Worldradio

Year 12, Issue 1

July 1982 • 80¢

Cable TV

Success story in Torrance

In the midst of all the gloom and doom concerning interference between amateurs and cable TV, there has been at least one encouraging story worth relating.

The city of Torrance, California (population 130,000), in the southern part of the Los Angeles megalopolis, has been studying and considering various cable TV services for the past two years. The study culminated in February when the six-member city council selected Teleprompter from a group of competing firms for the city franchise.

Feeling that the large Torrance ham community should be heard from, the Hughes Aircraft Company Amateur Radio Club armed itself with information from the *W5YI Report*, QST, Part 76 and a few other sources, and drafted a letter to the council, directing their attention to cable TV difficulties arising elsewhere in the nation. Exceprts from Part 76 and QST were enclosed, plus a recommendation or two on behalf of the ham community.

The letter was addressed to Councilwoman Katy Geissert, a long-time friend of the XYL of Hughes Club President, Chuck Lobb, KN6H.

Actions thereafter were swift, surprising and pleasing. Mrs. Geissert took the letter to heart, and immediately sent copies to the other five council members, the mayor, the city attorney and to Teleprompter. The city attorney was further instructed to draft the city ordinance in such a manner that the interests of the Amateur Radio community were protected.

Teleprompter, in their reponse to the council, indicated they would strictly abide by Part 76 radiation limits, and added "If . . . interference . . . is discovered to be a problem attributable to the use . . . of Channel E cable signals, then . . . Teleprompter will discontinue the use of Channel E cable signals." Copies of the Teleprompter letter were forwarded to the Hughes ARC by Mrs. Geissert with a note indicating it ". . . will travel as a part of the City's contract."

The city also noted that Channel K is of equal concern to amateurs. Teleprompter's response was, "We'll take care of it if a problem develops." (There are over 100 repeaters in the 220 MHz band in Los Angeles, and Channel K is 223.25 MHz). The city council further suggested that the Hughes ARC contact Teleprompter, indicating willingness to work with them should problems develop. The club is currently drafting such a letter, greatly encouraged by the council's ready acceptance of suggestions to date.

In retrospect, it is interesting to speculate on this success. Mrs. Geissert's husband Bill and married daughter Ann

(*please turn to page 44*)

Winds ignite Anaheim fire

A personal account by Ralph Alexander, W6RE
Narrated to Shirley Wolter, WB6QFU

California carries the image of being in danger from the inevitable earthquake. Easterners are truly fearful that their loved ones will disappear into the cracks in the earth some day. But the true threat to life and property lies with the frequent santana winds (better known as Santa Ana winds). Tornadoes, cyclones and hurricanes may be more vigorous, but not much. The latter are usually masses of cold air accompanied by rain, considerably more visible and predictable.

A Santa Ana wind comes down from the mountain tops, funnels into the canyons and across the flat lands of Orange County and the "Los Angeles Basin" toward the ocean. These winds are heated by downslope compression and blow for 24 to 72 hours at 30 to 50 mph with gusts up to 70 to 80 mph, snapping tree limbs and power lines in an instant as though they were fragile toothpicks. If the slightest hint of a spark or fire ignites the vegetation or a combustible, it goes without saying that Santa Ana conditions would *not* be favorable in an attempt to extinguish the blaze.

These conditions existed beginning the evening of 20 April 1982. On through the night the wind blew and gusted, and I cast anxious glances at my 2-meter and tri-bander beams atop my windmill tower. I cautiously turned the ends of the tri-bander into the wind and went to bed confident they would ride it out — they have made it through many times before.

Upon awakening the next morning about 6:20 am, it was still blowing and I became aware that our electricity had been off for almost an hour. A check of the tri-bander told me that it and the 2-meter antenna were still OK, and the center mast for my 40/80 trapped dipole was still standing.

Turning on a transistor broadcast radio and tuning to the Santa Ana KWIZ, they were reporting a fire in an apartment complex at Ball and Euclid in Anaheim which was out of control (just a few minutes away via freeway). The news was grim, reporters' voices reflected deep concern and impending doom for the area which was heavily populated. As the Emergency Coordinator charged with liaison duties between ARES and Red Cross as well as RACES, I felt sure the Red Cross would be responding and in need of help, so I grabbed a bite of breakfast and, without waiting for a call from them, dashed down to Red Cross Headquarters in Santa Ana. Our power at home had been restored by then.

The Orange County ARES is dedicated to serving the Red Cross with several repeaters available. The Red Cross has a Communications Committee responsible to the Red Cross Disaster Director, and they have established a communications room, with help from the community, equipped with synthesized 2-meter and crystal-controlled 220 and Ringo Ranger antennas. The Red Cross also has installed a radio operating on 47.42 MHz with a repeater on Santiago Peak. Many Red Cross volunteers and all Red Cross vehicles are equipped to operate on that frequency. Unfortunately, it is a shared frequency with the counties of Los Angeles, Riverside and San Bernardino, which could render the use of the frequency virtually impossible if required to serve the millions living in those three counties. There is also a telephone line in the communications room, and the amateur station has a club call WB6QDG (Quick Disaster Gang).

Upon my arrival at Red Cross headquarters at about 7:10 a.m., the Assistant Disaster Director was pacing the floor wondering, "What next!" Organizing for the unknown was frustrating, but it was becoming obvious that a disaster was in the making. A shelter had been established in a junior high school upwind, but there was no way of knowing how many would require service from the Red Cross. The Red Cross frequency had become chaotic with too much chatter and the repeater was not reliable, so when I volunteered our help through Amateur Radio, the answer was a relieved "Sure do!" from the Director.

At this time, I activated WB6QDG on the Anaheim repeater 146.19/79. Attempts to call ARES District Emergency Coordinator and others in Anaheim were fruitless as, we later learned, phone service to about 15,000 in Anaheim had been disrupted — including the shelter. A call on the air provided several responses from amateurs, including one who was just being discharged from a local hospital and immediately reported to the shelter on crutches to man a radio.

Communications were then established between the shelter and Red Cross headquarters, and a short time later, with the Incident Command Post. The fire was brought under control by about 10:00 a.m., but not declared extinguished until mid-afternoon. If you ever tried to put out a fire within a blow torch, you can understand the logistics of the problem facing the firefighters. The winds finally died down late in the afternoon, but the devastation caused earlier at the crack of dawn was evidence of the viciousness of the santanas.

The fire left 1,500 persons homeless, with most of them passing through the Red Cross shelter. The early morning fire caught many people sleeping, and there had been no time to evacuate or salvage anything in an orderly fashion. Every person escaping with his life and just the clothes on his back was considered fortunate.

Community support was phenomenal, with nearby hotels blocking off 100 rooms for three days to accommodate the homeless, and motels and other apartment owners opening their doors to the victims. It was not just a miracle that no lives were lost or that injuries were only minor; there was a great deal of common sense and good judgment in effect during those terrible hours.

(*please turn to page 5*)

Congress and Amateur Radio

H.R. 5008

On 5 May, the Subcommittee on Telecommunications, Consumer Protection, and Finance of the U.S. House of Representatives adopted an amended version of the "Communications Technical Amendments Act of 1982" which includes a number of important provisions affecting Amateur Radio already adopted by the Senate as S. 929.

Among other things, the bill would permit the use of amateur volunteers in preparing and administering licensing examinations and in monitoring for rules violations (but not in bringing enforcement action itself); would authorize the FCC to establish minimum performance standards for audio and visual electronic equipment to reduce their susceptibility to radio frequency interference; would authorize the FCC to issue station licenses for 10-year terms, rather than the present five years; and would exempt communications transmitted by amateurs from the secrecy provisions of Section 605 of the Communications Act.

The RFI provisions, which were not contained in the original bill, were added by the adoption of an amendment proposed by Rep. Al Swift of the State of Washington. This was a substantial victory for us, although the battle is far from over. The bill now goes to the full Committee on Energy and Commerce for consideration. If it survives in committee, action by the full House would be expected to follow promptly.

— *ARRL* □

Novice exam return time extended

The FCC has extended the Novice examination return time from 30 days to 60 days. This action was taken by the Commission on 14 April. An examiner will now have 60 days in which to administer the exam and return it to the FCC. This order became effective 6 May 1982. □

TM Worldradio

is published monthly by
Worldradio, Inc.
Offices at 2120 28th Street
Sacramento, CA 95818 USA
Telephone: (916) 457-3655

STAFF
Armond Noble, N6WR
Chris Wilson, KA6TAL
Jeanette Inouye
Norm Brooks, K6FO
David Tykol, WA6RVZ
Jack Schwartz, WA6TRZ

July 1982 Vol 12, No. 1

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

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

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

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

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

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

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

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Second-class postage paid at Sacramento, CA.

Change of address?

If you are moving, we need to know your new address **six to eight weeks before the address becomes effective.**

Wilson antennas

Majestic Communications, Inc. announces the purchase of the inventory, trademarks and designs for the Wilson amateur antennas. Richard Orgel, president of Majestic, says that Wilson antennas under the MACO name will be sold and manufactured at the Memphis facilities (4091 Viscount, Memphis, TN 38118; 901-794-9494). □

Ohio field office closes in July

The FCC has announced it is closing its Cincinnati, Ohio field office, effective 30 July 1982. After that date, all FCC public service and enforcement for the Cincinnati area will be handled by the Commission's Detroit District Office.

Amateur exams will be given at the Detroit District Office every first, second and third Wednesday and Friday of each month. Code will be given at 9:00 a.m. No code, 9:00 a.m. to 12 noon. No prior appointment is needed except for groups of 10 or more applicants and/or disabled applicants requiring special testing facilities.

The address for the FCC's Detroit Office is FCC, 1054 Federal Building, 231 West Lafayette St., Detroit MI 48226 Phone (313) 226-6078. The FCC will still be giving examinations in Cincinnati every February, June and October. □

VHF/UHF/OSCAR get-together

Project OSCAR and St. Timothy's Amateur Radio Club (San Diego, California) are sponsoring a VHF/UHF/OSCAR get-together on 3 July 1982, noon to 3:00 p.m., at St. Timothy Lutheran Church (Reo and Rancho Hills Drives).

The primary focus of the event will be information and help in working with the many new amateur satellites. The latest VHF/UHF news as well as the latest info on OSCAR will be provided. Discussion groups will be offered on: computers; OSCAR tracking and equipment for Ø III; ATV station requirements for 432, 1296, 2340 MHz; and setting up a station (boards available).

Talk-in on 146.55. □

IRTS has a Golden Jubilee

The Irish Radio Transmitters' Society is celebrating its 50th anniversary this year. Several special activities have been planned in honor of this Golden Jubilee, including the following: VHF National Field Day (4-5 July); a VHF Jubilee expedition to the west coast (10-12 August); a 2-meter Counties Contest (16-17 October); and a Region One Jubilee Christmas dinner (4 December). Special QSL cards are also being printed to commemorate the Jubilee.

Those who are interested in finding out more about the society can write to the Irish Radio Transmitters Society, P.O. Box 462, Dublin 9, IRELAND. □

Please
send NEWS and PICTURES to
Worldradio

Westlink, East

Hank Goldman, WA2OVG

Metroplex has created another Amateur Radio public service by providing the only East Coast phone outlet for the Westlink Radio Network.

East Coast amateurs and clubs who haven't listened before will find this weekly news bulletin a professionally produced and thoroughly enjoyable experience.

By calling 212-224-1555 you will hear the latest scoop on: public service contributions by amateurs; FCC decisions and progress; local antenna height rulings; DX news — who's on from where and QSL routes; satellite info; and much more. Dial it up . . . you're sure to like what you hear.

To contribute news to the Westlink system, call 805-251-7180 and let Bill Pasternak, WA6ITF; Burt Hicks, WB6MQV; or Alan W6RCL know your news.

For more information about the large Metroplex Repeater System in the NYC-NJ-CT area, leave your name and address on our 24-hour machine — 201-592-1579, or write Metroplex, Box 237, Leonia, NJ 07605. □

Government spelling

Dave Williams, N7ATT

Recently, the folks from the Seattle office of the FCC were in town to administer amateur and commercial exams, and again we the people found out how the government works in mysterious ways. It seems they expect you to throw away all you learned in your many years of education and spell their way. It just goes to show there is a right way, a wrong way, and the government's way.

Everyone that tried for the Extra Class license (and I do mean everyone) flunked the 20 wpm code test. Most people missed on spelling errors — the FCC's errors, that is. Instinct says to correct a misspelled word, but they don't want you to when copying the code exam. Just copy, don't think!

— Great Falls Area ARC, MT □

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Vic Clark addresses Foreign Relations Committee

BEFORE THE
COMMITTEE ON FOREIGN RELATIONS
UNITED STATES SENATE
Washington, D.C. 20510

May 18, 1982

Testimony of Victor C. Clark
for the
American Radio Relay League, Incorporated

Ratification of the Radio Regulations
(Geneva, 1979) and Final Protocol

My name is Victor Clark, and I live in Clifton, Virginia. I am President of the American Radio Relay League, the national organization of licensed Amateur Radio operators in the United States. I have been a member of the Board of Directors of the League and an Officer for about 12 years. I have also served for several years as an officer of the International Amateur Radio Union (IARU) and was a member of the observer team sent by the Union to the 1979 World Administrative Radio Conference in Geneva. The IARU is a worldwide federation of more than 100 national Amateur Radio organizations. My experience as a licensed radio amateur began in 1933.

The United States government, recognizing the social benefits derived from a strong Amateur Service, historically has occupied a leadership position with respect to the provision of privileges and frequencies to its radio amateurs. U.S. amateurs, through the years, have made effective use of their frequency allocations in the public interest by developing new techniques and instrumentation, providing emergency communications in disaster situations, encouraging and training young people who go on to employ their Amateur Radio experience as a gateway to a lifelong vocation, and creating through the medium of their international conversations, a friendly image for the United States and its people.

The United States delegation to the 1979 World Administrative Radio Conference (WARC) provided strong support for the Amateur Service — support which culminated in the assignment of additional frequency bands for the use of radio amateurs in the United States and around the world — for both experimental and disaster communication purposes.

As of this date, the radio amateurs of more than 40 countries have commenced operation on new frequency bands allocated at the 1979 World Conference. The United States, however, is not yet represented among them, and the nearly 400,000 licensed U.S. radio amateurs have been eagerly awaiting permission to join their colleagues on these new frequency bands.

Not readily apparent to the layman is the fact that activities on the Amateur Radio frequencies offer a vivid picture of the condition of the world and its people.

(*please turn to page 34*)

Contest interferes with Tonga communications

Bryon Radcliffe, WB0TDK

The island of Tonga (southeast of Samoa) suffered extensive damage from a storm which hit there during the first week in March. A ham station located on the island, operating on battery power on 20 meters, established contact with ham stations in Hawaii and California and set up an emergency net (14.300 MHz at 0400Z) for several days following the disaster to handle priority traffic, including coordination of Red Cross operations. Due to low power, the phone signal from Tonga was very weak; however, strong U.S. stations made repeated requests for a clear frequency and this re-

(*please turn to page 35*)

Chess and Amateur Radio

Vince Luciani, K2VJ

The cover photo of **CQ Magazine's** May issue has obviously stirred the interest of a special group of radio amateurs.

Those who looked beyond the photo's apparent theme of a DXer's shack noted a familiar checkered rectangle surrounded by carved wooden pieces — a chess board.

Why the chess board? An accompanying article explained the formation of a national Chess and Amateur Radio Society, CARS.

Prior to the CQ article, **Chess Life Magazine** had published my item on the virtues of combining both hobbies — chess and Amateur Radio.

Responses were from **Chess Life's** radio amateurs who wanted to know how to go about finding a game on the air, and from chess players who wanted to know how to become radio amateurs in order to play chess by Amateur Radio.

Their common question was whether I would take over the chore of organizing these two interests so that members of either might become active in both, so that finding someone, somewhere, with whom to play chess on the air might be made convenient and simple.

While I really didn't need any more work items, I found the challenge to be irresistible. I accepted the opportunity to enhance both hobbies. After all, as one writer suggested to me, CARS might one day sponsor national on-the-air matches for high school chess clubs via portable HF stations. Think of the impact and recruitment value such display of Amateur Radio capability would have on these talented future members.

How about you? Do you play chess? Would you like to combine both hobbies? You don't need to be an expert at chess. In fact, many who have written say they aren't very good at it, but they enjoy it and eagerly look forward to chess by Amateur Radio. CARS plans to offer recommended calling frequencies (including Novices), times, modes, notation, chess ratings and various other aids.

If you would like to learn more, drop me a line with your interests, needs and suggestions. Please include SASE; it's the only way, at present, that I can return your inquiry for my first (still pending) mailing. Address is P.O. Box 682, Cologne, NJ 08213-0682. □

Heard Island in 1983

Dr. Dan Handelsman, N2DT of the International DX Foundation, announced at the DX Forum in Dayton on 24 April 1982 that a three-month Amateur Radio expedition to Heard Island would be launched January through March 1983 if the world DX community wants to hear Heard.

This effort is being organized by G.K. Nichols, VK6XI and N2DT with the sponsorship of the Wireless Institute of Australia (WIA), the Northern California DX Foundation (NCDXF) and the International DX Foundation (IDXF). WIA will supply four complete stations and $7,000. NCDXF will donate $5,000, and the IDXF will donate at least $10,000 for a total of $22,000 out of estimated expenses of $30,000.

The expedition will be primarily a mountaineering effort with the crew consisting of six mountaineers, who will bear most of the expense of the trip, and two amateurs — one from Australia and one from the USA. This should cover the demand for Heard because the mountaineers need six weeks to scale the over 3,000-meter-high ice-covered volcano on the island, and as there is little diversion on this desolate island, there will be nothing for the two amateurs to do for 42 days but talk to the world. There will be *no* list operations, and selective calling will be avoided if possible. Amplifiers and beam antennas will assure control of the pileups. The operators will be chosen by the sponsors for their operating skill, technical (repair) ability and physical stamina. All bands 160 through 10 meters will be covered. SSB and CW will receive equal time and the General and Novice segments will be worked.

The IDXF is putting up the largest amount of cash for this effort and invites the other DX associations of the world to make their contributions or pledges directly to the WIA. The IDXF is an ongoing membership organization with over 1,000 active members and sponsors many expeditions such as the 1982 Navassa effort (33,500 QSOs) and the 1981 Desecheo operation (43,000 QSOs), as well as training and equipment donations to Third World nations such as 3X, 4S7, 8Q7, CR9, EL, J7, etc. Thus, the IDXF is *not* soliciting donations for Heard, but rather is asking the DX community to show its support by responding to a membership drive. Suggested donations are $25 for a one-year sustaining membership or $500 for a life membership, but any amount will help. Donations are deductible for U.S. income tax purposes, even if you do not itemize deductions. Mail your donation to the: International DX Foundation, Box 117, Manahawkin, NJ 08050.

Please include call, name and address. If more information is needed, send SASE to above address.

If the response from the DX community is affirmative, the IDXF will close the remaining gap. If not, the IDXF funds will be used to carry on other ongoing plans.

The IDXF was established with a large donation by John Ackley, KP2A in 1978 to promote international good will and understanding. John Ackley, President of Transidyne General Corporation in Ann Arbor, Michigan (a public stock company), is founder and President of IDXF. Gary Medford, N2CW, ATT, is Treasurer and Vice President. Rudy Lehnert, KB2XS, President of NASSAU DEL, Inc., is Vice President Operations.

Bob Dennison, W0DX (VP2VI), formerly President of the ARRL, is Vice President, DX Committee. Bob Schenck, N2OO, New Jersey Bell, is Vice President, Public Relations. Stu Green, WA2MOE, Attorney, American Home Products Corporation, is the IDXF's General Counsel. The Board of Directors is KP2A plus Mort Rogoff, W2EE, President, Navigation Sciences, Inc., and Rick Van Vecten, WB2IEI, President of TDA, Inc

Dr. Dan Handelsman, M.D. is Heard Island project manager on behalf of IDXF. The IDXF will provide a QSL manager and print the expected 40,000+ QSLs.

See **Time** magazine, 3 May 1982, page 7, "American Scene, In the Caribbean: Hams and Goats," by Ed Magnuson, W2IJB, Senior Writer, **Time** and IDXF member for the story of the 1982 Navassa operation.

For more information, contact address above, or: Bob Schenck, N2OO — 609/296-9987, Office; 609/296-0307, Home. □

Reducing RFI

Norm Brooks, K6FO

If you live in the San Francisco Bay area, you have probably heard of Wilbur "Bip" Bachman, W6BIP. Bip resides in San Francisco, living on one of those 25-foot-wide lots. Yet he is a DXer and runs a full kW on all bands. Does he know his neighbors? You bet! But in every case, he has reduced or eliminated RFI so that he can pursue DX in spite of all the stereos, TVs, etc. which are so close to him.

Bip's credentials are impressive. He has been a licensed amateur since 1928. He is an Electrical Engineering graduate of the University of California, Berkeley, 1934. From 1947 to 1959, he was the Electronics Field Engineer for General Electric Company. He was in charge of consumer service and was in on any troubles with radio amateurs. From 1959 to 1976, he was with Philco-Ford where he started an in-house radio club and was active in OSCAR communications. He has been awarded the Outstanding Amateur Award in the Pacific Division of ARRL for his help to amateurs in reducing their TVI and RFI.

You will notice I said "reduce" TVI and RFI. In his talk at the International DX Convention at Visalia, 17 April 1982, he emphasized there was a wide gap between "reduce" and "cure" interference.

In the early days of TV — say 1947 or 1948 — the average TV set was receiving about 250 microvolts of picture. In some cases, there was more snow than picture. (These were the days he was working for General Electric.) There were no commercially-made filters that could be bought off the shelf. Many of the problems were caused by the kind of antennas the radio amateurs were using. "Even today," Bip says, "I shudder when I read about indoor antennas. I visualize all that RF going through people on its way out of the house!"

Wilbur "Bip" Bachman, W6BIP gave a presentation on RFI at the International DX Convention in Visalia, California.

The 14 AVQ vertical

If you're going to use a 14 AVQ or similar vertical antenna, *don't* mount it on the roof of your house or garage! The vertical antenna must have radials to be effective, and these radials will be on the roof of the house or garage. Now remember that such a vertical is a vertical bent dipole, and the radials are radiating as much as the antenna. When they are above the house, the radials radiate into the house wiring. The solution? Mount your vertical on the ground, at least 25 feet from the house. The radials would then be on or underground.

Another trouble-making antenna is the quarter-wave sloper. If it is near the house, it can pump RF into the house wiring.

Coaxial cable

"You get what you pay for, when it comes to coaxial cable," declared Bip. He showed a slide which reproduced a table from page 31 of the April 1981 **QST**. This table showed:

Shield	Relative Isolation in dB
40% bare copper	17
51% bare copper	18
59% bare copper	26
79% bare copper	34
98% bare copper	52
Solid sheath (aluminum)	282

The better the copper shielding, the better the isolation (and the higher the cost). It does not pay to buy cheap coaxial cable.

Most amateurs use an antenna tuner of some kind. This gets the standing wave ratio (SWR) down to a reasonable level for the transmitter, but the high SWR remains on the other side. If this SWR is high enough, it causes "hot spots" on the coaxial cable. There are literally hot spots which can be felt as warm spots on the cable. These hot spots radiate radio frequency energy and do all kinds of damage. They get into your rotor control cable for example, if your control cable is not shielded. There is usually a silicon diode in the rotor control box (HAM-M, for example) and voila! You are generating RFI!

One way to determine if you are having problems with your coax is to put a dummy load at the top of the tower at the end of your coax. If RFI still exists, look at the coax as the possible problem.

Those silicon diodes

Keep on the alert for silicon diodes. Then look for ways your transmitter excites them. Then isolate them by ferrite rods or shielding.

