltimore, just off I-70 on Rt. 144, one mile west of Rt. 32) on Sunday, 11 October at 8:00 a.m. Admission is $3; tailgating and tables $6. Food available. Prizes.

Talk-in on 147.735/135; 146.52/52.

For table reservations and information write: Dennis Parra, 6955 Spinning Seed, Columbia, MD 21045. □

Michigan

The Adrian Amateur Radio Club will hold their 9th Annual Hamfest on Sunday, 27 September 1981, at the Lenawee County Fairground, Adrian, Michigan.

The hamfest will last from 8:00 a.m. to 3:00 p.m., and will include games, programs and prizes. Tables can be reserved; rates are $5 per 8 feet, $3 per 4 feet, $2 per 8 feet trunk space, and $2 for inside table space. A limited number of tables are available, so be sure to send a check for your reservation no later than 20 September 1981. Admission tickets are $1.50 in advance, $2 at the door.

Talk-in on 146.31/91 and 146.52.

For more ticket and table information, write to Adrian Amateur Radio Club, P.O. Box 26, Adrian, MI 49221. □

Michigan

The Blossomland Blast-1981 — sponsored by the Blossomland Amateur Radio Association — is southwestern Michigan's "best Swap and Shop" with new and interesting programs. The event will be held Sunday, 4 October 1981, from 8:00 a.m. to 3:00 p.m. at the Lake Michigan Convention Center, one mile off Exit 30 on I-94 near Benton Harbor, Michigan.

Tables are $5 each. Prepaid tickets are $2 each; $3 at the door. All children under 12 are FREE. Make it a family outing — enjoy our Oktoberfest, coho fishing, or visit our Michigan wineries.

Talk-in on 22/82 and 52 simplex.

For tickets and information send an SASE to BARA, P.O. Box 175, St. Joseph, MI 49085. □

New York

The Suffolk County Radio Club's 4th Annual Electronic Flea Market will be held on 13 September 1981 at the Oddfellows Hall in Port Jefferson, New York. Bargains, prizes and food will be offered at the event. Rain date is 20 September.

Talk-in on 2 meters, .52 and .94. Also on 223.5 MHz.

Gate opens at 7:00 a.m. Tickets are $1.50 for walk-ins, $3 for sellers (one car, one driver). No charge for XYLs and harmonics of attending amateurs! Tickets are available by mail. For info or details, contact Chairman Floyd Davis, (516) 234-9376. □

New York

The Long Island Mobile Amateur Radio Club (LIMARC) sponsors ARRL HAMFAIR '81 Part II on 27 September 1981. Held at the Islip Speedway, Islip, New York at Exit 43 of the Southern State Parkway, just south of the exit on Islip Avenue (Rte. 111), or exit 56 L.I. Exway. This is the 26th event; the last one in May had over 400 spaces filled with exhibitors. Food and refreshments are available at the concession stands. Many awards will be presented all day. No reservations are needed for space; thousands of free parking spaces for buyers.

General admission is $2; exhibitors' spaces are $5 each (admits one person). Ladies and children free. All licensed amateurs must pay admission. Heavy rain date is 4 October.

For info, call at night: Sid Wolin, K2LJH, (516) 379-2861; or Hank Wener, WB2ALW, (516) 484-4322. □

North Carolina

The Western North Carolina Amateur Radio Society will hold its Asheville Autumnfest 10 October 1981 at the Asheville Civic Center. Admission is $3 in advance and $3.50 at the door.

Activities include McElroy Memorial CW competition, dealers' flea market and demonstrations.

Talk-in 31/91, 16/76, and 52.

For information, contact WCARS, P.O. Box 1488, Asheville, NC 28802. □

Ohio

The Cleveland Hamfest Association will present the 7th Annual Cleveland Hamfest on Sunday, 27 September at the Cuyahoga County Fairgrounds in Berea, Ohio from 0800 to 1500 hours. Activities will include indoor exhibits, forums, ladies' program and outdoor flea market with separate parking. Food services will include both breakfast and lunch. Three main prizes and a mobile check-in prize.

Talk-in will be on 146.52 MHz with W8QV. Advance tickets $2.50 prior to 31 August and $3 at the door. Contact the Cleveland Hamfest Association, P.O. Box 27211, Cleveland, OH 44127. □

Tennessee

The Hamfest Chattanooga will be held the weekend of 24-25 October 1981 on the campus of Chattanooga State Technical Community College. Dealer set-up will be on Friday, 23 October from 5:00 p.m. to 10:00 p.m. Saturday morning set-up begins at 6:00 a.m. Hamfest opens to the public at 9:00 a.m. both days.

Outside flea market spaces will be $2 for one day; $3 for both. For information about table rentals, admission, etc., contact hamfest chairman, Thomas L. Smith, WA4ZOK, P.O. Box 3377, Chattanooga, TN 37404. □

Virginia

The 6th Annual Tidewater Hamfest-Computer Show and ARRL Roanoke Division Convention will be in the Virginia Beach Pavilion 26-27 September 1981. ARRL, traffic and DX forums, and XYL free bingo.

FCC license exams given to those sending form 610 request in advance. Free transportation to the oceanfront, where the Neptune Festival will be taking place. Admission is $3.50. Advance ticket drawing for a hand-held FM transceiver. Flea market tables $5 one day, $7 both days.

Tickets and information: TRC, P.O. Box 7101, Portsmouth, VA 23707; 804/587-1695. □

Washington

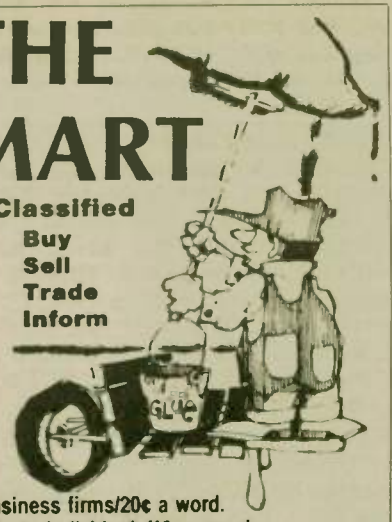
The Walla Walla Valley Amateur Radio Club's 35th Annual Hamfest will be held 26-27 September 1981 at the Milton-Freewater, Oregon Community Building in Walla Walla, Washington.

New gear displays by top dealers of the Northwest; computer, antique, repeater and homebrew displays; swap shop; and a bazaar will be among the hamfest attractions. A Northwest Tri-State officers meeting and Emergency Coordinators meetings will be held, as will various get-togethers. A potluck dinner will be held Sunday at 12:30 p.m.; please bring plenty of food and your own table service.

Prize drawings for all sorts of Amateur Radio gear will be held on Sunday, beginning at 1:30 p.m. Registration is free. Coffee and donuts will be provided, as will camp and trailer space.

Talk-in on 52-52, 19-79, 04-64, 28-88, 16-76 and 3960 KC. □

THE MART



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Scanning disc televisions or parts wanted by collector. Bill Russell, 6463½ Fulton Ave, Van Nuys, CA 91401.

List of RTTY Station in Frequency Order — 6th edition now contains 1717 frequencies monitored in 1980-81 of commercial stations like press, aero-nautical, weather, telex, military, diplo, maritime etc. on shortwave. Schedules of 82 news agency stations on 641 frequencies and 178 special abbreviations are also included. This offset printed list is air-mailed to you for $15.00 (cheque or cash) from Joerg Klingenfuss, Panorama-strasse 81, D-7400 Tuebingen, West Germany.

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