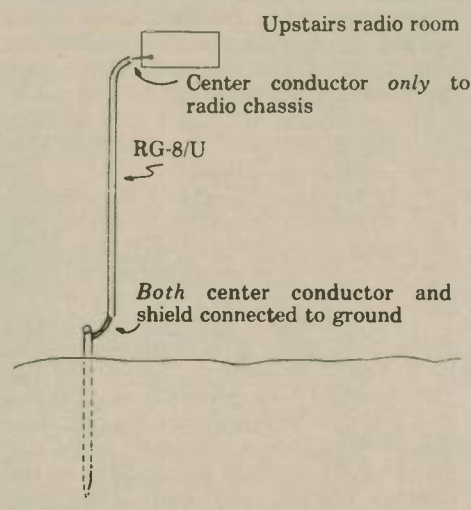

Figure 1

Grounds

The best grounding set-up would be a sheet of copper under all radios, with a short, heavy cable to ground. A good ground has a resistance of 25 ohms or less. You may have to tie several ground rods together to get this. An *excellent* ground would have a resistance of only 1 or 2 ohms.

Remember that tower bolts, which end up in concrete, are *not* ground. If lightning hit such a tower, it would crack the concrete. Ground rods should be driven alongside the tower concrete foundation.

Another point to remember: the total distance to ground includes the lengths of the ground leads and ground rod to "true ground." What's a perfect ground? "Probably a metal plate 40 inches or more square, buried 8 feet deep," says Bip.

How do you get a ground lead up to a radio room on the second floor? Use a piece of RG-8/U coaxial cable as the ground wire. Connect as shown in *Figure 1*.

The magic ferrite rod

Bip is a strong believer in decoupling devices made from ferrite rods. He refers to the following articles which lean heavily on the use of ferrite rods:

"Solving RFI Problems," **Ham Radio Magazine**, July 1978, P. 93
"RFI Cures," **Ham Radio Magazine**, September 1981, P. 52

In a typical amateur installation, the following should be wound around ferrite rods and taped into place: microphone cable; AC power cable to the exciter unit; keying and control leads to exciter unit; control leads to the linear amplifier; power leads to the rotator control; and rotator control leads, if not shielded.

On the user's end, the following leads should be wound around a ferrite rod and taped into place: speaker leads; phono input leads; tape deck input leads; tuner input leads; turntable power lead; tape deck power lead; and tuner lead.

Practical tips

When your neighbor complains about TVI or RFI, get the model number, the serial number and the name of the device you're interfering with. *You* write to the manufacturer and ask for *free* high-pass filters. Try not to do any work on the set yourself, as you'll be blamed — downstream — for troubles that show up later.

Move the TV antenna rotator control box away from the top of the TV set. Put ferrite rods on the control leads and the AC line to it.

Good information

If you're going to reduce or cure TVI or RFI, you must try a lot of ideas. The more ideas you have, the better off you are. Read everything you can on the subject. Here are the best:

Two excellent *free* handbooks are *Service Technician Television Interference Handbook* and *Service Technician Audio Rectification Handbook*. For these, send a postcard to Consumer Electronics Group, Electronic Industries Assn., 2001 Eye St. NW, Washington, D.C. 20006.

Radio-TV Interference Problems, prepared by the staff of the Field Operations Bureau of the FCC, File 1410-C. Send a postcard to your nearest FCC field office and ask for this.

Interference Handbook ($8.95), by William R. Nelson, WA6FQG, edited by William Orr, W6SAI, and *ARRL RFI Handbook* ($3) are both available at local Amateur Radio stores.

Bip has compiled a series of notes on the subject, which have been printed as a public service by Eimac. If you would like a copy, send him a large SASE with 54 cents postage. His address is Wilbur Bachman, W6BIP, 880 Dartmouth St., San Francisco, CA 94134. He also has a limited supply of ferrite rods which he makes available to amateurs at cost. □

Periodical for the blind and visually impaired

Although many textbooks have been translated into braille and onto recorded media, blind technicians and scientists are faced with the continual frustration of obtaining current supplemental materials.

We (at Smith-Kettlewell Institute of Visual Sciences) propose to publish a newsletter quarterly — in braille, large print and recorded form — which will serve as a guide to the current technology as applied to the needs of blind and low-vision people. We anticipate this will narrow the existing gaps and allow technically-minded visually impaired people to pursue their interests.

This journal, entitled *Smith-Kettlewell Technical File,* will include electronics information such as lists of materials already transcribed, catalog abstracts, data on integrated circuits, manufacturers' application notes, and when possible, construction details on devices for the blind using this current technology. Mechanical information will be similar: manufacturers' data, plus articles describing blueprints and techniques for the construction of the devices.

General interest "do-it-yourself" descriptions of such processes as soldering, project layout and the use of power tools will focus directly on techniques used by the blind.

Articles will be solicited from readers, training facility personnel, and other interested professionals and non-professionals.

To receive the first issue free, contact Editor, William A. Gerrey, Smith-Kettlewell Institute of Visual Sciences, 2232 Webster Street, San Francisco, CA 94115; (415) 561-1619.

The publication is produced by the Rehabilitation Engineering Center of the Smith-Kettlewell Institute of Visual Sciences, and is supported in part by the Smith-Kettlewell Eye Research Foundation and the National Institute of Handicapped Research. □

Microcomputer show

Ken Gordon, W2TGH of South Brunswick, New Jersey, has published the 1982 edition of his Amateur Radio equipment directory. The first was issued in 1977 and the publication has grown to international proportions over the years. Gordon's Kengore Corp. now has its own office, at 3001 Route 27, Franklin Park.

Not satisfied with being a successful publisher, the Brunswick Acres resident has expanded his efforts in staging microcomputer shows.

He has a fall show lined up for 11-12 September (Sat. — 9:00 a.m. to 5:00 p.m.; Sun. — 10:00 a.m. to 3:30 p.m.). The show will be held at the Holiday Inn (North) Convention Center at the Newark Airport North Terminal.

Microcomputer shows are a natural outgrowth of hamfests. The latest in new equipment is on display in commercial exhibits and there's provision for those computer freaks who want to wheel and deal in used gear — either to dispose of it or to acquire it.

— *The Home News, NJ* □

Handicapped children

Children at the Massachusetts Hospital School in Canton may soon be enjoying Amateur Radio, thanks to the efforts of the Sharon Amateur Radio Association. Club members John Boynton, WA1ZQT; Ray Kirchdorfer, KA1EKE; Patricia Malloy, N1AVW; Walter Bjornson, WA1WUV and others are instructing seven physically handicapped residents in preparation for Novice examinations. Club president Stanley Goldstone, W1TEA said that instruction is "tailored" so students can learn at an individual pace.

— *Crossbander, MA* □

Correction

On page 34 of our June issue, Dick Barrett, W6CFK mentioned that Nancy Smallhouse of Los Altos Travel had arranged last year's Amateur Radio cruise aboard the Love Boat, *Island Princess.* The name of the travel agency should have read San Antonio Travel, instead. □

Winds

(continued from page 1)

At the height of the fire, it was found that Anaheim General Hospital was without phone service. A group of amateur operators established a phone link for them on 146.55 which functioned for several hours until service could be restored.

WB6QDG was not secured until 8:45 p.m. that night (21 April) and was reactivated from 8:00 a.m. to 6:00 p.m., 22 April. We were on standby for the next two days but were not called up. This was during the hours and days after the fire when victims were registered and then, family by family, taken back to their apartment in ruins to personally observe the premises and search for salvageable possessions. At least 26 amateur operators actively participated, and many more stood by.

There are always lessons to be learned from every disaster, usually not at all applicable to the next one or to any previously experienced. If there was anything at all to be learned from this disaster as far as Amateur Radio is concerned, it is that no matter how much planning or preparedness any organization has provided in their thinking, Murphy's Law usually prevails. Those amateurs who kept their distance and remained near their radios are the ones to be commended. More people milling around the scene with hand-helds would have served no purpose. The Red Cross shelter was a focal point in this situation — a place for people to stay, a center for outsiders to seek information and a spot for the news media to gather their human interest stories. The Fire Department needed no assistance with communications, as they often do in the canyon or hillside brush fires and at fire camps. The law enforcement officials had no problems either, so in this Anaheim disaster, it was a matter of good relationship with the Red Cross.

No matter how one participates in the communications game, there is a great deal of fulfillment in taking a small part in helping people through difficult times, even when it is a behind-the-scenes part. All the discipline, the practice nets and drills, all the efforts in the many directions possible through Amateur Radio make it worthwhile. As we speak now, our antenna array stands repaired and ready for the next unknown need. □

Michigan Lady Ham of the Year Award

Mary McCarthy, WA8WZF of Ludington, Michigan was the recipient of the Michigan Amateur Radio Operator Lady of the Year Award at the recent ARRL Convention held in Muskegon, Michigan. The award was presented by Jim Seeley, WB8MTD, Section Communications Manager.

Mary has been active in Amateur Radio the past 15 years where her activities are mainly assisting with messages to and from service personnel throughout the world. She has served as Emergency Coordinator for Mason and Lake Counties for ARRL. She has been active with Navy-Marine Corps Military Affiliate Radio System (MARS) for the past 14 years and has held the positions of Emergency Communications Coordinator and Training Officer for Michigan. She has served as Region Emergency Communications Coordinator for the Fourth Naval Region, which consists of 13 states, and at present is the Region Training Officer. Mary has Training Officers from 12 states under her leadership. In the capacity of Regional Training Officer, Mary has the responsibility of preparing training manuals and material for all new members in the Navy MARS program, as well as State Training Officers with instructors manuals. These instructions provide training on correct operating procedures on voice, Morse code and radioteletype on the military circuits, and instructions on message handling and net controlling.

Mary McCarthy, WA8WZF holds the Michigan Amateur Radio Operator Lady of the Year Award.

Mary is Assistant Manager and Treasurer for the Michigan Amateur Communications System (MACS) and has been editor of the newsletter for MACS for the past 15 years. She is Certificate Custodian for the Auto State Young Ladies (TASYL) and a member of YLISSB. She hold numerous BPL (Brass Pounders League) Awards, the BPL Medallion, several Operator of the Month Awards, and the Meritorious Award — issued by Chief Navy-Marine Corps MARS, Washington, D.C. □

Another WAZ/Mobile

When the December issue of **Worldradio** came out, the front page story was about Philip Greentree, VK2DPN from Australia, who had become the first WAZ/Mobile award winner in the world. This news was somewhat disappointing to NOARS member Dana Henry, AI8W, who had some time ago worked all zones mobile but was waiting on one final card for confirmation. The card finally arrived and after submitting his QSLs Dana learned he had become the second amateur in the world to achieve WAZ/M and the first in the United States!! What an accomplishment. Congratulations, Dana.

How does someone go about achieving such a feat? In the following paragraphs, Dana relates some of his experiences as an amateur.

I have always been interested in operating HF mobile. For many years, the mobile rig was the only amateur station I had. While operating casually, I managed to Work All States and a handful of countries. After becoming interested in county hunting about two years ago, I decided to operate mobile once again and picked up a rig for the car. In the first year of county hunting, I managed to work about 2,500 counties. (For you DXCC chasers; try collecting 3,075 QSLs for Worked All Counties.) In that year, the XYL and I operated from over 100 counties in four states and twice were voted "Best Mobile in 8 Land" by the Mobile Amateur Radio Awards Club.

While county hunting, I suddenly found that I had had over 50 countries call me on the net. Wow — halfway to DXCC/M without really trying. The DX/M bug had hit. The next few months were spent calling "CQ" on 10 and 15 meters. During this time, I was on a first-name basis with the girl who sold IRCs at the post office and the pump jockey at the Sohio station. (hi) When DXCC/M came, it was time to start looking for a new challenge. Going through my QSL cards I found I had worked 28 zones. Was WAZ/M too much to hope for? Well, more trips to the post office and many, many more trips to the gas station, and finally I was at 39, the same number I had from the base.

As it turned out, I needed the same zone at home, so one contact with zone 26 would finish up both awards. Months passed, then more months, but still no zone 26. After operating mobile on and off for 15 years, the elusive zone came while driving back from a county hunting trip to eastern Ohio. I ran across HS1AMM on 15 meters on 14 November 1981. A quick note to his QSL manager and I had #40 in hand. At this time I would like to say "thanks" to Denny Burgess, K8DB and the many DXers who helped by putting the DX tips out over the .15 repeater, and also to those who called on the phone in hopes of helping with #40. But most of all, I'd like to thank the many DX stations who take time to listen for QRP and mobile stations. — Dana AI8W/M

— Northern Ohio ARS, Lorain, OH □

NJ QCWA chapter's Elmer Award

Named in honor of all the "Elmers" who, since Marconi, have given of their time and talents to help others become Amateur Radio operators, the Northern New Jersey Chapter of QCWA has established its "Elmer Award." The award will recognize as "Elmer-of-the-Year" the radio amateur in northern New Jersey who has done the most to pass on the knowledge he or she has gained over the years to the next generation of Amateur Radio operators.

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

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

Presentation of the award will be made to the 1982 winner at the Chapter's Annual Meeting, the evening of Friday, 19 November at the Robin Hood Inn, Clifton, New Jersey.

Rules

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

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

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

4) All nominations must be received on or before 1 September 1982 by the Chairman of the Chapter's "Elmer Award" Committee.

Please direct all communications to: Carl Felt, N2XJ, 8 Charles Place, Chatham, NJ 07928; Tel. (201) 635-7686.

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QC[illegible] outin[illegible] SoCal plans

Lenore Jen[illegible]

August 15, [illegible] the time for a p[illegible] Southern California nounced President Don Wallace, W6AM. [illegible] been set as Camp Wildwood, 500 [illegible] of the yon Blvd., Topanga will be an area owned by Oka Stewart. Talk-in will be via repeater 146.805 MHz, courtesy of Bill [illegible] W6ZRZ, starting at 10:00 a.m. — the the new chapter net each Sunday.

[illegible]ateur with 25 years to his credit An join the chapter, reports the Joffe[illegible]urer Ralph Cabanillas Jr., ous Se[illegible] QCWA fo[illegible]

The fall h[illegible] 1982. [illegible] meeting, Moe [illegible]rare Meritori- [illegible] national [illegible]e years. [illegible]tober □

USQS

... is an independ-
...reau for QSLing
...Alaska and Hawaii)
...le to everyone . . . no
U.S. ... USQS is managed by
... Berry, KM7Z. USQS is over
... old now, and I'm proud to say
...stem is working quite well. I would
... to talk about some of the basics of the
...ystem, the commonly asked questions,
and a couple of problems we encounter.
USQS is a single bureau for
amateurs in all of the states. All
tions are under one roof at the bureau,
by myself, Laryl, with help of this
Pat KN7B, and ... free.
volunteers who ... many hours of
friends. Th... ping, etc. and it
...unt of money. The
and wa... donations and what
poss... of our own pockets. All
... put to good use in keeping
...owing and getting the adver-
as many amateurs as possible. I
...like to thank those who send dona-
...s to help; they are much needed and
...ppreciated.

I am often asked why there are no ads in the major magazines . . . the cost of those ads is very high — too high at this point, but I hope to have the necessary funds in the near future. All work done to keep the bureau functioning is voluntary, so there are no wage expenses. USQS has several thousands of QSLs coming in monthly, and hopefully going out in reasonable time. I often go to the post office with 50 to 100 pieces of outgoing mail (SASEs). As this volume is constantly increasing, the possibility of human error increases. I recently was informed that an SASE arrived without contents, and the cause was that it had not been sealed properly. This mistake has caused the double checking of all outgoing mail from this QTH! I also recently received an envelope from an amateur in 9-land with no contents! Everyone should double-check and if in doubt, use a bit of scotch tape on envelopes; postal machines are a bit rough on mail! This brings me to another item, that being the sending of money to USQS. To be on the safe side, I recommend that instead of cash, it would be better to write a check. Checks can be made out to USQS, or to U.S. QSL Service, Inc.

To receive cards through USQS, we ask that you keep SASEs on file. There are two ways to do that: send SASEs complete *with your call* OR — I repeat OR — send $1 with your name, address and *call* and we will get the envelopes and postage for four SASEs on file for you. Please let us know if there is more than one call at your QTH. If your OM/XYL jr op has a call, we can simply cross-reference the file to send all QSLs in one envelope — a further saving of your funds! Also, if you ... a check for SASEs, ... for SASEs ... donation so please indicate to the right place.

... your outgoing ... that the ... sent), it ... the 10 call areas (Ø-9) ... filed into alphabetical order by ... letters following the number.) ... so we know if you point your ... or put a tail on your "U", dot your ... or have a corner on your "L"! (NOTE: If your outgoing QSLs do not have SASE to claim them already on file and you send a donation, we will send on as many of your cards as funds will cover. This will get your cards out and get our flyer to active amateurs who can then send a return QSL to you via USQS.)

If you have a club newsletter editor who would be kind enough to include USQS info in the newsletter, or if you could introduce USQS to a club during a meeting, it would be much appreciated. It is hard to get the word to every city in every state, so we need your help!

Every month since October 1980, **Worldradio** has listed calls of unclaimed cards on file. Due to the amount of time between sending in the list and the actual publication, please understand if your call appears and you have sent SASEs, or have received cards from USQS. Also note that my ability to handle so many cards without making mistakes is being tested, so if I type a wrong call, forgive me! This month again I am listing unclaimed cards. Note that these are only a sampling, and could be claimed and mailed by the time you read this.

It is the hope of yours truly that the USQS system will be a valuable tool for QSLing. The cost of postage is making the tradition of QSLing a hardship for some, and is keeping some from QSLing due to the higher-than-we-would-like-to-see prices.

Before I close, for those of you who have read this far, I would like to explain to the observant who noted the last name change that I am now Laryl Berry due to the April wedding with Pat Berry, KN7B! Thanks for the congratulations from those who heard about our day! For all the Dear OM headings on letters I get . . . oh well, with a name like Laryl, I guess it's hard to tell that I'm a YL. (The February 1982 article has my picture.) Whatever the heading, I hope to hear from everyone. Remember our address: USQS/KM7Z, P.O. Box 814, Mulino, OR 97042. Till next month — 73, Laryl KM7Z.

AK1A	WB1ADR	KA1AKT	KA1ASD
KE1A	KA1AEB	KA1AKW	N1AU
WA1ABL	N1AFW	KA1AMR	WB1AVA
N1ACH	N1AHY	WB1ANT	W1AW
KA1ACV	N1AJR	K1AR	AF1B
N1AD	N1AJZ	N1ARP	AK1B

K1BCI	W1GNR	W2AW	WB2FNF
KA1BFC	WB1GQR	K2AWP	KA2FPJ
N1BHI	K1GSK	N2AZE	W2FTY
W1BIH	W1GUC	N2BAT	KC2FV
N1BJK	KB1H	WB2BEC	KA2FXO
KA1BQB	WB1HBQ	WB2BFD	KI2G
K1BW	K1HEF	N2BHO	KS2G
WB1BXS	KA1HHA	WA2BIP	KA2GCH
WA1BYE	W1HNZ	N2BLT	KA2GFE
K1CC	KA1HPK	W2BMN	KA2GGT
W1CCN	W1HRQ	K2BOC	KA2GOH
KA1CI	KA1HWV	WA2BOT	KA2GOR
N1CW	KB1I	K2BQ	KA2GTT
W1CWU	W1IBC	K2BR	KA2GWO
KA1CXC	K1IEQ	KA2BRQ	KA2GZS
KA1CYN	K1IK	W2BVR	KA2HAB
WB1CZE	K1JB	K2BXG	W2HG
KG1D	KA1JGM	N2BYF	KA2HKN
K1DD	K1KJT	AI2C	KA2HLJ
WB1DEU	K1LL	AK2C	KA2HSY
N1DM	K1LPS	W2CAP	KA2HTH
K1DPB	KA1LR	N2CDX	W2IBD
WB1DQD	KA1LY	N2CFN	N2IC
W1DQY	AJ1M	W2CFY	KA2IEU
WB1DVE	K1MEM	KA2CIK	KA2IKA
WB1DXD	WA1MMD	KC2CK	KA2IKJ
KG1E	AK1N	KA2CKS	KA2IOB
KA1EBU	K1NBN	N2CLV	KA2IOK
WB1EEM	K1NWE	KA2CMB	KA2IOW
WB1ELC	AE1O	KA2CMC	KA2IPQ
KA1EVY	W1OD	WA2CNF	W2IQD
KA1EXG	KA1OOL	N2CQ	K2ITG
AB1F	AE1P	KA2CRL	KR2J
KC1F	K1PR	KC2CS	WA2JAS
WB1FAK	KC1Q	WA2CYQ	N2JB
W1FBV	KA1SCQ	KB2DE	KA2JCQ
KA1FCN	W1SR	KA2DFM	KC2JM
WA1FCN	WA1TAQ	KA2DFQ	KA2JMJ
KA1FMT	WA1TFF	KA2DKG	WA2JQK
WB1FPF	WA1TMZ	KA2DRT	WA2JUO
K1FPJ	W1TRU	KA2DUP	N2KA
KA1FVG	WA1TZV	K2DWI	KA2KEI
K1FWE	KA1VC	K2DXK	KA2KFD
KA1FXY	K1WW	AJ2E	KA2KFY
KB1G	W1XX	KR2E	K2KGG
KC1G	AI1Y	WA2ECA	KA2KLC
WA1GBA	WA1ZAM	KA2EFS	W2KNS
KA1GBO	KK2A	KA2EGH	KA2KOA
KA1GD	N2AA	KA2EIE	KA2KRH
K1GDM	WH2ABI	W2EMW	KA2KTR
W1GFH	WA2AMM	AK2F	KA2KYN
KA1GGE	W2ATM	N2FB	AE2L
W1GKJ	WA2ATR	KA2FKI	KC2L

KA2LCS	KB2OM	WA2RYE	WA2VYA
KA2LEB	K2OPJ	AD2S	KM2W
KA2LJO	K2OQJ	K2SCU	WA2WJO
KQ2M	K2PLF	WA2SVT	N2WT
KA2MIG	WA2PZI	WB2TFL	AG2X
KR2N	KJ2Q	WA2TMP	KG2Y
KA2NLY	K2QR	K2TR	WB2YOF
KA2NUA	KI2R	AC2U	W2YV
KA2NY	WA2RKO	K2UA	W2YWK
KF2O	N2RM	W2VTX	AA2Z
KN2O			WB2ZTD

MARS director to be installed

Leo Bennett, AFA6BS

William W. Good, AFA6IS — current Installation MARS Director at AGA6NO San Bernardino, California — will retire from a distinguished service career on 29 July 1982. He began flying after graduating from college as "YANK IN THE RAF." When the United States became involved in World War II, he was transferred into the Army Air Corps where his combat experience placed him as an instructor pilot.

After World War II, he became a civilian. This was to be short-lived. During this period he joined the Air National Guard, but the call for regular service was so strong that he rejoined the U.S. Air Force. When an old crash injury limited his flying, he attended school to learn the workings of computers and the logistic systems of the Air Force. Upon graduating from this training, he served as the

(*please turn to page 33*)

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— *Northern Ohio ARS, Lorain, OH* □

QCWA SoCal plans outing

Lenore Jensen, W6NAZ

August 15, 11:00 a.m. has been set as the time for a picnic by members of the Southern California QCWA Chapter, announced President (and champ DXer) Don Wallace, W6AM.

Camp Wildwood, 500 S. Topanga Canyon Blvd., Topanga will be the setting — an area owned by Oka Stewart, W6CAR.

Talk-in will be via repeater W6TEZ, 146.805 MHz, courtesy of Bill Hawley, W6ZRZ, starting at 10:00 a.m. — the time for the new chapter net each Sunday.

Any amateur with 25 years to his credit is welcome to join the chapter, reports the Secretary/Treasurer Ralph Cabanillas Jr., W6IL.

At the group's spring meeting, Moe Joffe, W6PHF received the rare Meritorious Service Award from the national QCWA for generous work over the years.

The fall luncheon is set for 23 October 1982. □

USQS

U.S. QSL Service, Inc. is an independent *FREE* QSL bureau for QSLing stateside (including Alaska and Hawaii) contacts. Available to everyone . . . no fees, no limits! USQS is managed by myself, Laryl Berry, KM7Z. USQS is over two years old now, and I'm proud to say the system is working quite well. I would like to talk about some of the basics of the system, the commonly asked questions, and a couple of problems we encounter.

USQS is a single bureau for all amateurs in all of the states. Its operations are under one roof and are handled by myself, Laryl, with help from the OM, Pat KN7B, and when necessary by volunteers who are neighboring ham friends. There is *no charge* for the bureau, and we are often asked how we could possibly run an efficient bureau of this huge volume by ourselves for free.

Let me say that it takes many hours of work in filing, bookkeeping, etc. and it does take a fair amount of money. The funds are limited to donations and what we can put in out of our own pockets. All donations are put to good use in keeping the cards flowing and getting the advertising to as many amateurs as possible. I would like to thank those who send donations to help; they are much needed and appreciated.

I am often asked why there are no ads in the major magazines . . . the cost of those ads is very high — too high at this point, but I hope to have the necessary funds in the near future. All work done to keep the bureau functioning is voluntary, so there are no wage expenses. USQS has several thousands of QSLs coming in monthly, and hopefully going out in reasonable time. I often go to the post office with 50 to 100 pieces of outgoing mail (SASEs). As this volume is constantly increasing, the possibility of human error increases. I recently was informed that an SASE arrived without contents, and the cause was that it had not been sealed properly. This mistake has caused the double checking of all outgoing mail from this QTH! I also recently received an envelope from an amateur in 9-land with no contents! Everyone should double-check and if in doubt, use a bit of scotch tape on envelopes; postal machines are a bit rough on mail! This brings me to another item, that being the sending of money to USQS. To be on the safe side, I recommend that instead of cash, it would be better to write a check. Checks can be made out to USQS, or to U.S. QSL Service, Inc.

To receive cards through USQS, we ask that you keep SASEs on file. There are two ways to do that: send SASEs complete *with your call* OR — I repeat OR — send $1 with your name, address and *call* and we will get the envelopes and postage for four SASEs on file for you. Please let us know if there is more than one call at your QTH. If your OM/XYL jr op has a call, we can simply cross-reference the file to send all QSLs in one envelope — a further saving of your funds! Also, if you choose to send in a check for SASEs, please indicate for SASEs or donation so the money gets to the right place.

When sending your outgoing cards via USQS (KM7Z), it is requested that the cards be sorted into the 10 call areas (Ø-9) and then sorted into alphabetical order by suffix (letters following the number.) *Print plainly* so we know if you point your "V" or put a tail on your "U", dot your "I" or have a corner on your "L"! (NOTE: If your outgoing QSLs do not have SASE to claim them already on file and you send a donation, we will send on as many of your cards as funds will cover. This will get your cards out and get our flyer to active amateurs who can then send a return QSL to you via USQS.)

If you have a club newsletter editor who would be kind enough to include USQS info in the newsletter, or if you could introduce USQS to a club during a meeting, it would be much appreciated. It is hard to get the word to every city in every state, so we need your help!

Every month since October 1980, **Worldradio** has listed calls of unclaimed cards on file. Due to the amount of time between sending in the list and the actual publication, please understand if your call appears and you have sent SASEs, or have received cards from USQS. Also note that my ability to handle so many cards without making mistakes is being tested, so if I type a wrong call, forgive me! This month again I am listing unclaimed cards. Note that these are only a sampling, and could be claimed and mailed by the time you read this.

It is the hope of yours truly that the USQS system will be a valuable tool for QSLing. The cost of postage is making the tradition of QSLing a hardship for some, and is keeping some from QSLing due to the higher-than-we-would-like-to-see prices.

Before I close, for those of you who have read this far, I would like to explain to the observant who noted the last name change that I am now Laryl Berry due to the April wedding with Pat Berry, KN7B! Thanks for the congratulations from those who heard about our day! For all the Dear OM headings on letters I get . . . oh well, with a name like Laryl, I guess it's hard to tell that I'm a YL. (The February 1982 article has my picture.) Whatever the heading, I hope to hear from everyone. Remember our address: USQS/KM7Z, P.O. Box 814, Mulino, OR 97042. Till next month — 73, Laryl KM7Z.

AK1A	WB1ADR	KA1AKT	KA1ASD
KE1A	KA1AEB	KA1AKW	N1AU
WA1ABL	N1AFW	KA1AMR	WB1AVA
N1ACH	N1AHY	WB1ANT	W1AW
KA1ACV	N1AJR	K1AR	AF1B
N1AD	N1AJZ	N1ARP	AK1B

K1BCI	W1GNR	W2AW	WB2FNF
KA1BFC	WB1GQR	K2AWP	KA2FPJ
N1BHI	K1GSK	N2AZE	W2FTY
W1BIH	W1GUC	N2BAT	KC2FV
N1BJK	KB1H	WB2BEC	KA2FXO
KA1BQB	WB1HBQ	WB2BFD	KI2G
K1BW	K1HEF	N2BHO	KS2G
WB1BXS	KA1HHA	WA2BIP	KA2GCH
WA1BYE	W1HNZ	N2BLT	KA2GFE
K1CC	KA1HPK	W2BMN	KA2GGT
W1CCN	W1HRQ	K2BOC	KA2GOH
KA1CI	KA1HWV	WA2BOT	KA2GOR
N1CW	KB1I	K2BQ	KA2GTT
W1CWU	W1IBC	K2BR	KA2GWO
KA1CXC	K1IEQ	KA2BRQ	KA2GZS
KA1CYN	K1IK	W2BVR	KA2HAB
WB1CZE	K1JB	K2BXG	W2HG
KG1D	KA1JGM	N2BYF	KA2HKN
K1DD	K1KJT	AI2C	KA2HLJ
WB1DEU	K1LL	AK2C	KA2HSY
N1DM	K1LPS	W2CAP	KA2HTH
K1DPB	KA1LR	N2CDX	W2IBD
WB1DQD	KA1LY	N2CFN	N2IC
W1DQY	AJ1M	W2CFY	KA2IEU
WB1DVE	K1MEM	KA2CIK	KA2IKA
WB1DXD	WA1MMD	KC2CK	KA2IKJ
KG1E	AK1N	KA2CKS	KA2IOB
KA1EBU	K1NBN	N2CLV	KA2IOK
WB1EEM	K1NWE	KA2CMB	KA2IOW
WB1ELC	AE1O	KA2CMC	KA2IPQ
KA1EVY	W1OD	WA2CNF	W2IQD
KA1EXG	KA1OOL	N2CQ	K2ITG
AB1F	AE1P	KA2CRL	KR2J
KC1F	K1PR	KC2CS	WA2JAS
WB1FAK	KC1Q	WA2CYQ	N2JB
W1FBV	KA1SCQ	KB2DE	KA2JCQ
KA1FCN	W1SR	KA2DFM	KC2JM
WA1FCN	WA1TAQ	KA2DFQ	KA2JMJ
KA1FMT	WA1TFF	KA2DKG	WA2JQK
WB1FPF	WA1TMZ	KA2DRT	WA2JUO
K1FPJ	W1TRU	KA2DUP	N2KA
KA1FVG	WA1TZV	K2DWI	KA2KEI
K1FWE	KA1VC	K2DXK	KA2KFD
KA1FXY	K1WW	AJ2E	KA2KFY
KB1G	W1XX	KR2E	K2KGG
KC1G	AI1Y	WA2ECA	KA2KLC
WA1GBA	WA1ZAM	KA2EFS	W2KNS
KA1GBO	KK2A	KA2EGH	KA2KOA
KA1GD	N2AA	KA2EIE	KA2KRH
K1GDM	WH2ABI	W2EMW	KA2KTR
W1GFH	WA2AMM	AK2F	KA2KYN
KA1GGE	W2ATM	N2FB	AE2L
W1GKJ	WA2ATR	KA2FKI	KC2L
KA2LCS	KB2OM	WA2RYE	WA2VYA
KA2LEB	K2OPJ	AD2S	KM2W
KA2LJO	K2OQJ	K2SCU	WA2WJO
KQ2M	K2PLF	WA2SVT	N2WT
KA2MIG	WA2PZI	WB2TFL	AG2X
KR2N	KJ2Q	WA2TMP	KG2Y
KA2NLY	K2QR	K2TR	WB2YOF
KA2NUA	KI2R	AC2U	W2YV
KA2NY	WA2RKO	K2UA	W2YWK
KF2O	N2RM	W2VTX	AA2Z
KN2O			WB2ZTD

MARS director to be installed

Leo Bennett, AFA6BS

William W. Good, AFA6IS — current Installation MARS Director at AGA6NO San Bernardino, California — will retire from a distinguished service career on 29 July 1982. He began flying after graduating from college as "YANK IN THE RAF." When the United States became involved in World War II, he was transferred into the Army Air Corps where his combat experience placed him as an instructor pilot.

After World War II, he became a civilian. This was to be short-lived. During this period he joined the Air National Guard, but the call for regular service was so strong that he rejoined the U.S. Air Force. When an old crash injury limited his flying, he attended school to learn the workings of computers and the logistic systems of the Air Force. Upon graduating from this training, he served as the

(*please turn to page 33*)

AMATEUR RADIO IN PUBLIC SERVICE

Paris tornado emergency

Rich Casey, N5CSU

The Texas tornado season is here, a time when amateurs throughout the Lone Star State keep a watchful eye to the sky. On Friday afternoon, 2 April, an intense low pressure front spawned a devastating tornado that ripped through the city of Paris, 90 miles northeast of Dallas. The twister touched down at the west edge of town, and cut a two-block-wide five-mile-long path completely across this city of 25,000. The final toll stood at eight dead, 160 injured, and an estimated $40 million in damage and destruction.

Grayson County ARES member Mike Gray, K5OUK had been alerted by the National Weather Service that severe weather might develop. As it passed over his area without incident, Mike could see the potential of the cell. He picked up Metz Shatley, WA5KKJ, and the two followed the storm east. When the tornado touched down in Paris, Mike was in touch with Dallas via 40-meter mobile with WA5KKJ as runner in and out of the EOC (Emergency Operations Center). For the two long hours that followed, K5OUK was the only communications link out of the Paris area.

Soon, Amateur Radio groups throughout northern Texas swung into action. Phil Clements, K5PC — the ARRL Section Communications Manager, and Charles Byars, W5GPO — Section Emergency Coordinator for ARES, were on the scene in hours, and EOCs in Dallas, Fort Worth, Paris, and the state capital were connected via a 75-meter voice link. A state police communications link between Paris and Dallas was also established on 75 meters that evening, and a dozen amateurs from the Garland Amateur Radio Club arrived with their portable 2-meter repeater. That night, 50 to 60 outgoing messages were sent for families in the affected area.

Throughout the night and into the next day, members of the Dallas ARES and other ham operators manned telephones and radios at a Dallas blood bank, collecting incoming health and welfare inquiries for the Red Cross.

Over that weekend, nets were established and maintained on several 40-meter frequencies, with operators transferred to 75 meters during the night. Over 900 health and welfare messages had been received, serviced, and responses sent through Red Cross HF stations KI5A and K5AVA by 6:00 p.m. Sunday; 163 of these necessitated house-to-house searches, which were handled by 2-meter FM.

All in all, a job well done by the amateur community. As District Emergency Coordinator Jerry Keesler, WA5KZA put it, "The hams knew what needed to be done, set up their stations, and went to work. We just could not have handled this without them."

A partial list of groups that were involved include: Grayson County ARES, Dallas County ARES, Tarrant County ARES, Lamar County ARES, the Sabine Valley Amateur Radio Club and the Garland Amateur Radio Club.

A thank you to all who helped, and also to those who monitored our low band nets but did not transmit unless your assistance was needed. It couldn't have been done without your help, too.

(The first calls for help came by way of Amateur Radio operators, who opened communication to the area by relaying requests for blood and medical equipment outside the storm-torn area, officials said.) □

Paraguay emergency resolved via Radio

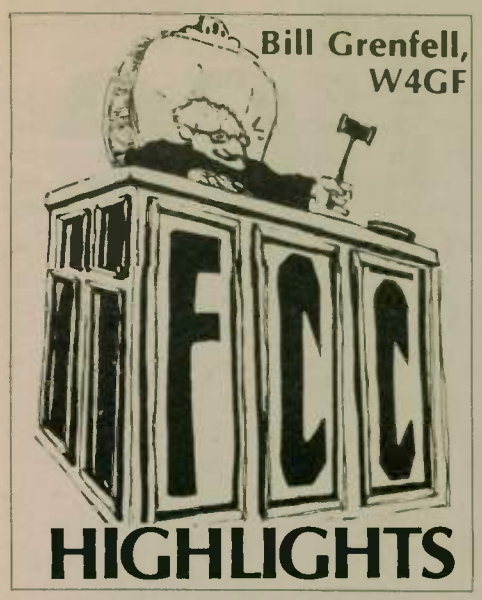
Recently, Jack Demaree, WB9OTX of Versailles, Indiana, successfully linked Dr. Robert Mulford of Versailles, Indiana with Registered Nurse Jonathan Beachy, ZP2CJ of Chaco, Paraguay, South America, via Amateur Radio telephone patch.

Beachy, unable to contact his resident doctor in Chaco, sought help through Amateur Radio. Demaree, while monitoring a 21 MHz calling frequency, heard Beachy's appeal for help, and having the proper equipment to assist, called Dr. Mulford by telephone, then connected him direct with Beachy in Paraguay.

Beachy relayed medical symptoms, vital signs and past history of his patient to Dr. Mulford. Mulford, making the diagnosis, prescribed treatment and medication for the patient immediately.

Although thousands of miles separated the doctor from his patient, Amateur Radio linked the two as if they were next door, helping to alleviate suffering for the patient. □

(*please turn to page 11*)



Use of the new 10 MHz band by U.S. amateurs must wait for Senate ratification of the WARC Radio Regulations. On this basis, several petitions — including ARRL's RM-3855, which proposed early use of the band — were dismissed by FCC's Private Radio Bureau Chief. According to the ARRL, the Senate Committee on Foreign Relations tentatively planned to hold hearings in May on the Radic Regulaticns (Geneva, 1979) and the Final Protocol.

•

The comment deadline on possible expansion of the HF phone bands has been extended to 16 August. Reply comments must be in by 16 September. The extension was approved by FCC on 30 April. Note the correct Docket number for this rule making is 82-83. The number given in Highlights two months ago was in error.

•

Cordless phone manufacturers have now switched attention from 1.8 MHz (and below) to 46.6-47.0 and 49.6-50.0 MHz frequencies. The ability of these devices to reject adjacent 50-54 MHz amateur band signals, as well as 1.8-2.0 MHz signals, has also been questioned.

•

The FCC rejected the idea of relaxing the code test requirements for handicapped applicants in terminating, without action, Docket 78-250. In its Report and Order, FCC stated: "After careful consideration of the issues and comments in this proceeding, it appears that selecting a particular group of license applicants for favorable treatment in terms of less stringent amateur operator requirements would not be a sound licensing policy. . . . Therefore, if we decide to introduce a class of Amateur Radio operator license without telegraphy requirements, it will be available to any applicant, instead of limited to applicants with certain physical or learning disabilities."

•

A reciprocal amateur operating privileges agreement between the United States and Japan is not likely in the near future, was the opinion of an FCC staff person. The disparity in the examinations and operating classes and privileges in the two countries is believed to make arriving at a basis for agreement difficult.

•

Novice Class applicants now have 60 days to get their examination papers back to FCC as a result of its action in April. The previous limit was 30 days.

•

Two amateur repeater jammers are "off the air" by recent FCC action. Donald Gilbeau, N6OZ has had his station license revoked and his Extra Class operator license suspended for transmitting random words, Morse code and unintelligible sounds on the input frequency of the "Grizzly Peak" repeater. (See letter following this column.)

The renewal application for the General Class operator license and the station license of Gary Kerr, WA6JIY was denied by the FCC. The judge found that repeated and lengthy transmission of "test jargon" on the repeater input frequency constituted willful and malicious interference, in that no legitimate tests actually were being conducted.

•

Transferring a secondary station call to the primary station is now permitted during the one-year amateur license renewal grace period. Previously, such a change could only be granted if applied for before expiration of the licenses. No *other* changes, which were not already permissible before or during the grace period, are included in this revision of the call sign rules.

•

FCC's amateur rules which might have an economic impact on small businesses were among those listed in an FCC Docket 81-706 release last year, pursuant to the Regulatory Flexibility Act of 1980. The amateur rule sections were: 97.69, Digital Transmissions; 97.73, Purity of Emissions; 97.75, 97.76 and 97.77 having to do with type acceptance requirements for RF power amplifiers used by amateurs.

The ARRL commented at length on the restrictions on 10-meter amplifiers (QST, May 1982, page 54). However, an FCC staff member advised me that no comment was filed by any amateur amplifier manufacturer!

•

Dear Mr. Grenfell:

It is courteously requested that the following be carried as a footnote to any report you may publish which refers to my alleged involvement of FCC rules and regulations, "jamming," or as being part of any illegal activity involving the Grizzly Peak Repeater.

With the report that I was involved with "jamming" activity of the above referenced repeater and that the FCC has decided to suspend my station license and revoke my operator license (Extra Class),

I wish to state here that the circumstances absolutely do not warrant such drastic action. It was stated in the hearing I requested that the alleged "jamming" was, in fact accidental transmissions due to the fact that a switch which permits my electronic keyer to be used for MCW on 2 meters was left in the wrong position which resulted in self-practice being accidentally transmitted over 2 meters. After a few minutes I decided to listen to 20 meters and at the same time moved my logbook which is on a heavy clipboard to the opposite side of the desk where, without realizing it somehow lodged against the 2-meter rig microphone, thus keying it and allowing the 20-meter signals to be picked up by the 2-meter microphone. A comedy of errors, yes, but by no means intentional.

All this was discovered some time later. The FCC cited me and I responded in a manner which basically took the attitude that if I admit to their allegations with a humble apology the whole nightmarish matter will go no further.

Well, the matter did go further as can be seen. I requested and had a hearing, at which time all the facts were presented. It should be stated at this time that I was at no time involved with any type of organized or unorganized "jamming" effort. To the contrary, as past president and vice president of the 50-year-old Stockton Amateur Radio Club/W6SF, I have drafted and circulated petitions urging the FCC to take appropriate action *against* the "jammers." I have made numerous telephone calls to the FCC in regards to the situation, and written letters, etc. I have conducted Novice and Technician/General classes for over seven years and hold numerous additional "credits." After nearly 25 years as a model ham, such action would be totally out of character.

My attorney and I have prepared the necessary papers to appeal their adverse decision and we hope and pray for a favorable result. I wish to take this opportunity to thank all my valued friends who have been so helpful in backing me with letters and moral support. I sincerely appreciate it. Hams helping hams . . . isn't that what it's all about?

73,
DONALD GILBEAU, N6OZ
Stockton, California □

.....important notice

YES I want to know even more about the wonderful world of Amateur Radio

Subscriptions received by the 20th of the month will begin with the issue dated two months from the month of receipt, i.e., if we receive the subscription by April 20, your first issue will be June, and will be mailed to you in early May.

If you received this copy of Worldradio and you aren't yet a subscriber . . . this was your sample copy.

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Public Service

(continued from page 9)

Amateurs lend a hand at Empire State Games

Vivian Douglas, WA2PUU

The second Empire State Winter Games at Lake Placid saw 1,100 athletes competing in nine winter sports over a nine-day period.

With nearly three times the number of athletes who participated the first year and the inclusion of about a half-dozen sports, Empire Games Executive Director Mike Abernethy saw a need for communications at the various events, such as Amateur Radio provided at the Summer Empire State Games last August in Syracuse.

Conditions were somewhat different from the summer games as heavy snow, rain and cold posed a challenge to the amateurs operating from Mt. Van Hoevenberg, Intervale and the Olympic Arena in Lake Placid. The base station was set up at the headquarters office in the Lake Placid Club Resort.

During the opening ceremonies at the arena, all operators worked at the Olympic Ice Center with WA2PUU — yours truly — handling communications for Mary Michele "Shelly" Nangle, Empire Games coordinator; Nancy Coe, KA2HQF, reporting for the M.C.; Jim Mozley, W2BCH, stationed with the program audio effects, and Ken Evans, WB2FXG covering the "catwalk."

Each operator covered two to three sports during the 12 hours the station was open for duty each day, with some competitions lasting as long as five hours.

The closing ceremonies were held in front of the Lake Placid Club and on Mirror Lake. During this event, KA2HQF worked with Abernethy, who congratulated the athletes on their enthusiastic participation and winnings; Ed Engel, WA2EJQ operated from the staging area under Craig Findlay, Syracuse Parks and Recreation; W2BCH was with the fireworks display crew and WA2PUU covered communications at headquarters with Shelly the coordinator. All operators were from Syracuse except Engel, who resides in Constantia.

On 11 August, the fifth Summer Empire State Games will be opening in Syracuse, when Amateur Radio again will cover the five-day event with approximately 100 operators working with the various two dozen sports chairmen throughout the Syracuse metropolitan area.

—Syracuse Herald-American, NY ☐

Telephones out

Gary Froemming, WB7CAG

On 13 March 1982, the American Radio Net — controlled by Richard Boston, K6AU — handled emergency traffic for Robert Butin, WA6YRV, who had lost telephone communications due to rain in Palm Springs.

Because of his medical practice, Robert Butin needs to keep in touch with hospitals in Palm Springs via telephone.

Robert West, WA6MFJ contacted the telephone company to report the problem. Gary Froemming, WB7CAG; Ken Gilbert, KB6TG; and WB6AAT kept the frequency clear during the exchange of traffic. A short time later, service was restored to Butin's office. ☐

Simulated nuclear meltdown

Reynolds Davis, K0GND

As part of the Nebraska State Emergency Operating Plan, Amateur Radio communications backup was provided to the State Civil Defense Agency as the state plan was activated during a simulated nuclear powerplant meltdown, 10 March 1982.

Gordon Lintt, K0HPT — Communications Officer for State Civil Defense — operated from the "meltdown" site near Brownsville in southeastern Nebraska on both federal and amateur frequencies. Mary Rea, KQ0K operated from the State Emergency Operating Center, assisting in the total communications. ☐

THE AMATEUR RADIO CALL SIGNS DID NOT ARRIVE IN TIME FOR THE JULY ISSUE.

World's largest plane escorted by amateurs

Lenore Jensen, W6NAZ

"You people *really* know how to communicate!"

That was the enthusiastic comment from the officer in charge of the Coast Guard to the 45 amateurs involved in the movement on 11 February of the 200-ton wooden flying boat, built for Howard Hughes near the end of World War II, to its new permanent home in Long Beach harbor adjacent to the *Queen Mary*.

An event covered by network TV, the long-awaited transfer over the four-mile channel waterway required careful planning and perfect communication to avoid mishap. Jim Michaels, W6PGM offered the services of the U.S. Long Beach Power Squadron (private vessels) and ham operators of the Associated Radio Amateurs of Long Beach. He's commander of the squadron as well as Emergency Radio Coordinator for the fleet.

Most of the skippers and radio operators had been ready from 9:00 p.m. the night before for the 5:35 a.m. start of the operation. It was mid-afternoon before they were finished.

The channel was guarded by 28 of the private boats, each with at least one operator aboard, to prevent any unauthorized interference by other craft during the ticklish time the giant flying boat was towed on its barge.

Atop the plane itself was Ed Kane, W6ONT — a technical advisor to ARRL and educational officer of the squadron along with the crew chief who had been with the plane since it was built.

Aboard the *Semper Fi* was Jim Michaels, W6PGM, serving as Net Control Station (NCS). Ashore, Ron Boan, AK6Y worked as Alternate NCS from his motor home nearby.

Frequency used was 145.52 MHz simplex. "Amateur Radio was the ideal choice, in this case," said Jim, "as no other communication afloat could have done the job as well. We didn't want to use marine VHF as we might have interfered with the safety of other boaters or they with us. We were supported by the police, fire and Coast Guard." (Jim himself went without sleep for about 40 hours, as the job required much advance planning.)

The entire operation went smoothly, with the "Spruce Goose" finally safely installed inside the dome waiting to protect it. However, considerable work is yet to be done before the public may have its close-up inspection of the unique craft. Its wingspan stretches 320 feet, larger than a 747 plane.

"At one point, there were three 'largests' together," continued Jim. "The plane itself, the *Queen Mary* (largest passenger liner) and Herman-the-German, the largest crane."

The Long Beach Power Squadron has many times combined activities with Amateur Radio. Safe Boating Week Parade was one event. The group also handles U.S. Olympic regattas' communications. Many of the operators are regular check-ins with ARES drills.

The "professional" operations of this latest Amateur Radio exploit well deserved the compliment given at its conclusion. It was typical of the many public services rendered by amateurs of Long Beach, California. □

Savannah hams work with March of Dimes

Richard Smith, WB4APG

It was a warm and cloudy Saturday morning on 3 April at 9:00 a.m., when approximately 1,700 walkers started the 10th annual walk-a-thon for the benefit of the March of Dimes. Teams from as many as 50 local businesses as well as schools and individuals made up the rainbow-colored wave of humanity that flowed at a leisurely pace around the 20-mile course through downtown historic Savannah.

The Amateur Radio Emergency Service of Savannah provided an Amateur Radio Safety Communications Net for the Association of Life Insurance Underwriters, who organized the walk-a-thon for the March of Dimes. Richard Smith, WB4APG and Sarah Smith, KA4MXJ were stationed at the start/finish line. Greg Dickerson, N4DBS; Tom Langenfeld, KA4RKX; Becky Langenfeld, KA4VSC; Joe White, WA4GFC; Demetria White, N4EXD; and Philip Neidlinger, KA4KOE supplied radio coverage for the five checkpoints and also the Red Cross first aid van. Communications-wise, the day went very well with no real emergencies — just a lot of blistered feet and a skinned knee or two.

At last report, $35,000 had been raised to fight birth defects. It was a good day for the March of Dimes and a good day for Savannah amateurs. The Amateur Radio Club of Savannah's repeater — W4HBB, 146.28/88 — was used for all communications. □

Volunteers who assisted during the Chatsworth Run were (top row, left to right) Wayne Rankin, WA6MPG; Emergency Coordinator Len Drayton, WA6LAU. (2nd row) Alvin Teeter, WD6FXG; Ken Teeter, KA6QHE; Jerry Gross, WA6POZ; Lenore Jensen, W6NAZ; Judy Teeter, WD6FWZ; Wally Foster, N6CDJ; Jim Fortney, K6IYK; John Hiltabiddle, K6CTT; Dick Ulrich, K6KCY; Jim Tittsler, AI8A; Brian Ulrich and Ben Caplan, WA6MRY. *(photo by Bob Jensen, W6VGQ)*

ARES team rises early to aid runners

An ARES team checks out rigs and frequencies prior to providing communications for the Chatsworth Run on 18 April in the San Fernando Valley. Amateurs were stationed around the 10K course with each official and at all strategic points to help the benefit staged by Kiwanis for Spastic Children.

Planning was done for the amateur activity by Jim Fortney, K6IYK, District Emergency Coordinator for the northwest area of the Los Angeles ARRL section; he also served as NCS. Volunteers who showed up at 5:45 a.m. are shown in the photo. □

Lincoln Marathon

Reynolds Davis, K0GND

For the fifth year, the Lincoln Amateur Radio Club provided communications for the Lincoln Marathon — a certified marathon sponsored by the Lincoln Track Club, which took place 9 May 1982. In addition to linking public safety, race officials, press and checkpoint/aid stations, the club also provided the public address announcer (Reynolds Davis, K0GND), and the press box support team — Howard Cash, KA0AYY; John Edson, N0COO; Lynn Blesh, K0EK; Jack Clift, KA0ERQ, who sorted and recorded data. Roger Cox, WB0DGF and Joe Eisenberg, WA0WRI passed data to the press box. Steve May, WA0ASM was Net Control for the net, which started 15 minutes prior to the race (6:45 a.m.) and concluded six hours later.

Four club members operated from bicycles: David Kunkee, K0DI; Mark Price, K0NB; Blaine Tomkin, WB0QLH; and Les Myers, K0SCM. They tracked the lead male and lead female runner, the head of the pack and the rear of the pack. Bob Tridle, WD0DJT operated from the coordinating squad car of the Lincoln Police Department, while Scot Davis, WB0WSL operated from the ambulance assigned to the race. Steve Lutzman, N0CIS operated from the press van while Gail Tanabe, KA0CGF and Mike Drabant, N0DMX operated from support vehicles operated by the Lincoln Track Club.

TV personality Dick Cavett, whose parents live in Lincoln, stopped by the press box and passed on his greetings to all of the operators on the net.

In addition to the 35 amateurs who assisted with communications during this activity, the Eastern Ambulance Company remained on hand. □

Tucson amateur helps others

J. Lester Hearn is an Amateur Radio operator who lives in Tuscon, Arizona. Because of an incurable eye problem, he has been going steadily blind since 1960; this does not preventing him from doing all he can to help others retain their sight.

Since 1966, Hearn has been involved with the Eye Emergency Radio Network. The group was founded in 1962 by two Midwest amateurs who hoped to start a national radio network which could be used to arrange transfers of human eyes from donors to persons who needed them. The network has been a huge success and recently arranged its 10,000th transfer.

Hearn himself has been on the net every day for the past 15 years — a true display of the amateur spirit of public service to others.

— *Northern Ohio ARS, Lorain, OH* □

Civil Defense calls on amateurs

Reynolds Davis, K0GND

The Lancaster County Amateur Radio Emergency Service (ARES) was placed on "standby" by County Civil Defense due to posted storm warnings in counties west of Lancaster, Nebraska and projected movement to the east.

The spotters net was readied, but not called; however, key positions at the Civil Defense Emergency Operating Center and radar operations at two local radio stations and a net control station were manned. The storm dissipated before spotters were needed.

The six ARES members who stood by are: Steve May, WA0ASM; Fred Jones, KC0CI; Steve Lutzman, N0CIS; Reynolds Davis, K0GND; Joe Eisenberg, WA0WRI; and Art Gakel, WB0YYE. □

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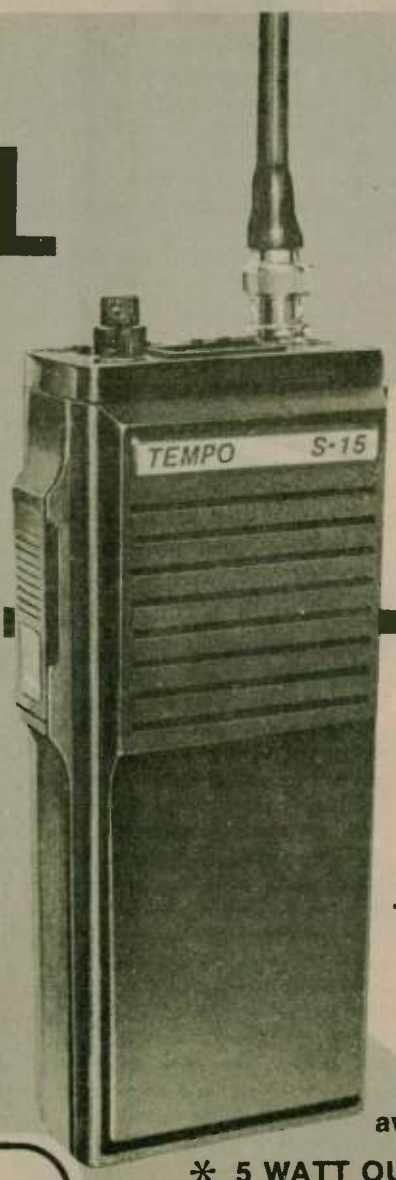

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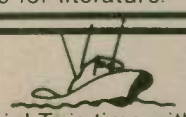

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OFF THE AIR

Listen for bootlegged call

I have been advised by several amateurs in California that there is an individual there using both my name and former call sign, N4VN on several repeaters.

N4VN was a secondary call sign assigned to me in 1976. It expired in 1980 and I did not renew it. During the four years I held N4VN, I almost never used it, preferring my primary call, WB4FDT. A call to the FCC today (14 May) revealed that N4VN has *not* been renewed. I must add that, unfortunately, I have never visited California.

Please advise your readers that my former call has been pirated, and should it be heard on the air, the appropriate authorities should be notified.

PHILLIP SAGER, WB4FDT
Falls Church, Virginia □

W6VIO QSL information needed

I worked W6VIO at the Jet Propulsion Lab, Pasadena in August 1981, when they were operating a special event station during the *Voyager* flyby of Jupiter.

I sent a QSL and SASE to the Callbook address, as requested. When I failed to receive a QSL by mid-November, I sent a follow-up QSL and SASE, assuming my original QSL/SASE had been lost in transit.

I still haven't received a card, and subsequent letters have not been answered. Does anyone know how I can get a card from W6VIO? I think others who haven't received anything might be wanting this information, too.

GARY PAYNE, KE6CZ
1347 East Dakota
Fresno, CA 93704 □

SSTV help for Generals

I am starting an SSTV net on 14.340 ± 3 kHz for General amateurs who have no SSTV gear. If they have a cassette recorder, I will — on the air or off — send their CQ with call, QTH and 73 sign-off plus any picture.

With such a tape, they can go on the air with SSTV without gear, as I got my start.

JOSEPH SCHADL
1802 W. Merlin Road
Tucson, AZ 85713 □

Opinions wanted

I would like to have opinions and comments from traffic handlers on the following ideas.

I think there are quite a few net members of various nets who don't have up-to-date Callbooks and are in need of this kind of help in their traffic handling.

Also, what about putting a QSL column in net bulletins, listing each member's call, complete address, gear, antennas and location which could be covered for messages. Members could send their QSLs, etc. to editors of net bulletins for publication of the information.

KEN HAND, WB2EUF
East Hampton, L.I., New York □

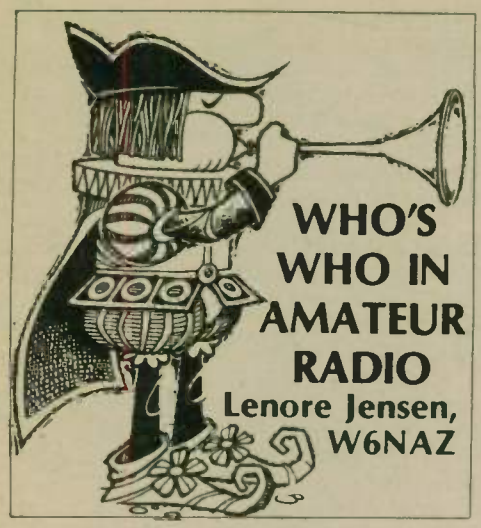
Against lists

To the Editor, QST
American Radio Relay League

I strongly disagree with the comments of Mr. Henry Fort, WB5IKX (Correspondence, Dec. 1981 QST). The reasoning that he uses to justify list operation are in fact the very reasons that this type of operation is a detriment to Amateur Radio in general and the noble art of DX chasing in particular.

I have been an Amateur Radio operator for 17 years and have sweated out DX contacts with 100 watts, dipoles, verticals, etc. That very sweat gave me the incentive to burn the midnight oil, squeeze the budget, hang off of 100-foot towers and build amplifiers. I know the agony of defeat, but also the joy that can only come from "landing one yourself." I

(please turn to page 17)



"This is your captain speaking. Folks, we have just crossed the country with 100 percent safety. Now the most dangerous part of your journey will be to your home or your hotel!"

That's an airline pilot's idea of a serious joke and Don McBain, K6MR firmly believes it is true. He will explain that air travel is 50 to 60 times more safe than driving in a car.

"Remember," he says, "50,000 people are killed each year on our highways. Commercial pilots are professionals, but too many car drivers are incompetent." Don can reel off convincing statistics by the pageful.

After 34 years with United Air Lines, most of them as a captain, Don McBain knows whereof he speaks. A great deal of that time he also served on various safety committees and in investigations of the comparatively few accidents occurring within the industry.

"After all," he continues, "five million take-offs and landings happen each year. For a two-year period there were no accidents at all in the United States on scheduled airlines."

Don didn't start out to fly but was a radio announcer and engineer in the '30s, having earned his ham ticket at age 13 "and fooling around with Leyden jars and big plates for rectifiers." His early ham days were spent as W6VI, but his ticket lapsed during the war so he took the exam again, ending up as K6MR. (His big home station sentimentally uses that original telegraph key.)

He first worked at Hollywood's KHJ in 1934, transferring to KNX when CBS took it over. One of his assignments was to put on the Big Bands from the romantic Casino Ballroom on Catalina Island. Tired of crossing the 23 miles by water — and having learned to fly (soloing after less than three hours instruction) — he and a friend established the Catalina Air Lines, on the side. They operated it for five years, flying 12-passenger de Haviland Doves and DC3s, transporting about 65,000 passengers in complete safety.

Don always wanted to own a broadcast station. In 1945, he and announcer Dick Joy established one (which Don built) in Palm Springs with the call letters KCMJ (M for McBain, J for Joy). They sold it in '51 but it's still flourishing.

Always keeping busy, Don managed "in his spare time" to personally build a home for himself and his wife, Iris, in Santa Monica.

Exciting as broadcasting was, flying had become paramount. In 1940, Don was hired by United at half what he was earning in radio, but the magic of "friendly skies" was well worth it. (Things became considerably better later, of course!)

The company's passion for safety touched him; before long, Don was on safety committees. Finally ('65) he was asked to chair the Central Safety Committee, representing 6,500 pilots of United. As such, he was in charge of the pilots' concern in all aspects of air safety.

"You see," he explains, "when the National Transportation Safety Board investigates an air carrier accident, several teams are involved. We have a pilot on each team: that of the Board itself, the FAA, the carrier and probably the manufacturers of the engine and the plane as well." He personally testified at perhaps 50 of such hearings. This work was done on leave, under the auspices of the Air Line Pilots Association (ALPA). Then, back to "the best job in the world" — flying as captain of the big ones, especially his favorite, the 747.

Although he flew wherever United served, he spent lots of time on the Honolulu run. "Then, arriving at the hotel, I'd get my FT-101 out of the locker, throw a wire over the balcony and work the world. Or I d enjoy jolly chats with tourist hams in other hotels looking for a KH6 QSO with their hand-helds."

Still fascinated with broadcast radio, he decided to try for another license. After three years of paper work, he and a friend received FCC permission for a station at Lake Tahoe. Don again built the transmitter and did the all-important proof of performance tests. The AM/FM station does very well and Don makes the required field intensity tests every year.

"In those mountains, this can be a rugged job," he laughs. "Until we received a variance, I had to test both the lobes and the nulls of the two-tower array. For one of them it meant going by boat, helicopter and muleback to a mountain top. One time I broke four ribs by slipping and then sliding down the hill atop my field meter!"

"Finally the FCC permitted our using a "mirror image" from our main lobe because of the inaccessibility of the minor. In other words, we check the opposite radial for any change in pattern. By the way, when it snows, sometimes the capacity will change between the towers, giving a false reading."

He flew more than 30 flights to Vietnam, but "luckily we didn't find any holes in our planes." However, so that Don isn't considered lacking in adventure, it is admitted he once set the record of time for a transport in flying from San Francisco to Los Angeles: 35 minutes instead of the usual full hour. "Of course, that was before the regulations required nothing more than 250 knots below 10,000. Our 85 passengers in that DC8 enjoyed a fine tailwind, and we crossed the Hollywood hills at about 400," he admits.

Captain Don McBain, K6MR ***(photo by Bob Jensen, W6VGQ)***

Don flew for United until his 60th birthday — the dreaded time at which he (like all pilots for commercially scheduled passenger flights) was forced to retire. This is a matter of great annoyance and concern, it being due to a regulation which went into effect in 1959. He says, "It was a political and not a safety decision and it certainly is illegal discrimination! Retirement based on health and ability!

Long ago he had a Rights Association, members, a political act for elimination of that dis

Another assignment ca pilots FAA requested he be representative with a select g retired pilots who make an study of safety — not only for a but of the entire industry.

Don devoted six months "with a pletely free hand" to traveling the ent country in the cockpits of all lines, attending schools of both the lines and the FAA, checking out towers and air traffic facilities, manufacturers — every aspect of aviation.

"We were not trying to find fault," Don explains, "merely seeking ways to improve air safety."

The group came up with a 93-page report which was submitted to Congress. It scheduled some criticisms of the FAA, but mostly it concerned the Air Traffic System.

It resulted in one actual regulation change; also, many suggestions from these experienced fliers were readily adopted by carriers.

"For instance, there was the matter of the "sterile cockpit" under 10,000 feet. We believe there should be no talk of golf, cars, etc. . . . and no pleasant conversations with stewardesses visiting the cockpit. Everyone should pay strict attention in the light plane altitudes (under 10,000.)"

"Too, we felt that landing lights of the plane should be turned on "below 10" so that the craft could be more easily seen."

He feels things are far too complicated. "Once on a DC6 flying from Chicago to Los Angeles, there was such a jumble of papers and notes, we counted 656 communications!"

Don's all for electronics taking over, to make the system 90 percent automated.

"After the strike of the air traffic controllers (*coordinators* would be a more proper term), 11,500 were discharged. Their numbers have been cut in half, but now we are operating 95 percent as many airline trips."

Yes, automation is more practical than many realize. "We now have the ability to land 'zero-zero.' With the automatic landing capability, the pilot can be relieved of the highly demanding concentration of flying the plane to touchdown, thus permitting him to manage the systems. (In effect, the plane could land itself from 2,500 feet on down. Of course, this isn't currently used much but is perfectly possible. In a few years it may be routine.)"

The shuttle *Columbia* counts Don McBain among her helpers. He and another pilot did flight tests at Edwards Air Force Base to learn if the craft could land at a certain spot on the 15,000-foot runway without an engine.

"Using a Convair 990 (a 100-passenger four-engine jet) we shot about 15 landings

no power, putting
the gear, and manag-
by varying the drag

landings were within a thou-
within 100 feet of the desired
his proved they would not need an
e in order to maneuver the shuttle
ound the traffic pattern." It has been said this saved two years and $100 million in design work. She would need to carry only the rocket engines into space.

His enthusiasm for the shuttle is great. After NASA completes the test flights, the proven machine will be flown by an airline. Of course, Don hopes that will be United. He understands the first 40 flights are already sold out. By the year 2000, some people believe as many as 18,000 pilots may be needed to fly shuttles!

The film *Airport 75* required a technical advisor, and Don was invited to serve. Charlton Heston autographed a photo to him, "Thanks for making me look like I knew what I was doing!" Don even appeared in the film as a tower operator.

Nowadays, there is more time for Amateur Radio and his new electronic organ. His handsome home has a fine radio shack whose walls are covered with photos of favorite planes. Also, there are many plaques and certificates from admirers — all souvenirs of his 27,000 hours of flying.

In addition to the praise, another from the Retired United Pilots Association salutes his having "patiently endured discomfort of burning eyeballs, freezing feet, hours of boredom, moments of stark terror, too much coffee, too little fuel, early calls, late arrivals, rising runways, lowering visibilities, expanding waistlines, receding hairlines . . . unchallenged second-guessing, 20/20 hindsight and full recall of the Good Old Days!"

In other words, when you QSO Don McBain, K6MR, just ask him about all the *other* fascinating information on flying we didn't have room for here! □

Still *more* incredible

Paul Schuett, WA6CPP

WA6CPP has QSL cards from W6CPP, WB6CPP, W7CPP and W3CP. No skeds were involved.

WA6 and WB6 used to cause a bit confusion when they would check in to WCARS at about the same time. W6 and WA6 met each other on WCARS, also.

(WA6CPP will soon have a KE6 call.) □

American Radio Relay League

J.A. "Doc" Gmelin, W6ZRJ

Past Director, Pacific Division
ARRL Honorary Vice-President

In the last two columns in this series, we discussed the FCC's proposal for phone band expansion in the Notice of Inquiry Docket 82/83.

The docket proposes phone band expansion on the 20-meter amateur band and also asks for comments on possible expansion on other phone segments in the amateur HF bands.

We have already discussed the various aspects of the proposal on 20 meters together with assignment of phone subbands on the basis of license class. The latter is also in relation to the amateur 20-meter band.

What about the other HF amateur bands: 80, 40, 15 and 10 meters? Should we also ask for expansion on these bands?

Well, the first question to ask is, is there a need for more phone band segments? A second question relates to the present use of these bands.

In this issue, we will look into both of these questions as they relate to the 80-meter band and then take the others in order.

On 80 meters, the present phone band for U.S. amateurs runs from 3775 to 4000 kHz. Actually, the entire band is open for CW operation, but in practice, it would appear that the CW band runs from 3500 to 3775. This is slightly less than 50 percent of the available 80-meter spectrum.

Actually, of course, amateurs may also operate RTTY on this segment. Since Canadian amateurs can use the segment 3750 to 3775 kHz, the actual CW segment used by U.S. amateurs is less than would appear at first glance.

In practice, most CW operation is from 3500 to 3700 kHz, with a window of about 3605 to 3640 used mostly by RTTY stations. Of course, not all classes of license in the United States can use the full CW segment, since 3500 to 3525 is restricted to Extra Class only. The segment 3700 to 3750 is used for CW operation, but this is a Novice band and is left mostly for Novice operations.

There are also restrictions in the phone bands by license class, with General restricted to 3890 to 4000 kHz, Advanced restricted to 3800 to 4000 kHz, and Extra the full phone band from 3775 to 4000 kHz.

In practice, most crowding (QRM) on the 80-meter phone band is from 3890 to 4000 kHz, with considerably less congestion in the Advanced and Extra Class segments. There are two reasons for this. The first has to do with the fact that a great deal of traffic and net operation is carried on in the 80-meter band, both on phone and CW.

On phone, almost all traffic nets operate in the 3890 to 4000 kHz segment. This is so that all classes of license can take part. This takes a good deal of the General Class phone segment.

Secondly, much ragchewing is also carried on in this same space since many amateurs want to talk to friends of *all* license classes, and of course can only talk to their friends who hold the General license in this segment. Thus, the major crowding on the 80-meter phone band is in the upper segment.

What about the actual use of frequencies on the 80-meter band on both CW and phone by U.S. amateurs?

Well, of recent years, the crowding on this band has been less than in previous years. This is due in great part to the advances in the use of VHF spectrum, especially in the use of 2-meter FM repeaters.

While in past years, 80 meters was the main band for close-in communications of 500 miles or less, much of this close-range communications is now on the repeaters, which has relieved the 80-meter phone band to some extent.

Of course, there are times of severe crowding on the 80-meter phone band, especially in the evening hours and mostly on the upper segment. At that same time, the CW segments are also more crowded, mostly with traffic nets using multi-channel communications techniques.

It must also be observed that in almost all cases, there is still more phone operation than CW operation. Of course, when there is little or no crowding on the phone band — even to the point of many clear and unused channels — there is often very little CW operation on 80 meters at all.

This, of course, makes a great case for expansion of the 80-meter phone band.

Why not use the rest of the band? Such expansion could be done in many ways since the band is subdivided by license class. Many General Class operators would be very satisfied if they could just use all of the present phone band. (There is still a bad taste in the mouths of many General Class amateurs who feel they "lost" what should be theirs when incentive licensing went into effect.)

There is another reason why some amateurs would like to see changes in the phone segment on 80 meters.

In general, phone DX is at the low end of the band. The reason for this is the fact that in many countries, there is much less space available on this band than in the United States and Canada.

This is certainly true in ITU Regions 1 and 3, where the band may be only 100 or 150 kHz wide. The segment is on the low end of the band, and thus DX phone cannot come into the upper frequencies where U.S. amateurs can operate. Because of this fact, it is impossible — in many cases — to work DX phone on "their" frequency.

How do we solve this problem? If we were to move U.S. phone clear into the low end, CW would probably be eliminated in this part of the segment. The U.S. amateurs using CW could move to the high end of the band, but amateurs in other regions could not do so. Thus, CW operators would have the same problem phone has at present.

Another problem regarding phone band expansion on 80 meters is the fact that Canada allots at least "some" expanded phone frequency larger than the United States allocates to its amateurs.

As an example — if the United States expands the phone band down to 3750 kHz, in all probability, Canada will open the region 3700 to 3750 for phone operation. This would probably eliminate our Novice segment in that section.

Of course, we can then move our Novice band to 3650 to 3700 kHz. In that case, amateur CW operation in that segment — mostly traffic channels — will move down. Since there will be crowding from RTTY, this net operation will then move to the low end where there is DX operation.

Is this phone expansion really needed? Certainly at times there is overcrowding in the phone band on 80 meters, and expansion is needed. But all factors should be taken into account if the move is made.

Many amateurs I have talked to who

favor such phone expansion, are — of course — incensed with the fact that Canadian amateurs wish to have more phone segment than U.S. amateurs. But when I have talked to Canadian amateurs, they insist they must have this extra space in order to work each other, feeling they cannot compete with U.S. QRM. In fact, when I broached the subject to a Canadian amateur official some years ago, I was told to mind my own business, that Canada is a soverign nation, and that it would do as it pleased within the bounds of the ITU agreements.

The same feelings also seem to be found in some countries in other regions, where amateurs feel they must have an extra segment to be used to escape U.S. phone operation.

Thus, the ARRL Board must weigh all factors in deciding what stand to take on 80 meters, as well as other bands. Since the ARRL is a democratic organization, the Directors will mostly follow the wishes of the membership. All League members should make sure their Director knows how they feel about phone band expansion.

Next month, we will discuss 40-meter phone band expansion proposals. □

Vic Clark drops in for a visit

Rufus McCracken, KH6QL

ARRL President Victor C. Clark, W4KFC made a surprise visit to the Honolulu Easter Sunday brunch gathering of 50 local amateurs and guests on 11 April 1982. Lavern KH6HQ and XYL Jolly Peterson, KH6INK brought Vic along to see old friends and meet new amateurs in the area.

World-famous Katashi Nose, KH6IJ, with his wife Matsuyo, were among the many old friends to greet Vic at the club. Vic expressed his thanks to all for the fine support to ARRL and thanks to Katashi for the timely information provided on their activities in his weekly **Star-Bulletin** newspaper article, "With Hawaii's Radio Amateurs." □

Off the Air

(*continued from page 14*)

am sure the feeling is similar to a fisherman landing a 12 lb. bass or a hunter bagging a 12-point trophy buck. Could the hunter take pride in that trophy if someone lured the deer to a spot and then held it while he fired the shot? I fail to understand how the list operator can look at his DXCC certificate or honor roll standing with anything but guilt! I am thoroughly disgusted with the sad state of affairs that currently exist under the assumed name of DX chasing. "Good Buddy" lists and telephone lists are the "in thing" today, along with "relayed" signal reports. This is not DX chasing!

In the last two weeks I have heard different list MCs encouraging their audience to write the ARRL and express their views in support of list-type operations. I have also read that as of mid-May 1982, 74.7 percent of your incoming correspondence favor leaving things as they are. Surely this cannot be a true consensus of Amateur Radio operators; however, it does tend to fluff the feathers of the peacocks who run these so-called lists.

True, the spoon-feeding of some new DX stations is the only way they will operate, but so what as long as *no one* works them! I have waited a long time for XZ, BY, 4W and others to come on and I can wait, as long as anyone else will wait, for a true DX operator to put these or any other country on the air in the competitive spirit that DX operation is supposed to be. As long as lists exist, there is no incentive for the fledgling DX operator to mature or ever get in the spirit of "hamming."

I firmly believe that lists are the welfare rolls of Amateur Radio and like any other welfare recipient, there will be marching, crying and protesting when the aid is cut. But the DXCC program is taking a black eye to pay for this aid, and the "inflation" of lists will eventually kill us all!

My personal recommendations would include letting Official Observer (OO) and Official Phone Stations (OPS) start earning their keep, so to speak. Perhaps if two or more of these stations reported a list-type operation, these contacts should be disallowed for DXCC purposes; it would discourage and eventually wipe out list operations. I would gladly coordinate these reports at no charge to the League. Call me an Official Fink Station (OFS) if you must.

I realize that the above would cause screams from sea to shining sea, but medicine never tastes good. Wouldn't you like to know that your children and grandchildren could someday enjoy DXing in the competitive spirit that it was meant to be?

If not the above, at least consider the proposal of Carl Henson, WB4ZNH, who is currently at League headquarters to at least modify DXCC Rule 12 to let list-takers and operators know that list operations are at least officially frowned upon. This would at least be a step in the right direction, but ultimately I believe that stronger steps (perhaps as outlined above) must be taken. If not, the fine sport of DXing — and perhaps hamming in general — will eventually die. After all, how many complaints can the FCC get before acting? We are not children and this is not a child's sport. We are supposed to be gentlemen.

JESS LEWIS, KD4NB
Cumming, Georgia □

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WITH THE HANDI-HAMS

Bruce L. Humphrys, KØHR

The stroke connection

I'm going to depart just a little bit this month from my regular stuff to talk about another Courage service which might be very important for handicapped amateurs around the country — the Courage Stroke Club Network. A stroke can strike anyone and change their active life to a sedentary one. Often, a stroke will occur later in life — just when a person is ready to settle down and enjoy the fruits of his labor. Perhaps there can be no better therapy for a person who had a stroke than the strenuous studies needed to excel in Amateur Radio! Here is a service which just might interest you, or someone you might know about.

The concept of a stroke support group originated in Minnesota in 1972 when the Mankato Stroke Club began meeting at the Mankato Rehabilitation Center. A small number of other groups developed in the next few years, but without any coordinating organization. One such group was the Twin Cities Stroke Club which met at Courage Center in Golden Valley and received encouragement from Courage Center. In 1979, the Minneapolis Stroke Club approached Courage Center requesting the establishment of a program to coordinate existing clubs and develop new ones.

The importance of a program such as the Courage Stroke Club Network which serves as one aspect of the overall rehabilitation program for a stroke patient, is demonstrated by a study done by the National Association of Rehabilitation Facilities. This study indicates that an average of $13,248 is saved per year for each stroke patient who is rehabilitated to live at home over those not rehabilitated and living in nursing homes or other institutions.

It is significant, I think, that Amateur Radio is a "home" activity. Amateur Radio lends itself perfectly to the overall rehab plans that a person may have — provided, of course, that the person is really interested! There can be cases where merely learning the Morse code can be a valuable communications tool for the stroke-handicapped person.

Program description

Each year, more than 414,000 Americans have a stroke. Thanks to advances in medical science, each year more people are surviving their strokes to begin the struggle to put their lives back together again. The Courage Stroke Club Network supports the community of persons who have experienced strokes, their families and the local health agencies which serve them. It does this through:

- providing for the development of local, independent clubs
- developing a network of information and support between clubs
- counseling and educational services to "strokers" and their families
- promoting public awareness of stroke and its long-term effects

The losses from stroke can be tremendous for both the individual and his/her family and can affect every aspect of life. Amateur Radio can play an important part in rehabilitating a person who has had a stroke. So can the Courage Stroke Club Network.

If you would like more information on the network, or strokes in general, write Bob Lepp, Courage Center, 3915 Golden Valley Road, Golden Valley, MN 55422.

The network publishes a monthly newsletter called *The Stroke Connection.* It's free, but donations to help offset the costs of distribution and setting up Stroke Clubs are always welcome.

If you know of someone who has had a stroke, and might — just might — be interested in Amateur Radio, get in touch with me at the same address. Your Radio experiences can be much richer if *you* help someone who has a handicap become a ham! □

She's not handicapped with Amateur Radio

Gayle Sabonaitis, WA1OPN cannot see, cannot hear and cannot walk. She has been blind since she was 1 year old, deaf since 15, and an incurable nervous disorder has destroyed her equilibrium so she must crawl up and down stairs and get about in a wheelchair.

Gayle Sabonaitis recently earned an amateur Extra Class license. The 38-year-old Worcester, Massachusetts YL also holds a full-time job.

According to an Associated Press story that appeared in the **New York Daily News**, Gayle earned her Novice license 11 years ago. Because she cannot hear, she copies code by touch. A piece of plastic the size of half a ping-pong ball is glued to a speaker cone. Gayle places her hand on the ball and reads the incoming code by feeling the vibrations.

"When she's using Morse code, she's without a handicap," the AP quoted Dr. Peter Sosnow, a ham friend at the University of Massachusetts Medical Center, as saying. "Any person she's in contact with has no conception that she's deaf and blind. She sounds and seems the same as any other person."

The story said Gayle "crawls to the corner of her apartment house basement" every night to get on the air to chat with radio friends.

"I hear every word people say with my fingers. I hear through my hands," the AP quoted her as saying.

— *Albany ARA, NY* □

STATION APPEARANCE

Howard Saling, DF2AX of West Germany wins the station appearance award for this month. Notice the display of awards above the lights and the easy-to-see Radio Amateur's World M. right of the station. Howard's l. he's got the advantage of sunlight by as his homebrew console sits in front . windows.

Howard is an active AMSAT member with 20-element-twist/40-element Yagi antennas. Other equipment in his station includes a TX T-599, RX R-599S, SB230 linear, and a Log Periodic 5-element antenna.

Howard's wife, Ingrid, is also an amateur — DG3OP. Some of you may have contacted Howard when he was CT1QG in Beja, Portugal.

Congratulations, Howard. You'll be receiving a free year's extension of your **Worldradio** subscription. □

Howard Saling, DF2AX of West Germany

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DX WORLD

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Activities calendar

03-04 July	Venezuelan Contest (CW)
24-25 July	Venezuelan Contest (SSB)
07-08 August	DARC Work All Europe Contest (CW)
21-22 August	JARL All Asian Contest (CW)

Refer to 'Contest Calendar' by Frank Anzalone, W1WY in CQ for details.

DXpedition calendar

Central Kiribati	July	T31 by SM0AGD
American Phoenix Islands	August	KH1 by SM0AGD
Eastern Caroline Islands	04 Aug - 08 Aug	KC6 by AD1S and N5DLM
Western Caroline Islands	08 Aug - 11 Aug	KC6 by AD1S and N5DLM
Mariana Islands	11 Aug - 14 Aug	KH0 by AD1S and N5DLM
Marshall Islands	14 Aug - 16 Aug	KX6 by AD1S and N5DLM

W-100-N

The following four amateurs successfully completed the requirements for the **Worldradio** Worked 100 Nations Award during the period 12 April through 8 May 1982.

174. W5GZI	Harold D. Howard
175. KA4IWX	Martha A. Silver
176. W0CON	Lloyd Brown
177. N6NW	Neal W. Hudson

Martha is another one of the several YLs who has applied for this award, and in addition to that, Martha completed the requirements all on CW!

Several requests for the W-100-N rules have been sent to **Worldradio** directly. Although there is nothing wrong with that, you will have faster service if you mail your requests directly to me.

Heard Island

Plan ahead! A joint venture involving a mountaineering group and an Amateur Radio group should be heading for Heard Island next January or February. The DXpedition is to be backed by the WIA (Wireless Institute of Australia). The costs involved with this trip will be very expensive with the costs being split between the two groups. The charter cost of the ship alone is expected to be $30,000.

Ian Hunt, VK5QX reported the above at the April DX convention in Visalia, and says due to the magnitude of the operation, only the best of the DX operators will be going. So, list-takers can forget about this one.

Additional material on this subject was presented at the DX Forum in Dayton, which is presented in its entirety on page 3 of this issue.

China (BY)

BY1PK continues to show after making the initial appearance on 29 March. Presently, operation is restricted to CW only on the 20 and 15-meter bands. On 15 meters the station has been reported between 21.020 and 21.050 MHz, 0600 to 0730 and 1500 to 1700 UTC. The station is working mainly Japanese stations, although a few North American stations have been worked. Europeans have also been worked.

Obviously, with BY1PK making the scene, Slim has also made the scene. The operators at BY1PK are more apt to answer a CQ than to call CQ at the present time. No doubt this will change. Other calls presently heard from China include BY1KC, BY2KU and BY3D, although it is not known if these are legitimate calls.

Tom Wong, VE7BC reports that BY1PK is to be relocated into a new building in Peking.

In all probability, Amateur Radio in China will be on the increase. Old-timers will remember when the Soviet stations came back on during the late 1950s which created a sensation on the bands. In a couple of years, the BY's will be as plentiful as the UA's. Keep the faith.

Liberia (EL)

Several stations have been reported operating from different call areas in Liberia. Juan Tejero, EL2AO is often found near 14.205 MHz at 2230 to 2330 UTC. On CW, S. Richelieu Watkins, EL2P has been reported on 14.038 MHz around 0100 UTC.

In the fourth call district you might find EL4A near 21.363 MHz at 2300 UTC. He is reported to be a new amateur and is very much interested in working the deserving DXer. Also reported on from this district is EL4AU who has been found on 21.330 MHz at 1130 UTC. This

operator goes by the name of David. Look for him on Thursdays.

EL8A is often found on 10 meters on 28.570 MHz between 1100 and 1200 UTC. For the 40-meter fans, we have Erickson B. Edouard, EL8H near 7.020 MHz between 0000 and 0100 UTC. QSL cards for EL8A go to Eskil Gustafson, SM3BCS with cards for EL8H to Hans-O Vedenhagh, SM7FIG.

Also reported on 10 meters is Ahmed Victor V. Maningo, EL9B who has been found on 28.730 MHz from 1200 UTC. Most likely, there are several more active stations from this country that haven't been reported. Liberian stations using the EL0 prefix are maritime mobile stations.

Reunion Island (FR)

This is another one of those rare DXCC countries with reports of several amateur stations being active. You might listen for Jean Bouygues, FR7BP in the 14.025 to 14.033 MHz slot between 1300 and 1400 UTC. This station has also been reported on 28.015 MHz from 1400 UTC with signals into the East Coast. The QSL manager indicated for this one is Dr. Thomas Donovan, W0AX.

Also from this island is Pierre Wilson, FR7BX, who has been reported on 14.019 MHz from 1300 UTC working East Coast stations. Also reported are FR7CE on 28.506 MHz at 1500 UTC, FR7CG on 14.012 MHz at 1300 UTC and FR7CQ on 14.020 MHz at 1300 UTC. From this you can see that 1300 UTC is a good time to check the bands for Reunion Island. If you are on the West Coast, try long-path.

Guy Langlois, FR7ZG works well with the pileups on 14.207 MHz, many times working stations while others are still calling. A good time to look for FR7ZG is between 1200 and 1400 UTC. Try Sundays! Guy handles his own QSL card chores.

FR0FLO, when not on one of his DXpeditions, can be found on 28.635 MHz around 1300 to 1400 UTC. Herik had operated the South Indian Ocean French Island DXpedition last year along with FR7BP. Cards for FR0FLO go direct to Herik Mauduit Larive, P.O. Box 200, 97430 Tampon, FRANCE. I suggest that you do not mention Reunion Island or any reference to Amateur Radio on the envelope.

FR0GGL is also active and has been found on 28.050 MHz at 1300 UTC and 21.021 MHz at 1800 UTC.

Vendaland (V9)

This one still counts only as South Africa for DXCC purposes, although Nation status is granted toward **Worldradio's** W-100-N Award. V9ADX has been active from this South African homeland and has been reported on 28.602 MHz around 1645 UTC. This station has also been reported on 14.229 MHz from 1600 UTC.

Burma (XZ)

With the activity from XZ5A and XZ9A, another station has made the scene. This station was signing DF8MP/XZ, but the legal status or how long the station is to be on is not known at this time. The operator goes by the name of Heinz and has been reported on 21.250 MHz at 1815 UTC. A review of another report states that he is to be there for a year, but this has not been confirmed.

Jin Fukuta, XZ9A continues to hand out the contacts and has been reported on 28.740 MHz around 1230 UTC and 21.195 MHz at 1715 UTC working into Europe. Laydoh and Kinni are names of two of the operators from this station.

A note was received at **Worldradio** of an XZ5KNU in the "Khmer National Union" which claims to be an independent Christian republic. Bill, the operator, says he is operating the station to inform the world that the Khmer Republic is still going strong. He also says that a small contribution to TEA (Tribal Education Assistance) would be appreciated. Before we all run to the nearest post office and mail funds, perhaps we should learn more about this one. QSL this one via P.O. Box 4-25, Bangkok, THAILAND 10250. The above information came from Ray Griese, K6FD, who worked Bill XZ5KNU. As to the legal status of this one, Rangoon will no doubt say no.

Nepal (9N1)

Father Moran, 9N1MM is still active from Nepal, and has been reported on 28.044 MHz at 0830 UTC working into Europe with a good signal. He has also been reported on 14.216 MHz around 0100 UTC handing out SSB contacts. Father Moran has been keeping a schedule with W3WGS on 14.235 MHz on Mondays and Fridays at 2400 UTC.

Ed Blaszczyk, N7EB — QSL manager for 9N1MM — reports sending out 54,000

QSL cards for this station over a 15-year period.

Mawson Base (VK0)

No, this is not a new DXCC country. All Mawson Base is good for is a contact with Antarctica. The station at Mawson Base, VK0DX has been reported at 14.139 MHz at 1100 UTC working into Europe. This station is not to be confused with VK0AN on Macquarie Island. And it's not Heard Island either; they won't be on until early 1983. Send your QSL cards for VK0DX via L.C. Jarvis, VK7LJ.

The Colvins

The Colvins have concluded their winter DXpedition with 9,000 contacts from Curacao as W6QL/PJ2. During their six-month tour, a function of the "Yasme" Foundation, Lloyd and Iris operated as 8P6QL, 9Y4KG, W6QL/8R1, W6KG/PZ1, FY0FOL and W6QL/PJ2. All together, the couple made 56,000 contacts in four months of "on-the-air" time. As you read this, the Colvins are already planning for another one of their "Yasme" DXpeditions. All QSL cards should be sent to the Foundation at P.O. Box 2025, Castro Valley, CA 94546. Include an SASE, preferably one for each contact.

Navassa Island (KP1)

The KP2A/KP1 DXpedition to Navassa Island earlier in the year racked up 33,500 contacts in a little over five days. This amounted to an average contact rate of 4.3 QSOs per minute. This IDXF-sponsored DXpedition was written up in the May 3rd issue of **Time** magazine by Ed Magnuson, W2IJB, a Senior Writer for the magazine.

Pacific Odyssey

In the May issue of **73 Magazine**, there is an article by Jack Binder, KB7NW about the past Kingman Reef and Palmyra Island DXpedition. This was the operation that included George Carleton, AD0S; Bill Boykin, W6HTH; and Jack, skipper of the *S.Y. Banyandah*. You might enjoy reading the article and appreciate what is involved in putting together a DXpedition.

Mellish Reef

This one came off as expected with VK9ZR being worked by the deserving. The team for this DXpedition included Harry Mead, VK2BJL; Frank Langner, DJ9ZB; Fernando Martin, EA8AK; and Jack Binder, KB7NW — skipper of the *S.Y. Banyandah*, which brought them to the reef.

Mellish Reef is a small submerged coral reef approximately 650 nautical miles east of Australia. The sandbar from where they were operating from is reported to have been only 2 meters in elevation.

From Mellish Reef, the team sailed on to Willis Island where they were to have concentrated heavily on CW operation.

Ross Forbes, WB6GFJ/FO0FB sends this photo, which was taken at the Papeete Airport in Tahiti recently. From left to right: Jean FO8DF, Richard FO8HL, Wilber FO8GW, Oliver FO8HI, Warren FO0KW and Victor FO8CX. The occasion was for seeing Ross off on his return to California.

This photo shows (left to right): XYL of Georges FO8AK, Georges FO8AK and Yves FO8DP.

Syria (YK)

Ernst Habermann, OE1EHB/YK has been busy on the bands and has been found on 14.206 MHz from 0530 UTC, 21.305 MHz from 1630 UTC, and 28 540 MHz from 1200 UTC. These are not exact frequencies, so look around. If propagation is good, also look for Ernst on 75 meters between 3.780 and 3.790 MHz.

Jersey (GJ)

For a 40-meter contact with Jersey, look for GJ5DPW, who is active between 0530 and 0600 UTC near 7.010 MHz. QSL cards for this station should be sent via H. van Hensbergen, PA0KHS. Also on 40 meters is GJ3XTT, who has been reported on 7.002 MHz from 0100 UTC. QSL cards for this station, plus those of GJ3ZAY, GJ4LUN, GJ4LVH and GJ6UW, should go to P.O. Box 146 in Cambridge, ENGLAND.

GJ5AGA — a call assigned to Bill Baird, K4II — has been reported to have been pirated by Slim. This is to have been since last fall and the real GJ5AGA is not expected back on the Isle of Jersey until this fall.

Area amateur earns YBH award

Arnold Fredricks, KF0F is now the sheepish owner of a brand new YBH award. Arnie earned this award on 20 meters. It seems Bill Adams, AF4B was a list-taker for A7XAH on Qatar and called to be placed on the list. A short time had passed when AF4B called and asked KF0F to help with the list, by taking a list from the 4th and 5th call areas. He picked out calls with ease and had all that wanted to work A7XAH and had a rapport going with the guys on the list you wouldn't believe. AF4B took some more and KF0F took some more calls for the list.

But while the time was drawing near for A7XAH to appear, AF4B disappeared and was not to be found. Apprehension and fear set in. KF0F was left to be with the list operation. Another amateur on the list looked up AF4B in the Callbook and it was not the person Arnie had been in contact with. Panic! A phone call was made to AF4B, who they got out of bed at 11:15 p.m. in Virginia. The story was told to the sleepy amateur and he assured Arnie that he had not been on the air that evening. They had a short talk and then hung up.

KF0F reluctantly and politely informed the multitude of those on the list that he had been wrong in taking the list on the word of the supposed AF4B. Arnie explained the situation and hopes he is back in the good graces of the hobby. He will always cherish his YBH award. By the way, YBH is You've Been Had!

That little item was gleaned from *Backscatter*, the newsletter of the North Iowa Amateur Radio Club, of which Arnie KF0F is a member. Most likely, this is not the first time one of these make-believe list operations have occurred. If you are anti-list, you probably are rolling on the floor. But in all reality, it is just another technique of Slim, your friendly pirate.

Prefixes

Spanish stations are authorized to use the AM, AN and AO prefixes during the period 1 May through 31 July of this year to celebrate the occasion of the World Football Cup. EA stations will be using AM, with EB and EC using AN and AO respectively. Reports of stations using the special prefix for the Barcelona event have been found prior to the 1 May start date. AM01BKC goes to EA1PJ, AM03CBQ goes to EA3CBQ and AM30KS goes to EA3BBD. As to the 01, 03 and 30 following the prefix, we have no explanation for that. I would think that an EA3 would be just an AM3.

An EX5UKO was on recently to commemorate 1,500 years after the founding of Kiev (present day Ukraine). Prior to the revolution, the Ukraine was referred to as "Small Russia." At least that is what my father-in-law calls it; he was born there.

Silent Key

Masanobu Tada, JH1WDN became a Silent Key 16 February 1982. Masa was a charter member of the Tokyo Old-Timers Club and an amateur since 1927. He was a consistent operator on the Novice bands in order to give many a Novice their first DX contact. During the war years, amateurs were forbidden to operate with the Japanese amateurs returning to the bands in 1952. Obviously, Masa was not one of the first back on the bands, unless he was relicensed in 1952 in a different call area.

1982 Northwest DX Convention

A good time to visit western Canada is mid-summer; while you are there, why not plan to visit the 1982 Northwest DX Convention in Vancouver the weekend of 31 July and 1 August. Included in the program are noted DXers such as Dr. San Hutson, K5YY; Stu Hoar, N7ZZ; Karl Renz, K4YT; Carl Henson, WB4ZNH; and others.

This year's event is hosted by the Fraser Valley DX Club, and further information can be obtained from the club from P.O. Box 3112, Langley, BC V3A 4R3, CANADA. Preregistration prior to 10 July is $37 Canadian, or $32.50 U.S. This includes the Saturday banquet and Sunday breakfast. If you cannot attend both days, the fees are prorated.

For hotel reservations, contact the hotel directly at The Richmond Inn, 7551 Westminster Highway, Richmond, BC. Telephone (604) 273-7878.

If you enjoyed the Visalia DX Convention in April you should enjoy this one. Telephone information is available from Henry Thel, VE7WJ at (604) 534-7774, or from Dave Bennett, VE7AZG at (604) 888-1276. See you in Vancouver.

New Zealand counties

The county hunting craze has spread to include New Zealand. This country contains 112 counties, although it is very difficult to determine the counties from the maps available. The only county outline map we have seen is that what is printed in the New Zeland Callbook, and that is not very clear. Also, most New Zealand stations fail to include their counties on their QSL cards.

But wait! The ZL Counties Hunters Net will help you solve some of these problems and will also help you with some of the rare ones. Listen daily from 0330 UTC on 21.385 MHz. Depending on the conditions, the net may be operating on 10 meters on 28.700 MHz from 0200. Details on the net are available from James W. Smith, KA7APJ, 5717 N.E. 56th Street, Seattle, WA 98105. Include an SASE plus three 20 cent stamps.

The New Zealand Counties Award (NZC) is sponsored by NZART (New Zealand Association of Radio Transmitters). The basic award is for working and confirming 20 counties with endorsements for 40, 60, 80 and 100 counties. A special certificate is awarded for all 112 counties. The information we have on NZART awards is not up to date, but I'm sure any New Zealand station that you work can give you the latest awards manager. North American amateurs may apply to James Smith, KA7APJ.

Indian Ocean Odyssey

There is an interesting article in a recent issue of **Amateur Radio Action**, an Australian Amateur Radio magazine, published in Melbourne. This is an independent magazine like that of **CQ** published in this country and is not affiliated with any Amateur Radio society. The article, "Indian Ocean Odyssey," was written by Steve Gregory, VK3OT, which describes the recent DXpedition to Cocos (Keeling) and Christmas Islands, by Steve and Bill Peollmitz, K1MM. If you worked VK9YM, VK9YT, VK9XM or VK9XT, you worked one of these two gentlemen. Steve is also a columnist for the magazine and writes the DX column, 'Spectrum.'

Subscription details for this magazine are available from Newspress Pty. Ltd., 603-611 Little Lonsdale Street, Melbourne, Victoria 3000, AUSTRALIA.

Craig Woodford, VK9XW, who was helpful with the DXpedition while at Christmas Island, is still on the island available for contacts with that island. You might find him in "Open House" on 14.332 MHz between 1000 and 1200 UTC on Tuesdays, which is hosted by Jill Weaver, VK6YL and Heather Pike, VK2HD, who keep things alive at that part of the band.

DXCC

The latest DXCC countries list is available from ARRL headquarters in Newington, which gives the current countries total of 318. Be aware that deleted countries do count toward the award, provided that you had worked the country prior to the deletion date. If you had worked a DJ/DK/DL or a DM/DT station prior to 17 September 1973, you may count that for Germany. Of course, after that date the DJ/DK/DL would count for West Germany and the DM/DT for East Germany. You might say that you get "three for two" if you started your DXing prior to that date.

If you are interested in working toward your DXCC award, please be aware that all amateurs in Canada, the United States and possessions, and Puerto Rico must be a member of the ARRL prior to application of this award. Foreign applicants need not be a member of the ARRL. So, if you are not a member, I suggest that you join the League. Besides, the benefits are more than just the DXCC program.

Canadian Constitution Certificate

In celebration of the Canadian Constitution, the Canadian amateurs have been authorized to use special prefixes through the end of May. Stations with the VE prefix were using the VC prefix, where VO stations were using CY. Stations in the Yukon were authorized to use CK1.

There is a special certificate for working at least 10 Canadian amateurs during the months of April and May with a special seal for working 100 stations or all of the 10 provinces. All calls should count, with or without the special prefixes. Send a certified log extract to VE3LSS, Listowel District S.S. ARC, 155 Maitland Ave. S., Listowel, Ontario N4W 2M4 CANADA. Include a fee of $1 or 3 IRCs.

Koln Diplom

This award is offered by Kolner Ortsverbande of the DARC to all licensed radio amateurs who can show proof of contact with at least six stations in Cologne DOKs. Club stations will count as two stations each. The DOKs that are valid for this award include G-10, G-12, G-24, G-35, G-39 and Z-12. This award is also available to SWL and the above requirements apply to stations outside of Germany. Stations in Germany require additional stations for the award.

To apply for this four-colored award send your certified list of QSL cards with a fee DM 5 (or 10 IRCs) to: Benno Reinarz, DB6KL, Kurt-Schumacher-Strasse 1, 5000 Koln 90, FEDERAL REPUBLIC of GERMANY.

Clubs

The Fraser Valley DX Club, sister club of the Western Washington DX Club, announces its 1982 officers to be: President, Richard McQuillan, VE7ZB; Vice President, Earl Dery, VE7IN; Secretary, Gordon Hamilton, VE7AVA, and Treasurer, Dave Bennet, VE7AZG.

This year the club will host the Northwest DX Convention in beautiful Vancouver, British Columbia.

Officers for the Redwood Empire DX Association include Len Geraldi, K6ANP as President; Jim Nessen, KD6LC as Vice President; and Steve Schaffer, KD6GC as Secretary-Treasurer. Chod Harris, VP2ML is their newsletter editor, who — incidentally — is the new DX editor for **73**. There is a conspiracy here with all these DX editors in Northern California.

The Redwood Empire group meets the third Wednesday of each month at 7:30 p.m. at the Cattlemen's restaurant in Petaluma, California. Several of the members hold dual membership with the Northern California DX Club, and many were seen at the Visalia DX convention sporting some very attractive badges signifying their membership of this club. Further details of this club are available by writing to the club at P.O. Box 4881, Santa Rosa, CA 95402.

Many DX clubs have monthly dinner meetings. This can be rather expensive to many, but how about the idea of monthly DX breakfast meetings? This idea was found in the newsletter of the McMinnville Amateur Radio Club, which came from Fred Molesworth, AF7S of the Salem Amateur Radio Club.

DX in the early '30s

Yardley Beers, W0JF is the author of the following article, which was printed in *The Totem Tabloid*, newsletter of the Western Washington DX Club. Perhaps many an amateur takes DX for granted today as it is fairly easy to work with the modern equipment that is available on the market. But that was not the way it was in 1930. Read on.

As one who started his DX career in 1930, I am continually amazed at the large number of contacts now that can be made in a short time and sometimes bewildered by the operating practices. Indeed, the world I entered had little resemblance to the present one except for the devotion of the participants. There was a different technology, a different operating procedure, a different set of objectives, and even different definitions of what DX and a QSO are.

International amateur DX communication had already existed for a decade, but when one amateur received one VK and two ZL QSL cards, the event merited publication in the Station Activities Section of QST. Nowadays, of course, Australians frequently take lists of U.S. stations wanting to work the rarer DX. Given the choice of working San Marino or Rome, the 1930 DXer probably would have preferred Rome because when he went to tell his friends about it, he could expect them to know where Rome is but he would not expect them to know about San Marino unless they were stamp collectors. Similarly, had there been a station on Kingman Reef, it probably would have been considered a second-rate Hawaiian.

While amateurs frequently spoke of the number of countries they worked, the main emphasis was on continents. There was no official list of countries. Working Asia, especially from the Eastern USA, was very difficult, and it would be today if there were no amateurs in Japan, USSR and Israel. An amateur who had worked Asia, even just once, enjoyed an unusual prestige among his friends. In the earliest Callbook I have on hand, the 1938-1939 one, there are only four listings for Palestine (Israel), 25 from Asiatic USSR, and two pages (of larger print than at present) of Japanese calls. In 1930, there were probably even less. Furthermore, at that time the Japanese had severe restrictions in the power they could use and the times when they could operate.

Some amateurs relied upon an absorption wave meter to determine whether or not the frequency of a transmitter was in the band. Nearly everyone used a regenerative receiver. Such receivers blocked on strong signals such as one's own transmitter, and one could transfer the transmitter's frequency to the dial of his receiver by a very laborious process of transferring it first to a separate shielded receiver known as a monitor, which then generated a weak signal that could be picked up without blocking on the main receiver. Therefore, since generally people did not know what point on their dials corresponded to their own transmitter frequencies, they tuned the band after a CQ, and it was likely that the station they answered was 100 kHz away. Therefore, calls were long and making contact was very slow.

However, not all of the slowness of the procedure was due to the technology. Leading DX stations like to be able to make a choice. When

(please turn to page 28)

NEW

"DX-traordinary."

Superior dynamic range, auto. antenna tuner, QSK, dual NB, 2 VFO's, general coverage receiver.

TS-930S

The TS-930S is a superlative, high performance, all-solid state, HF transceiver keyed to the exacting requirements of the DX and contest operator. It covers all Amateur bands from 160 through 10 meters, and incorporates a 150 kHz to 30 MHz general coverage receiver having an excellent dynamic range.

Among its other important features are, SSB slope tuning, CW VBT, IF notch filter, CW pitch control, dual digital VFO's, CW full break-in, automatic antenna tuner, and a higher voltage operated solid state final amplifier. It is available with or without the AT-930 automatic antenna tuner built-in.

TS-930S FEATURES:

- **160-10 Meters, with 150 kHz - 30 MHz general coverage receiver.**
  Covers all Amateur frequencies from 160-10 meters, including new WARC, 30, 17, and 12 meter bands, on SSB, CW, FSK, and AM. Features 150 kHz - 30 MHz general coverage receiver. Separate Amateur band access keys allow speedy band selection. UP/DOWN bandswitch changes in 1-MHz steps. A new, innovative, quadruple conversion, digital PLL synthesized circuit provides superior frequency accuracy and stability, plus greatly enhanced selectivity.
- **Excellent receiver dynamic range.**
  Receiver two-tone dynamic range, 100 dB typical (20 meters, 500 Hz CW bandwidth, at sensitivity of 0.25 μv, S/N 10 dB), provides the ultimate in rejection of IM distortion.
- **All solid state, 28 volt operated final amplifier.**
  The final amplifier operates on 28 VDC for lowest IM distortion. Power input rated at 250 W on SSB, CW, and FSK, and at 80 W on AM. Final amplifier protection circuit with cooling fan, SWR/Power meter built-in.
- **Automatic antenna tuner, built-in.**
  Available with AT-930 antenna tuner built-in, or as an option. Covers Amateur bands 80-10 meters, including the new WARC bands. Tuning range automatically pre-selected with band selection to minimize tuning time. "AUTO-THRU" switch on front panel.
- **CW full break-in.**
  CW full break-in circuit uses CMOS logic IC plus reed relay for maximum flexibility, coupled with smooth, quiet operation. Switchable to semi-break-in.
- **Dual digital VFO's.**
  10-Hz step dual digital VFO's include band information. Each VFO tunes continuously from band to band. A large, heavy, flywheel type knob is used for improved tuning ease. T.F. Set switch allows fast transmit frequency setting for split-frequency operations. A=B switch for equalizing one VFO frequency to the other. VFO "Lock" switch provided. RIT control for ±9.9 kHz receive frequency shift.
- **Eight memory channels.**
  Stores both frequency and band information. VFO-MEMO switch allows use of each memory as an independent VFO, (the original memory frequency can be recalled at will), or as a fixed frequency. Internal Battery memory back-up, estimated 1 year life. (Batteries not Kenwood supplied).
- **Dual mode noise blanker ("pulse" or "woodpecker").**
  NB-1, with threshold control, for pulse-type noise. NB-2 for longer duration "woodpecker" type noise.
- **SSB IF slope tuning.**
  Allows independent adjustment of the low and/or high frequency slopes of the IF passband, for best interference rejection.
- **CW VBT and pitch controls.**
  CW VBT (Variable Bandwidth Tuning) control tunes out interfering signals. CW pitch controls shifts IF passband and simultaneously changes the pitch of the beat frequency. A "Narrow/Wide" filter selector switch is provided.
- **IF notch filter.**
  100-kHz IF notch circuit gives deep, sharp, notch, better than -40 dB.
- **Audio filter built-in.**
  Tuneable, peak-type audio filter for CW.
- **AC power supply built-in.**
  120, 220, or 240 VAC, switch selected (operates on AC only).
- **Fluorescent tube digital display.**
  Fluorescent tube digital display has analog type sub-scale with 20-kHz steps. Separate 2 digit display indicates RIT frequency shift.
- **RF speech processor.**
  RF clipper type processor provides higher average "talk-power," plus improved intelligibility. Separate "IN" and "OUT" front panel level controls.
- **One year warranty.**
  The TS-930S carries a one year limited warranty on parts and labor.

Other features:

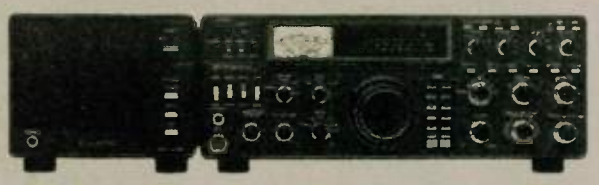
- SSB monitor circuit, 3 step RF attenuator, VOX, and 100-kHz marker.

Optional accessories:

- AT-930 automatic antenna tuner.
- SP-930 external speaker with selectable audio filters.
- YG-455C-1 (500 Hz) or YG-455CN-1 (250 Hz) plug-in CW filters for 455-kHz IF.
- YK-88C-1 (500 Hz) CW plug-in filter for 8.83-MHz IF.
- YK-88A-1 (6 kHz) AM plug-in filter for 8.83-MHz IF.
- MC-60 (S-8) deluxe desk microphone with UP/DOWN switch.
- TL-922A linear amplifier.
- SM-220 station monitor.
- HC-10 digital world clock.
- HS-6, HS-5, HS-4 headphones.

More information on the TS-930S is available from all authorized dealers of Trio-Kenwood Communications
1111 West Walnut Street,
Compton, California 90220

KENWOOD
...pacesetter in amateur radio



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

TR-2500

BIG performance, small size, smaller price!

The TR-2500 is a compact 2 meter FM handheld transceiver featuring an LCD readout, 10 channel memory, lithium battery memory back-up, memory scan, programmable automatic band-scan, Hi/Lo power switch and built-in sub-tone encoder.

TR-2500 FEATURES:

- Extremely compact size and light weight 66 (2-5/8) W x 168 (6-5/8) H x 40 (1-5/8) D, mm (inches), 540 g, (1.2 lbs) with Ni-Cd pack.
- LCD digital frequency readout, with memory channel and function indication.
- Ten channel memory, includes "M0" memory for non-standard split frequencies.
- Lithium battery memory back-up, built-in, (estimated 5 year life) saves memory when Ni-Cd pack discharged.
- Memory scan, stops on busy channels, skips channels in which no data is stored.
- UP/DOWN manual scan in 5 KHz steps.
- Repeater reverse operation.

CONVENIENT TOP CONTROLS

- 2.5 W or 300 mW RF output. (HI/LOW power switch.)
- Programmable automatic band scan allows upper and lower frequency limits and scan steps of 5 KHz and larger (5, 10, 15, 20, 30 KHz... etc) to be programmed.
- Built-in tuneable (with variable resistor) sub-tone encoder.
- Built-in 16 key autopatch encoder.
- Slide-lock battery pack.
- Keyboard frequency selection across full range.
- Extended frequency coverage; 143.900 to 148.995 MHz in 5 KHz steps.
- Optional power source, MS-1 mobile or ST-2 AC charger/ power supply allows operation while charging. (Automatic drop-in connections.)
- High impact plastic case.
- Battery status indicator.
- Two lock switches for keyboard and transmit.

STANDARD ACCESSORIES:

- Flexible rubberized antenna with BNC connector.
- 400 mAH heavy-duty Ni-Cd battery pack.
- AC charger.

OPTIONAL ACCESSORIES:

- ST-2 Base station power supply and quick charger (approx. 1 hr.).
- MS-1 13.8 VDC mobile stand/ charger/power supply.
- TU-1 Programmable "DIP switch" (CTCSS) encoder.
- SMC-25 Speaker microphone.
- LH-2 Deluxe top grain cowhide leather case.
- PB-25 Extra Ni-Cd battery pack, 400 mAH, heavy-duty.
- BT-1 Battery case for AA manganese or alkaline cells (not Ni-Cd).
- VB-2530 RF power amplifier.
- BH-2 Belt hook.
- WS-1 Wrist strap.
- EP-1 Earphone.

TR-7850

40 W, 15 memories/offset recall, scan, priority, autopatch (DTMF)

Kenwood's remarkable TR-7850 2-meter FM mobile transceiver provides all the features you could desire, including a powerful 40 watts output. A 25 watt version, the TR-7800 is also available.

TR-7850 FEATURES:

- 40 watts output, with selectable high or low power operation.
- 15 multifunction memory channels, easily selectable with a rotary control, M1-M13 ... memorize frequency and offset (±600 KHz or simplex).
- M14 .. memorize transmit and receive frequencies independently for non-standard offset. M0... priority channel, with simplex ±600 KHz or non-standard offset operation.
- Internal battery back-up for memories. Requires four AA Ni-Cd batteries, (not supplied).
- Extended frequency coverage, 143.900-148.995 MHz in 5 or 10 KHz steps.
- Priority alert. Beep alerts operator when signal appears on priority channel.
- Built-in autopatch encoder (DTMF). A.I 12 plus four adcitional DTMF signaling tones. (With simultaneous push of REV switch.)
- Autoscan of memories and entire band. Scan resumes automatically.
- Front panel keyboard.
- Compact size.
- UP/DOWN manual scan of entire band and memories, using UP/DOWN microphone (supplied).
- Repeater reverse switch.
- Separate digital displays for frequency and memory channel.
- LED S/RF bar meter.
- Tone switch.

Matching accessories for fixed station operation:

- KPS-12 power supply (for TR-7850)
- KPS-7 power supply (for TR-7800)

SP-40

Compact mobile speaker
Only 2-11/16 W x 2-1/2 H x 2-1/8 D (inches)
Handles 3 watts of audio

KENWOOD

TRIO-KENWOOD COMMUNICATIONS
1111 West Walnut, Compton, California 90220

DX World

(continued from page 25)

I visited the late G6HP in London in 1932, he said, "I am glad to meet you after having worked you four times." I replied, "I am delighted to meet you, but we have had only two QSOs." "Well, anyway, you appear in my log four times," he said. He then showed me the log. In establishing a new contact, he tuned the band, logged all of the 10 or dozen stations who were calling him, and then he decided which one to reply to. Twice he had decided to reply to someone else. Needless to say, in those days there were no pileups, and often the strongest station called his head off while a weak station received a reply.

There were few contests. In those days, the ARRL DX contest lasted nine days — two weekends and all the time in between, but operation was limited to 90 hours. More properly, it should have been called a QSO party because contacts were hardly any shorter than non-contest ones. Each station made at least two transmissions each with the calls of both stations being sent two or three times at the beginning and end. Contacts included such social amenities as "GM, 73, HPE CUL."

Many features of the 1981 DX World were absent. There were no broadcasts of propagation or DX information, although for a short time, many people eavesdropped on the skeds of two giants, W5ATF and W6CXW, who exchanged information. There were no DX nets, printed bulletins, VHF information frequencies, no lists and — as I have said — no pileups. Such propagation information that was available was poorly understood. The DXpedition concept was not to rise until 1949 when W3BXE went to FP8 (see November 1949 QST), and, if it had, probably no one could have obtained a license under the restrictive regulations of the day.

Very little DX in 1930 was worked on phone — which, of course, was AM. And CW signals often had a different sound than today. Early in the 1930s, crystal-controlled transmitters came into wide use. Because of the lack of shielding and imperfect neutralization, these usually had a back wave — a weak signal with the key up. The British had an unusual system, the Goyder Lock system. With this, the final stage was an oscillator synchronized to the crystal oscillator rather than an amplifier, and such a transmitter had a distinctive note even though it would be described as "PDC." The majority of the signals of the day would have been described as "PDC" also, but a significant minority of amateurs deliberately introduced modulation into their CW signals to get a distinctive tone. Under the regulations then in effect, this modulation was permitted if it did not broaden the signal significantly. At the time, Southern California had power at 50 Hz, as Hoover (Boulder) Dam had not come into operation. Many of the Big Sixes used resonant filters in their power supplies that suppressed the 100 Hz fundamental but passed all the harmonics, and because of these filters, their signals could be distinguished from Europeans who also were on 50 Hz. At the Yale University Radio Club, W1YU, where I was a student, we used half-wave three phase which gave us a distinctive 180 Hz modulation. As far as I know, W2ZC was the only other station on the air with 180 Hz.

I end with mentioning one difference that had nothing to do with DX. In those days, ham shack visiting was a very popular pastime. A large number of amateurs in Trenton, New Jersey — where I grew up — visited my shack, and I visited theirs. By contrast, in the 20 years I have been in Boulder (Colorado), only two or three have come to the house specifically for the purpose, although many have seen my shack because they came for other purposes. What is probably more significant, five or six times I have been in some other amateur's house for a committee meeting or a social event, and neither did the host offer to show his shack nor did any of the guests request to see it.

The attraction of shack visiting resulted from the fact that each displayed the owner's individuality and ingenuity even though the choice of circuits and components was very limited. Even in the case of the copper tubing inductors we all used in our transmitters, there was an opportunity to display one's individuality. In a conversation about 45 years ago, a friend asked me what I wound mine on.

Propagation

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

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

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

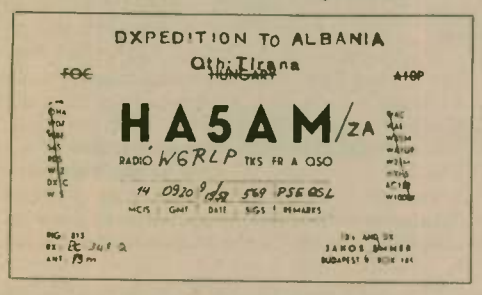
AUGUST 1982

UTC	AFRI	ASIA	OCEA	EURO	SO AM
0100	22.2	23.8	30.6	15.9	24.8
0200	19.1	23.9	30.4	14.9	25.0
0300	17.3	23.9	30.1	14.2	23.3
0400	19.7	22.8	29.7	14.4	21.8
0500	17.9	20.9	28.1	15.3	21.3
0600	16.3	19.4	25.9	16.7	19.3
0700	14.4	18.7	24.3	15.6	16.3
0800	12.4	18.3	22.0	14.1	13.8
0900	11.1	17.6	19.8	12.9	14.3
1000	10.9	16.6	18.0	12.5	17.2
1100	11.6	15.3	17.0	12.7	16.4
1200	13.2	14.2	16.7	13.7	16.6
1300	15.3	14.4	16.7	15.7	18.8
1400	17.5	16.3	16.8	18.5	21.7
1500	19.2	18.7	16.7	20.8	23.5
1600	20.0	18.2	15.7	21.3	23.8
1700	20.3	18.2	13.8	21.7	24.2
1800	20.6	18.3	12.5	22.1	25.7
1900	20.9	19.1	14.0	22.3	27.7
2000	21.0	21.3	18.9	21.8	28.8
2100	21.2	23.9	24.7	20.6	28.8
2200	21.7	25.3	28.8	19.0	27.6
2300	22.5	25.0	30.5	17.7	25.8
2400	23.2	24.2	30.8	16.8	24.7

"A No. 6 dry cell," I replied. He said, "I wind mine on a piece of iron pipe, but Ted winds his on a beer bottle." Since prohibition was then on the books, the last remark gave some significant information about Ted.

Antique QSL Department

This QSL isn't so much an antique as it is unique. This Albanian card was submitted by Paul Wolf, W6RLP for a 1958 contact made with the HA5AM Dxpedition to Albania. Paul reports that Janos, the operator of HA5AM was an airline pilot, who flew between Budapest and Tirana in Albania, and obtained a rare privilege in being allowed to operate from the rare DXCC country of Albania during one of his stopovers. He used a rig with an 813 final with an old surplus BC-348Q receiver. Notice the "PSE QSL" in the remarks column. Of course, Paul did. "Only a fool would not," says Paul.



In the May issue, the QSL card of P.T. Namgyal, AC3PT, was run in the 'Antique QSL Department.' This prompted a letter from Dan Umberger, W8ZCQ, who wonders if the QSL card shown was really one of Gus Browning's cards. This would have been around August and September 1963. Dan says, "It would be interesting to turn N4SU's card over and see if it didn't say 'Operated by Gus Browning' and signed by Ack Ackerson, W4ECI on the back." Unfortunately, that cannot be done, as I had only a Xerox copy of the QSL, which didn't include the back side. The card in question was reported to be of the 1940-1950s era.

QSL information

We have had a few misprints on calls in some of our recent QSL routes. Cards reported to be routed via K0DH should have read N0DH in Mesa, Arizona. It is confusing here as both K0DH and N0DH are residing in the 7th call area, (N0DH has been listed as N0DH/7, so this wouldn't help you decipher the misprint), and the operators of both calls have the surname Henderson. So! It's N0DH.

In the May issue we listed the QSL manager for OD5FB as WB2QAU. It should have read via WA2QAU, as shown in the "W6GO/K6HHD List." The reader who commented on this couldn't find WB2QAU in the 1982 Callbook and didn't have access to the latest issue. Wouldn't it have been easier to ask a fellow amateur if he had a 1982 issue? I checked my copy and there is no WB2QAU in there either. I recommend that all DXers obtain a copy of a QSL manager's directory, such as the one listed above.

Bryan Casey, formerly P29KC, is now in New Zealand with the call of ZL2KJ. If you still need a P29KC card, try ZL2KJ.

John Thompson, W1BIH writes that he has been erroneously listed as QSL manager for P42C in some DX publications. John handles QSL cards for his recent P42J and W1BIH/PJ2 calls, not P42C. John says that P42C was PJ2PP. The P42 prefix was to be used only in the recent DX contests.

Bob Parkes, G3REP is doing his best to finish up on his QSL chores for his past operations as VS5RP. Bob ended his VS5RP operations on 4 September 1981 and went back to the United Kingdom on the 13th, then on to Saudi Arabia on 25 September, bringing some of his VS5RP QSL cards and logs to catch up on the backlog. Bob did not receive the rest of his property until mid-March of this year. During Easter break in the United Kingdom, he collected the rest of his QSL cards and logs and has been working hard to catch up. Bob cannot operate from Saudi Arabia due to non-licensing arrangements. Bob's address is now P.O. Box 1698, Taif, SAUDI ARABIA. If in a few months you have not received your VS5RP card, try the above address, with an SAE and IRCs or "green stamp," of course.

Saul Slonim, W2PD, 320 Rose Street, Massapequa, NY 11762 is willing to assume the chores of QSL manager for DX stations. Saul presently handles cards for K3OX/VP9, P29CC, VS6IC and 6W8IK.

Recently, we ran a request for George Oster, K0EDA, who was looking for help in obtaining a QSL card for W2PCJ/KJ6. Lenny Mendel, K5OVC writes, "W2PCJ, Larry had gotten a new call years ago. It is W2AX. He lived in Northport, New York until last month and moved closer to New York City. I am sure his mail will be forwarded."

Larry Amodeo, W2AX (ex-W2PCJ); Joe Weite, KH6GDR (ex-W2WJM); and Lenny K5OVC (ex-W2OVC) all grew up together in the Bronx, and are still around. We hope this will help George K0EDA and others who may be looking for a card from W2PCJ/KJ6.

QSL routes

A22GM	—N4FD	CT7AL	—CT1AL
A22TX	—DF5UG	CT8CQ	—CT2CQ
A35RF	—VK3VU	CU5UA	—W3HNK
A35TN	—VK3VU	D44BC	—D4CBC
A92DD	—K7DVK	DA2AR/HB0	—DA2DC
AH2L	—W4PKM	DA2CK/HB0	—KA2JFY
AH2M	—K2PL	DF8MP/XZ	—DL2KAO
AH6BK	—NE4S	DF900/JW	—DF900
AH8AA	—W4FGX	DL2VK/ST3	—DF9FM
AM10BKC	—EA1PJ	DU7EM	—W6SKE
AM03CBQ	—EA3CBQ	ED1ILT	—EA1MC
C6ADV	—N7YL	EF5SSC	—EA5BAA
C31YG	—G5YC	EL8A	—SM3BCS
CE0ZAD	—WB6WOD	EL9B	—KA8BXA
CN8AQ	—WA3HUP	F6BJY/ST2	—F6BJY
CN8CU	—WA3HUP	FC9UC	—F5RV
CN8CY	—GW3IEQ	FC9VN	—F9VN
CS1OF	—CT1OF	FH8CL	—VE2FOU
FK8BW	—F6EWK	VP2VFI	—K1IJU
FM0GUI	—NC4U	VP5UXY	—W4UXY
FM0GUJ	—K4LYA	VP8AOB	—K0JW
FM0GUK	—KR4C	VP8AOH	—K0JW
FM0GUL	—NR4S	VP8APW	—WA4TWS
FM0GUN	—WA4CDH	VQ9BB	—WA4TWE
FO8IW	—K1CC	VQ9BP	—N2BIM
FP8FI	—VE3IMU	VQ9CW	—WB1DQC
FY7BG	—F6EWK	VQ9JB	—WD5BOP
G3UML/4X	—G3UML	VS5GA	—G4CCM
GB2BC	—VE7SAR	VS6CT	—KB9N
GB4DX	—G3VBL	VS6EY	—G3GKI
GB4SG	—G3LQI	VS6IC	—W2PD
GJ5DPW	—PA0KHS	W9DCN/C6A	—W9DCN
H5AHF	—ZS6BSK	W9HI/J8	—W9HI
H5AIR	—ZS6BSK	WA2KCL/KP2	—WA2KCL
H44GR	—KH6EI	WB1FSB/8P6	—K1BNQ
HC8SL	—HC2SL	WB8LDH/J3	—W8UVZ
HG19HB	—HA5KKG	WD9IHD/ HK3	—WD4PTO
HH2A	—AJ9D	XD0LCH	—WD8NKT
HH5CB	—K9WJU	XF1FH	—XE1UL
HL1SF	—JA6YBW	XK5XK	—VE5XK
HS5AID	—AG6N	YB1CD	—WA1ROI
J3AE	—J3AAG	YB0ADI	—WA2DWE
J6LB	—KO2A	YB0PG	—KB5AS
J6LZA	—K4LTA	YZ6G	—YU6SCG
J20Z	—F6ATQ	YZ9HDE	—YU2HDE
J87DU	—VE3DUS	ZC4AK	—G3VHE
J88AM	—N4FJL	ZD7HH	—W4FRU
JA1DNG/YI	—JA1CJF	ZD8DZ	—AB4B
JX5VAA	—LA4YW	ZD8MJH	—G3GIQ
K2BS/VP9	—W2GHK	ZF2FP	—K8OSR
K3OX/VP9	—W2PD	ZF2FQ	—AB8Y
K4FW/VP2K	—K4FW	ZF2FX	—K4UEE
K6GXO/V2A	—K6GXO	ZK1CQ	—ZL1AMO
K8CW/6Y5	—K8AV	ZK2BA	—VK3VU
KA3V/ZB2	—K5BDX	ZL1AFU	—N5TX
KA4EIN/TI4	—N5BQR	ZL4GF/C	—ZL4KI
KA7FUS/KH0	—KA7FUS	ZL0AEO	—WB8WMS
KC6DZ	—N5RM	ZS1XR	—N7RO
KH8AC	—WP2ACL *(See Note 1)*	3B8FG	—3B8AS
KP2A/6Y5	—WB2MSH	3D2ER	—W5RBO
KR4C/J6	—KR4C	4K1A	—UA3AEL
N6BZA/6Y5	—W6BDN	4K1D	—UA1AFM
N9PI/V2A	—N0DH/7	4K1H	—UA1CJD
OA4DW	—N4DW	4K1HK	—UA3AEL
OA4OS	—W2LCH	4N6NH	—YU6KOP
OA8CW	—N4CQ	4N9PEP	—YU2DX
OD5FB	—WA2QAU	4N0SM	—YU7JDE
OE1EHB/YK	—OE1EHB	4T8CW	—OA4OS
OG7AA	—OH7AA	4X2BYB	—WB2WOU
ON7NH/ST2	—OE7WDH	4X6DX	—KA2KWG
OX3TT	—OZ6UT	5B4JK	—W7WLL
P29CC	—W2PD	5B4KV	—SM5OV
P29KC	—ZL2KJ	5H3WB	—PA0JFH
P29MC	—VK7MC	5N3ECA	—I6DZB
P42J	—W1BIH	5N6GGJ	—DJ4JG
PY0SOB	—PY2SOB	5N9ACO/8	—IV3APC
PZ5DX	—K3BYV	5W1DC	—DL3GU
R6L	—UK6LAZ	5W1EA	—ZL1BBZ
SM0GMG/ CT3	—SM0DJZ	5Z4BW	—W6YNK
SV0BM	—WB9UGQ	5Z4CS	—J11VLV
T32AF	—WH6AIF	5Z4CV	—W2KF
TI2EY	—DF6EX	5Z4JR	—OH2BAH
TL8CK	—F6EWM	6D5JTS	—KM5Q
TL8MX	—F6FFR	6W8AK	—WB4LFM
TN8AJ	—Y25LO	6W8AR	—WB4LFM
TR8OIT	—JA1LFR	6W8IK	—W2PD
TU2HU	—W3HNK	6Y5CG	—6Y5RA
TU2IE	—DL4BAM	6Y5KG	—VE3KGK
TU2IN	—DL4BAM	6Y5SH	—AK1H
U4MK	—UK4AAD	8P6EU	—K1BNQ
UA3DQS/U6A	—UA3DLG	8P6FJ	—K1BNQ
UK6CAA	—UD6DLJ	8P6KY	—K2QIE
UY4L	—UA4LM	8P6NF	—K4ZA
V2AMK	—N0DH/7	8Q7BC	—DL5BC
V3WX	—WA7VGT	8Q7DL	—DL9BAF
V9ADX	—ZS6J	8R1Y	—8R1B
VE1AT/1	—VE1AI	9J2JN	—WB2IZN
VE3COA/Z2	—VE3DPB	9J2TY	—JH3DPB
VE3FXT/Z2	—VE3DPB	9J2YT	—JR1OBC
VE3LRU/6Y5	—VE3KGK	9K2EK	—JA2LZB
VK6KYL/LH	—VK6ZX	9L1EX	—LA2EX
VK6ZX/LH	—VK6ZX	9L1FD	—WA0CAE
VK9XW	—VK6RU	9L2FD	—WA0CAE
VK9ZR	—VK2BJL	9L3FD	—WA0CAE
VK0AB	—VK2BRN	9M2MV	—JA3BQE
VK0DX	—VK7LJ	9M8PW	—G4DXC
VP2E	—K8ND	9M8WR	—G4DXC
VP2MKD	—N0DH/7	9Q5GD	—DL9IL
VP2MMP	—N0DH/7	9Q5MA	—K1VSK
VP2VD	—VP2VBK	9Q5ZA	—ON6FN
		9X5SL	—DL8DF

AC3Q/KX6	—Hal, P.O. Box 326, APO San Francisco, CA 96555
BY1PK	—P.O. Box 6106, Beijing, PEOPLE'S REPUBLIC of CHINA *(See Note 2)*
CO2OM	—P.O. Box 4940, Habana, CUBA
CT2CB	—P.O. Box 44, Santa Maria, Azores, PORTUGAL
GJ3ZAY	—P.O. Box 146, Cambridge, ENGLAND
GJ6UW	—P.O. Box 146, Cambridge, ENGLAND
HR1MZM	—P.O. Box 761, Tegucigalpa, HONDURAS
PY1BVY	—P.O. Box 68, Marcia, RJ 24900, BRAZIL
SV5SW	—Socrates, P.O. Box 349, Rhodes, GREECE
5H3AA	—P.O. Box 83, Bagamoyo, TANZANIA
5H3LM	—P.O. Box 511, M'beya, TANZANIA
5N8OZJ	—P.O. Box 6589, Nigeria, NIGERIA
5N0WNL	—P.O. Box 3197, Lagos, NIGERIA
5T5APF	—P.O. Box 1256, Nouakchott, MAURITANIA
5Z4CM	—P.O. Box 30514, Nairobi, KENYA
5Z4CX	—P.O. Box 90661, Mombasa, KENYA
7P8CI	—Guenther, P.O. Box 949, Maseru, LESOTHO
9L1DR	—Private Mail Box 502, Freetown, SIERRA LEONE

Notes

1. The address for WP2ACL is not in the Callbook. Holder of this call is Gary Carl Mitchell, P.O. Box 1003, Fairfield, CT 06430.
2. One source has stated that QSL cards are being returned unanswered from BY1PK and to QSL via VE7BC.

Many amateurs were helpful with their contributions to this month's column which I appreciate very much. Many thanks go to W1BBJ, W1BIH, WP2ACL, W2PD, K4HLT, K5OVC, K6FD, WB6GFJ, W6KG, W6NWS, W6QL, W6RLP, N6WR, KA7APJ, KA7FEE, KA8KGH, W8ZCQ, W9HI, W9LNQ, K9MK, K9PNG, W0CUB, DJ9ZB, G3REP, VK3OT, Kansas DX Association, McMinnville Amateur Radio Club, North Iowa Amateur Radio Club, Redwood Empire DX Association, Western Washington DX Club, International DX Foundation, *The DX Bulletin*, *The Long Island DX Bulletin*, *DX News Sheet* and *DXpeditions International*.

The debate over the pros and cons over DX nets and lists is becoming a dull and boring issue. Our publisher, and sometimes DXer, Armond Noble, N6WR adds his words of wisdom to that of a list: "List — like going fishing off a pier and having somebody in a rowboat down at the water, hooking fish on your line." I would agree with that in the sense where the List Master acts as a go-between when either station cannot hear each other. My idea of a good list operation is where the DX station picks out a bunch of calls in a pileup and makes up his own list instead of coming back one at a time. The best way, of course, is to work split frequency.

The crowd on Mellish Reef should have worked everyone who wanted a contact. Toward the end of the DXpedition, VK9ZR, with Frank DJ9ZB at the mike, started to work transceive on 10 meters. There was no sense in operating split when the number of takers had been greatly diminished. Overheard was this:

W/K Station: "What is your QTH, OM?"

Frank (somewhat surprised): "Mellish Reef! Mellish Reef! This is VK9ZR, QRZ."

W/K Station (beneath the pileup): "Say again?"

Obviously, not all are DXers. Just like the time a few years ago when a W/K station asked a "UW" station what state he was in.

Hope your DX is good this summer. Very 73, de John, N6JM. □

What a coincidence

Carl Henson, WB4ZNH

WA6PKI worked WD8PKI (May '81 Worldradio) and N2CBU working N4CBU (April '82, Worldradio). I (WB4ZNH) have worked WB6ZNH, WA7ZNH and W8ZNH — all with no skeds. But Martha, operating WN4FVU/5X worked KA4FVU. The incredible part is that KA4FVU is *also* a YL, and they both live in Georgia! □

AMSAT OSCAR

Dr. Norman L. Chalfin, K6PGX

The 10-10 International Net had set aside a series of numbers in the 10,000 series for AMSAT/OSCAR-7 contacts. Since OSCAR-7 is no longer active, these numbers should be available for OSCAR-8 or RS 3 through RS 8 contacts since their Mode A outputs are on 10 meters. One area we have been wondering about is that usual 10-10 Net contacts necessitate that both sides of the contact be in the 10-meter band. When using the OSCARs and the RS satellites on Mode A, each of the signals received by the communicants is on 10 meters (the downlink). Transmission by each of the participants in the QSO would be on 2 meters (uplink).

The 10-10 paperchasers should think about this, and the officials in the 10-10 organization should consider and rule upon the propriety of point gathering and certificate granting via the Mode A satellite 2-meter to 10-meter route. For information on the 10-10 net activity, check on 28.800 MHz at 1800 UTC daily, except Sundays.

For those who may not have had any contact with 10-10 members, the following should give you enough information about the organization to appreciate the significance of the foregoing comments.

How to become a 10-10 member

Work 10 present members on 10 meters. Log each 10-10 number, call sign, date worked, operator's name and location. Submit this list to your call sign area manager, with $1 registration fee and $4 for your first year's dues. Novices need not pay registration fee, and Novices and DX applicants need work but five present members. You will receive a certificate and be assigned a permanent 10-10 number. You must pay annual dues to remain in good standing, receive the *Quarterly 10-10 International News,* and participate fully in 10-10 activities.

As a member, log the 10-10 numbers of stations you work on 10 meters. You may wish to mark your roster to avoid duplicates, and to develop a filing system to record 10-10 contacts. Bars are issued for 100, 200, 300 contacts, etc. All contacts must be bona fide number exchanges on the air. When you have 100 contacts (including your first 10), list *100 only* (never more, never less and no duplicates) as follows:

1) Your list must be in serial order of 10-10 numbers. Show call sign, handle, location and date worked.

2) You may submit only one list of 100 at a time.

3) You may not submit logbooks or copies of logbook pages.

4) You must give your name, address, call sign, 10-10 number and state which Bar you are requesting (i.e. 100 Bar, 200 Bar, etc.).

5) You must enclose an SASE (large size — #10, about 4¼" x 9⅜").

6) Mail your materials to: Wm. (Bill) Risher Jr., WB6OMH, 10542 Loch Avon Drive, Whittier, CA 90606.

When you have attained your 500 Bar, you will be assigned an Honorary V.P. number, and will be entitled to participate in additional activities. In addition, plaques are awarded for 1,000, 2,500 and 5,000 10-10 contacts.

How to earn WAS

When you have worked at least one 10-10 member in each of the 50 states, *and have QSL card confirmation,* mail your cards to WB6OMH (address above) and apply for the 10-10 WAS Certificate. Enclose also an alphabetic list of the states, with full information on each station worked, plus $1.08 return postage. 10-10 membership activity is international in scope.

The Phase IIIB OSCAR will have transponders on 1296 and 435 MHz. It will be the first amateur communications satellite which does not have a Mode A transponder aboard. This may place a burden on all of the users who now foresee either an extended period of inactivity on satellites for them should present Mode A amateur spacecraft fail, or an additional expense to become active again in the 70cm and 23cm bands.

The following editorial comment from the *ORBIT* magazine issue #10 was written by Vern Riportella, WA2LQQ. This was in the March/April 1982 issue:

> Phase IIIB will be the first transponder-equipped OSCAR to fly which has not included a 10 meter downlink. Does this mean, as some suggest, that AMSAT will be severing the beginners' access route? Obviously the question presumes that 10-meter equipment is the key. We don't agree. VHF and UHF equipment abounds in many nations today and is becoming available in the others. So although the question would have been answered quite differently a decade ago, today the beginners' access route might just as well be 2 meters or above.
>
> Furthermore, there is ample reason to conclude there are more Mode A birds in the RS roost to serve the firmly immobile Mode A community. This is fortunate because the tether is now pulled taut. The crowding of the 2-meter band in some regions makes even Mode B of Phase IIIB look like a temporary solution. So it's on to the vast spectral Serengeti plains where grand schemes can be played out with the coming super-performance transponders. The promise of multi-MHz-wide resources free from the competitive excesses of the carnage below is alluring indeed.
>
> The herd *is* moving. It's probably too soon to judge if the rate is adequate. An answer to our question posed above will have to wait to see how well Phase IIIB and C are accepted. Many eyes will be watching.
>
> Meanwhile, those leading must be ever sensitive to the need for pacing; those tending to tarry when it's time to move must be gently prodded or be lost to predators. Only in this way can maximum benefit accrue to the community at large.
>
> Art may flourish in crisis; science certainly does not. With the awful din of 20 meters in one ear, let us move smartly on to more serene pastures. We simply must evolve. It is inevitable; it is healthy; it is warranted; it is time and it is critical to survival!

Roy Neal, K6DUE at the Dayton Ham Convention made a number of comments regarding amateur space communications. Roy is a firm believer in the future of amateur communication being via the space satellite route. He has looked into a crystal ball, as it were, and has seen the amateurs of the next generation talking

AWARDS

Scott R. Douglas Jr., KB7SB
P.O. Box 9990
Glendale, CA 91206-0990

To start off this month's column, let's take a look at the awards offered by FEDERACHI, Federation of Clubs of Radio Amateurs of Chile. The following applies to these awards:

1) Send your log extract showing station, date, time, band and mode, certified by two licensed amateurs or radio club official. Do not send QSLs.
2) All awards are available to SWLs and licensed amateurs worldwide.
3) To cover postage costs, etc., send 10 IRCs or $4 (U.S.) with your log extract.
4) All contacts after 15 November 1945 are considered valid.
5) Send all applications to: FEDERACHI — Awards Manager, P.O. Box 2545, Concepcion, CHILE.

ABCE Award (All Band Chile Award)

This award is issued for confirmed contacts with at least one "CE" station on each of the following bands: 10, 15, 20, 40 and 80 meters. Endorsements are available for band or mode if requested at the time of your original application.

The award measures 14½"L x 10½"H and is printed on a heavy white bond. The other colors on the award are blue and brown.

100 CE Award

This award is issued for confirmed contact with at least 100 Chilean amateurs on any combinations of bands. However, you must have made the contacts via the same mode of communications. All CW, SSB, RTTY, etc.

The award measures and is styled exactly as described above.

50 MHz CE Award

This award is issued for confirmed contact with three different districts of Chile on the 6-meter band. The award is as described above.

Now on to other areas.

Mexico 50 Award (by MDXC)

The Mexico 50 Award is issued by the Mexico DX Club to licensed radio amateurs and SWLs for the confirmation of contacts with Mexican amateurs in 1982 on a point system. The award is being offered to celebrate the 50th anniversary of Amateur Radio in Mexico, and only 500 awards will be available.

To acquire this handsome 8½" x 11" award, you must amass 50 total points. Below are the qualifications.

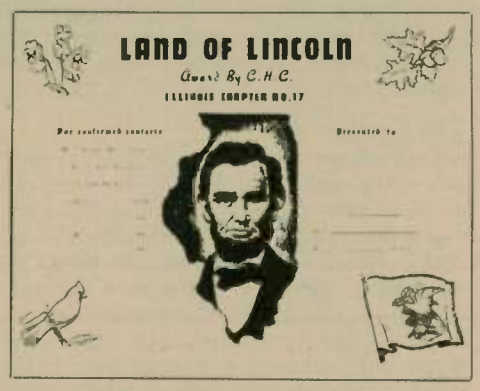
Contacts with: 6D5MDX, MDXC Club station = 10 pts.; XF4MDX, MDXC Revillagigedo Island DXpedition = 10 pts.; 6J5LM, special event station of the 1982 Revillagigedo DXpedition = 10 pts.; 6J5LM, on continental Mexico = 5 pts.; members of the Mexico DX Club = 3 pts.; any Mexican amateurs using the special prefix = 2 pts.; any Mexican station using the standard XE call = 1 pt.

Each station may be worked only once, regardless of band or mode, and application should be in the form of a log extract verified "GCR" by your local radio club official, two licensed amateurs, or by submitting cards to the headquarters of the International Amateur Radio Society, with return postage.

The award fee is $3 (U.S.) and it should accompany your application to: Mexico DX Club, Awards Manager—XE1OX, P.O. Box 21-167, Coyoacan 04000, D.F., MEXICO.

Hawaii Counties

This sharp 8½" x 11" certificate is available to licensed amateurs and SWLs who have confirmed at least two of Hawaii's five counties. A gold seal is added for those with three or more confirmed. Send your log extract "GCR" along with $4 to CHC, P.O. Box IARS, Glendale, CA 91206-7609.



Land of Lincoln Award

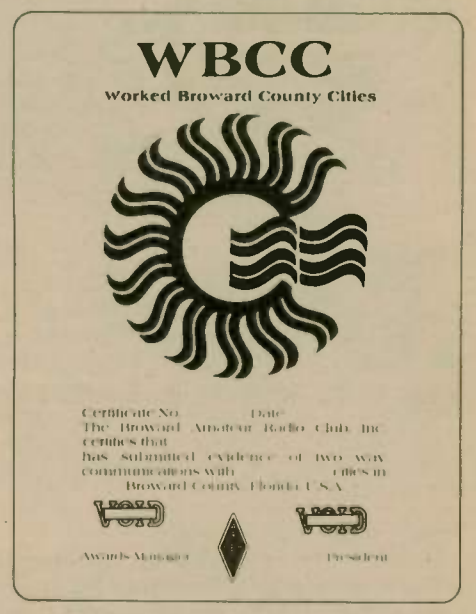
This fine 11" x 14" certificate is available to licensed amateurs and SWLs for contact with at least 15 cities in the state of Illinois. Endorsements are attached for 30, 40 and 50 cities. Send your log extract, along with the award fee of $4 to CHC, P.O. Box IARS, Glendale, CA 91206-7609.

Worked Broward County Cities (WBCC)

This sharp 8½" x 12" award, sponsored by the Broward Amateur Radio Club, is available to all amateurs submitting proof of two-way contacts with cities of Broward County as follows.

Residents of Broward, Colliers, Dade, Hendry, Monroe and Palm Beach Counties require at least 10 Broward County cities confirmed. All other amateurs require five.

A complete cities list and award application are available from the award manager WD4RAF, and application may be submitted with the award fee of $1 to WD4RAF, Fred L. Van Aalst, 1921 NW 41st Street, Oakland Park, FL 33309.



Worked All Morton Award (WAMA)

The Morton Amateur Radio Club offers to amateurs who contact either five members of their club or Morton County, the Worked All Morton Award. Only contacts after 1 January 1981 will be considered valid for this award. If you qualify, send your log extract along with a large-size SASE to: MARC, 701 Columbus Ave., Morton, IL 61550.

San Diego Award

This award is available to licensed amateurs and SWLs for confirmed contact with at least 10 amateur stations located in San Diego, California. To apply for this award, send your log extract along with $3 to: CHC P.O. Box IARS, Glendale, CA 91206-7609.

Til next month, 73s and good hunting.

AMSAT *continued*

to one another on hand-held transponders via satellites.

This is no far-fetched dream, as many of you know who have been able to receive the UOSAT (OSCAR-9) on their hand-held 2-meter transponders, or would you prefer transceivers?

The UOSAT is a downlink-only spacecraft with its outputs in the HF, 2-meter and 70cm bands, with other experiments in the 13cm and 3cm bands. The Soviet RS satellites have demonstrated that as little as 50mW can produce usable two-way communications. P.J.A. Gowen, G3IOR has reported contacts with the headquarters of the Radiosport Federation in Moscow from England using very low power. This means that there should be no difficulty whatsoever with present known technology to prove Roy's crystal ball correct.

If all of this still leaves you skeptical, the transmitters on the moon during the Apollo project landings which transmitted the video images of the astronauts to Earth showing them going about their lunar extra-vehicular activity had less than 10 watts of power. The distances are 10 times greater than the expected distances to Phase IIIB and 250 times greater than the distances to the UOSAT from Earth.

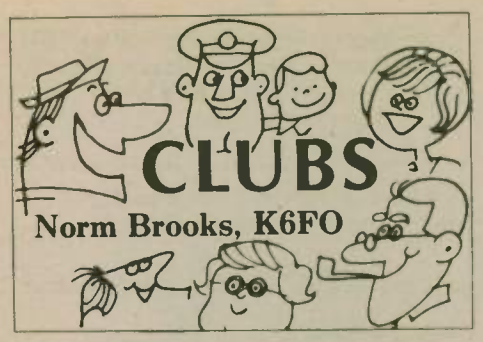
I am ignoring the fact that on Earth we had a 64-meter dish to pick up the video signals from the Apollo landers. Nevertheless, the advances in receiver and transmitter design with chips and small transistor units have certainly reduced that need for so large an antenna by a substantial factor in the ensuing 13 years. Keep the faith.

●

The JPL Amateur Radio Club will again be supplying shuttle audio (STS-4). There will be a net on 3910 kHz every Monday and Thursday at 10:00 p.m. prior to launch, to aid in coordinating those repeater operators and amateurs who wish to participate in retransmitting the shuttle audio signals. Launch date is 27 June.

●

It was reported in the press on 17 May that the Salyut-7 Soviet space station astronauts had pushed a communications satellite out into orbit from the space station. The transponder aboard this satellite is believed to have a 15-meter input and a 10-meter output capability. It was reported to be a "gift" to the people of the Soviet bloc nations to provide a communications link in space "that anyone can use." The spacecraft is identified as ISKRA 2 and is in such an orbit that only the Eastern Bloc countries can access it. The spacecraft can be heard in the Western Hemisphere for only six minutes. □



The hamswap

"Sold! — for 25 cents." With these words, Lou Potter, K6VT auctioned off a piece of ancient teletype gear. This was at the big annual fundraising affair of the North Hills Radio Club, Sacramento, California. It is held on a Sunday in early May, and has become an event that all amateurs within a 150-mile radius look forward to.

Many clubs participate

It isn't just a fundraiser for North Hills; it is used as a fundraiser by other clubs as well. How? I like to describe it as a two-level operation. North Hills is the host club. They arrange for the hall at the fairgrounds. They are concerned with tables, parking, food and refreshments, a talk-in station, publicity, door prizes and ticket selling for other major prizes. Other clubs (let's call them guest clubs) act as gathering points for gear to be sold by their members, then rent tables at the hamswap and provide sellers throughout the day. These clubs may charge their members a commission, thus providing an income for the guest club's treasury.

Of course, some amateurs have so much gear to sell that they rent a table(s) and sell their wares themselves. The local commercial interests are invited to attend and they, too, rent tables. If your club is not connected with a hamswap as a fundraiser, I'll cover the operation in more detail to help you get started.

How to do it

The host club must make reservations (a year or more in advance) to use, say, the hall at the fairgrounds. The club arranges for an adequate number of folding tables. The site should have adequate parking and enough paving so that heavy gear can be wheeled in and out on dollies. There should be a place to sell refreshments. A platform or stage is needed from which there is an auction from time to time. The proceeds from the auctioned items go to the host club. Generally, as the day wears on and a seller at a table sees he will not be able to sell a boat anchor he brought, he can take it to the platform. When he does, he has donated it to the host club, which then auctions it off for whatever it will bring — often only 25 cents.

The auctioneer

This brings us to a very important person — the auctioneer. Ideally, he is a local amateur personality known and loved by everyone. In the Sacramento area, this is Lou Potter, K6VT. Lou annually does the auctioning, and it is a pleasure to hear him work. His humorous descriptions of some of the items have the audience chuckling. Although a septuagenarian, he knows when to let the junk go for 25 cents and when to push for higher bids.

Refreshments

Everyone gets hungry and thirsty at a hamswap, so some organization should run a snack bar. Just who, and the items to be sold should be determined locally.

Prizes

The host club arranges for a door prize in the $75 range, sometimes donated by a local merchant. A free ticket for this prize is given each registrant. There is no admission charge or fee; just register and get a free ticket. There are two other prizes, too — each in the $300 bracket. Tickets for these prizes are sold from about two months prior to the hamswap, by club members. Tickets are $1 each, or six for $5. They are stapled in books of six. The club expects $5 for each book. If a ticket seller sells five tickets at $1 each, he has the right to put his own name on the sixth stub. Ticket buyers need not be present to win. This drawing is the big money-maker for the host club.

Publicity

Of course, the hamswap needs to be publicized. Flyers are sent to all the Amateur Radio clubs in a 200-mile radius, so they can be included with those clubs' newsletters. The swap is announced on the 2-meter repeaters, especially during nets when most members will be listening. When the swap becomes known as an annual affair, it is easier to publicize. All the amateur needs is a reminder as to where and when.

Commercials

Local radio stores should be invited to attend and rent tables. They all say it is a good idea to be there, even just to be seen. Most will offer a "hamswap special," usually a smaller accessory item. One dealer of a well-known radio line said, "I don't really expect to sell much, but I get a lot of good contacts for future sales." Try to get local dealers in personalized hats, shirts and badges to be there with their equipment. They'll make a killing, as identification is needed.

The guest club

Here's how your club can participate when you aren't the host club. Announce to your members you will sell any member's gear at a price agreeable to him, with your club taking, say, 10% commission. Appoint a selling committee, and make prior table reservations. One of your club members volunteers his spacious garage as a collecting point. The day before the swap, at an appointed time, members deliver their wares to be tagged with the asking price. The committee should also note the bottom price, and whether the owner wants it back if it doesn't sell. Unsold items could be donated to the host club's auction.

All the gear, after being tagged and listed in the selling committee's book, is loaded onto trucks and station wagons ready to be delivered to the hamswap hall early the next morning.

The morning of the sale, if tables are sold on a first-come, first-serve basis, have a committee person there early to pay for the tables and pick the best location. Try to be near the flow of foot traffic and near an electric outlet if one is needed to demonstrate receivers, etc.

Merchandising

The Mt. Vaca Radio Club — with Wayne Minick, WA6APX as sales chairman — used some gimmicks to attract attention to its tables. All selling committee members wore identically colored T shirts with iron-on slogans such as "pay me," "such a deal," "insult me" and "banker."

They also brought along a rotating red light on a pole, with an electric siren. Every once in a while, they would hold a "Red Light Special" and discount an item to be sold. K-Mart's "Blue Light Specials" were never like this!

John Dowling, WB2PWT, President of North Hills Radio Club (left) kibitzes while Lou Potter, K6VT auctions off a choice of junk equipment.

Security

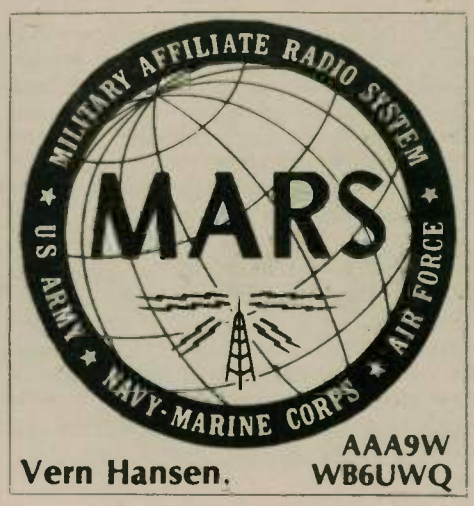
There should be enough people on the selling committee to watch the merchandise, even when some go for refreshments. If you have small, valuable items, take extra precautions. One year I rented a table by myself. I had one helper. We couldn't watch everything all the time, and I was ripped off for a paging receiver for which I was asking $125.

The payoff

As a guest club, we found the best way to handle the money received for the merchandise is for *all* money to go into the club's treasury. Checks are made out to the club, not the owner of the item sold. Promptly after the hamswap, the treasurer writes a club check to each member selling gear, minus the commission, which stays in the treasury. The key word is promptly, as it is not fair to make the member wait for his money.

You will be surprised how fast the dollars add up at a hamswap. Don't worry about getting your price. Our sellers noticed that buyers' wallets had lots of $100 bills — they came prepared to buy.

Good luck on your next hamswap. □



Vern Hansen. AAA9W WB6UWQ

The following article, "News from Northern California", by Norm Brooks, AAR9NI/K6FO, will appear in the July 1982 Western Area Army MARS Bulletin.

Meet one of Northern California's newest Army MARS members, Terri Pannett, AAT9PX/N6CYV of Santa Rosa, California.

Terri has been an amateur for about one and a half years. She thanks Joe Zimmerman, WB6JPC and Betty Braven, AG6C for a lot of excellent training that helped her pass her Novice and General FCC tests the same day. She is single and lives with her parents in Santa Rosa. She holds a Bachelor of Arts degree in music from Westmont College, Santa Barbara, California (1974). She works part-time as a switchboard operator for the Exchange Bank in Santa Rosa. Previous employers in Santa Rosa were Pacific Telephone and Sears Roebuck.

Her amateur/MARS station is equipped with a TS-120 transceiver, with a vertical trap antenna and a 4-element quad for the higher frequencies. She is net control station operator for the Sonoma Mountain Repeater Net on 146.91 MHz 8:00 p.m. Tuesdays local time.

Army MARS members Chuck Sabin, AAT9LV/N6DDK and Jim Tomer, AAR9SI/W6CYM introduced Terri to our operations. She checks into the AAA9CN/C net daily, Monday to Friday, and stays the full hour, which her working hours will permit. She takes all the traffic coming her way.

Here's the surprise ending. Terri is totally blind. She takes all of her traffic and keeps track of check-ins on a braille-writer. This is a device like a manual typewriter which has six keys. These emboss the braille character into the paper.

Our hats are off to Terri for the wonderful job she is doing in Amateur Radio and Army MARS. Welcome, Terri, and we are especially happy you are in Northern California. We hope your association with MARS is long and pleasant. □

MARS director

(*continued from page 8*)

worldwide head of the Air Force Footwear Procurement and Distribution. Later, he was assigned to the 63rd Military Airlift Command as the Chief of the Supply Systems Branch, Chief of Supply.

It was during this assignment that "Bill" became interested in Air Force MARS. He decided to get back into Amateur Radio as he was first licensed as W8ALD at the age of 13. During the years, his license had expired, so out came the books and the key. He was licensed as WB6QQM and his Air Force MARS call AFA6IS was issued.

In his desire to develop and maintain a strong MARS program at Norton Air Force Base (AFB), he has given many hours of tireless effort both as member and as Installation MARS Director.

Bill plans to remain in the Norton AFB, San Bernardino area and his many friends wish him and his lovely wife Kathy many years of happy retirement. □

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

YOUR LOCAL RADIO CLUB

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.

ALASKA

Borealis Amateur Radio Club
Eielson AFB, Alaska 99702
North Pole Jr./Sr. High School
3rd Friday/monthly - 7:00 p.m.

ARIZONA

Metropolitan Amateur Radio Club
J.C. Penny Restaurant, El Con
Tucson, AZ 85726
Call in on 34/94 K7CC/R
Every Saturday morning — 8:00 a.m.

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

CALIFORNIA

ARALB (Assoc. Radio Amateurs of Long Beach)
1708 E Hill St. Signal Hill, CA 90806
Meets: Signal Hill Comm. Center
1st Friday/monthly

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

Mt. Diablo Amateur Radio Club (MDARC)
Grace Presbyterian Church
2100 Tice Valley Road
Walnut Creek, CA 94598
3rd 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

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

Santa Cruz County ARC
PO Box 238, Santa Cruz, CA 95061
Last Friday/monthly — 8:00 p.m.
San Fran. Fed. Savings, 1995 41st Ave., Capitola
K6BJ repeater 146.19/146.79

Satellite ARC, Inc.
Bldg. 21160
Vandenberg AFB, CA 93437
1st Thursday/monthly — 8:00 p.m.

S.C.A.T.S./WB6LRU
S. CA Amateur Transmitting Society
P.O. Box 1770, Covina, CA 91722
Vine School
1st Monday/monthly — 6:30 p.m.

Silverado Amateur Radio Society - (SARS)
Silverado Jr. High School
1133 Coombsville Rd., Napa, CA 94558
Bill Williams, N6EIH - (707) 255-7600
1st Tuesday/monthly - 7:30 p.m.

Sonoma County Radio Amateurs, Inc.
Box 116, Santa Rosa, CA 95402
Hank Davis, W6DTV (707) 823-7885
County Office of Emergency Service
1st Wednesday/monthly — 8 p.m. rpter 146.13/73

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

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

West Coast Amateur Radio Club
Fun Meetings — No Business
Fountain Valley Recreation Center
Visitors welcome — call in 144.330 simplex
Call KA6RRR (714) 636-8661 for dates

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

Greater Titusville Amateur Radio Club
c/o W.R. Young, N4DQT, 3845 Catalina St.
Titusville, FL 32780 • Repeater 146.31/91
3rd Monday/monthly - 7:30 p.m.
Chamber of Commerce Bldg.

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.

Sarasota Amateur Radio Assoc., Inc.
Sarasota Junior High School Rm. A-9
Shade Avenue & Hatton Street
President: "O.W." Lander N4FCF
3rd Tuesday/monthly - 8:00 p.m.

GEORGIA

Gwinnett Amateur Radio Society
Red Cross Center
Hi Hope Road, Lawrenceville. GA
147.87/27 for Talkin/Info.
3rd Thursday/monthly — 7:30 p.m.

ILLINOIS

Fox River Radio League
McCullough Park Dist. Bldg. Rm. 101
Rt. 31 & Illinois Ave., Aurora, IL
(312) 898-2779 for more information
2nd Tuesday/monthly — 7:30 p.m.

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

Wheaton Community Radio Amateurs (WCRA)
College of DuPage, Room 2061
Glen Ellyn, IL 60137
1st Friday/monthly — 7:30 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
P.O. Box 15127, Fort Wayne, IN 46885
The Salem Church
3rd Friday/monthly — 7:30 p.m.

IOWA

Muscatine Amateur Radio Club
Info: Bruce Dagel, WB0GAG (319) 264-3320
Meets: Basement Meet. Rm., Public Safety Bldg.
Muscatine, IA
1st Monday/monthly — 7:30 p.m.

MARYLAND

Frederick Amateur Radio Club
Frederick Electronics
Vernon Simmons, KA3CVD
(301) 371-5735 after 1800 except Thur.
2nd Tuesday/monthly — 2000

MASSACHUSETTS

Billerica Amateur Radio Society (BARS)
Honeywell Systems Division
300 Concord Road
Billerica, MA 01821
1st Wednesday / monthly — 7:30 p.m.

Q.R.A. (Quannapowitt Radio Assoc.)
Masonic Hall — Salem Street
Wakefield, MA 01880
2nd Friday/monthly — 8:00 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, W2MMD
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 YORK

Amateur Radio Assoc. of the Tonawandas
City Hall, Community Room
200 Niagara Street
City of Tonawanda, NY 14150
3rd Tuesday/monthly — 8:00 p.m.

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.

Long Island Mobile Amateur Radio Club (LIMARC)
146.25/85, 147.975/375, 223.22/.224/.82, 444.125/449.125
Membership: Jerry Kamen, K2QXH, 44 Robin Lane, Levittown, 11756 Net every Mon. 8:30 p.m. 146.25/85
Meets 1st Tues / 8 p.m., H.B. Thompson, JHS, Syosset

NEW HAMPSHIRE

Great Bay Amateur Radio Assoc.
Airex — Tel. 742-3703
Route #16, Dover, NH 03820
2nd Sunday/monthly — 7:00 p.m.

OHIO

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

C.A.R.S. (The Clyde Amateur Radio Society)
Ervin Remaley, KA8CAS, Secretary
2nd Tuesday/monthly - 7:30 p.m.
Community Rm., City Building, Clyde, OH
Repeater 144.75/145.35

Champaign-Logan A.R.C., W8EBG/R
Joe Palmer, KS8M, President
2 Meter Net, 147.60-100, Tuesdays, 8:30 p.m.
Dinner Meeting, 1st Thursday / monthly
Dajolees Restaurant, West Liberty, OH, 7 p.m.

Findlay Radio Club
1333 W. Sandusky St./Box 587
Findlay, OH 45840
Repeater 147.75/15
1st and 3rd 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.

Oregon Tualatin Valley ARC
Portland General Electric Auditorium
14655 S.W. Old Scholls Ferry Road
Beaverton, OR 97005
3rd Wednesday/monthly — 7:00 p.m.

SOUTH CAROLINA

Keowee-Toxaway A.R.C. (Seneca/Walhalla)
147.87/147.27 WA4JRJ/R
Seneca Police Dept. Bldg.
Call Hum Walker, S/T, KD4WL (803/882-0471)
3rd. Tuesday/monthly — 7:30 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.

Radio Amateur Club of Knoxville (RACK)
PO Box 124, Knoxville, 37901
Fire Training Center
Prosser Road, Talk in 147.90/30
3rd Thursday/monthly — 7:30 p.m.

TEXAS

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

Houston Amateur Radio Club, W5DPA
7011 Lozier Street
Houston, TX 77021
(713) 747-5073
Fridays/weekly — 7:30 p.m.

UTAH

Utah Amateur Radio Club (UARC)
Room 161, Murray High Sch., 5300 S. State
Gordon R. Smith, K7HFV
582-2438/talk-in 16/76
1st Thursday/monthly - 7:30 p.m.

VIRGINIA

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

WISCONSIN

Racine Megacycle Club
Red Cross Building
4521 Taylor Avenue
Racine, WI 53405
2nd Monday/monthly — 7:30 p.m.

WEST VIRGINIA

Jackson County Amateur Radio Club, Inc.
First National Bank of Ripley, WV
1st Thursday/monthly — 7:30 p.m.

MARS at SAROC

Paul Turkheimer WA6NKL/AFF6P

On Saturday, 3 April 1982, during the annual SAROC Las Vegas, Nevada Convention, two MARS meetings were held. The first meeting was chaired by Mr. Vernon Hansen, Army Command MARS Director, Presidio of San Francisco and Mr. Arthur Delperdong, Deputy Chief, Navy-Marine Corps, MARS, Washington, D.C. Although this event was advertised as a tri-service MARS meeting, no official Air Force representative was present. Oscar Heinlein, AFA6KE — a veteran AF MARS member, active in the program since 1950 — briefly addressed the group. Each of the speakers provided a short overview of their respective operation.

The second MARS event was a group-exclusive activity and the Air Force meeting was chaired by Paul Turkheimer, AFF6P. There was an exchange of ideas based upon significant recent events. Emergency communications support activities, focusing upon recent Region 6 experiences, were in the forefront. The importance of the constant threat of Murphy's Law waiting to strike was stressed. The best weapon to defeat it is an accurate, comprehensive checklist and practice drills.

We discussed the need for getting more of the younger people involved, who by virtue of their vocational involvement in industry can bring a new technical vitality to MARS. A great number of our members are retired and are not in touch with the rapid advances of technological state-of-the-art. The reactivation of once flourishing youth training programs should be considered.

In the too-hot-to-handle category was multiple membership station authorization in order to access other services' traffic nets. This discussion was short-lived and was deferred to those not present.

The only other appointed official present was Leon Stanley, AFF5UT, Utah State MARS Director. Marion C. Crane, AFB3AV of St. Joseph, Missouri had traveled the greatest distance. A total of 17 USAF members attended. It is suggested they report their participation time to their respective officials. □

Vic Clark

(*continued from page 3*)

The freedom with which radio amateurs are permitted by their governments to function, and the immediacy with which this fact is evident from listening to the transmissions of the world's radio amateurs from day to day, tell a story that transcends propaganda efforts and is at once candid and revealing.

U.S. radio amateurs have been looked up to throughout the world as leaders and innovators, enjoying the full support of an enlightened system of government. We believe that prompt ratification of the WARC treaty will help to protect the proper image of a government that, having sought and attained an objective at an international conference, follows through with its timely implementation.

On behalf of the radio amateurs of the United States, I would like to urge that the United States Senate advise and consent to the ratification of the 1979 Geneva Radio Regulations and Final Protocol.

Thank you very much. □

Still more

Glen Peterson, WB6BOD

If the reference to WA6PKI-WD8PKI and N2CBU-N4CBU is newsworthy, how about this one?

I, WB6BOD, have had the pleasure of working KH6BOD, WA6BOD and K6BOD. All on 40-meter SSB and no skeds were involved. □

Silent Key

Kenneth M. Durkee, AFA6GL, who passed away on 5 January 1982, had been a member of USAF MARS for in excess of 16 years where he was primarily assigned to CW net TRC. Ken was also active on NET 6S1 and VHF as well as on the ARRL Traffic Nets. He was a very dedicated and dependable member and contributed heavily to the nets indicated. All of us miss Ken, especially on CW Net TRC where his familiar fist and outstanding CW proficiency was evident.

Ken was born in 1905 at Seattle Washington. As a young man he was employed as a commercial CW operator at Canadian Coastal Stations VAB, VAD VAE ETC in the Vancouver, British Columbia area. He graduated as an electrica

engineer from the University of Washington during 1929. He was employed by General Electric Co. in New York in the Broadcast Transmitter Design Division for several years after 1930, followed by employment by WMAL-TV for several years as Asst. Chief Engineer in Washington, D.C.

He came to the San Francisco, California bay area around 1956, where he was employed as a television station engineer for several years, followed by employment as a local School District Engineer in charge of electronics from which he retired in 1972.

Ken was a member of many organizations such as #596SGP (SGP indicating CW operation of Spark Gap Transmitters), and received several certificates of recognition from USAF MARS.

Ken leaves his widow Helen, AFA6GK who likewise is primarily assigned to Net TRC. May He Rest In Peace.
— *by L.C. Skipper, NM TRC* □

Pass it on . . . WORLDRADIO

Beacon schedule

Experimental Station KK2XJM
Daytona Beach, FL, USA

The current period of operation consists of transmissions on frequencies selected to be close to the optimum working frequency for selected areas. The schedule is:
18 June - 9 July: Asia (Japan)
16 July - 6 Aug.: Oceania (Australia)
13 July - 3 Sept.: Africa

Beacon frequencies will be selected from 10.140, 18.108 and 24.930 MHz, using propagation predictions published in QST. Approximately, one of the two highest frequencies will be used when it is daylight at the midpoint of the path, and one of the two lowest when it is night.

Beacon signals will be unmodulated carrier, interrupted 0, 2 and 7 minutes past each hour, the cycles repeating each 10 minutes. Initially, announcements will be USB voice. They may be replaced by CW or RTTY (110 baud ASCII) at intervals. Operations may be at several power levels.

The station will be operated in the beacon mode each Friday, Saturday and Sunday from 0000 to 2400 UTC. The station may be on at other times and other frequencies in the 10.18 and 24.5 MHz bands for calibration, maintenance and special tests, and for two-way operation (QSO) with other experimental stations. At this time, QSO with amateur stations is *not* authorized.

There will be no operation between 3 September and 30 October. Future schedules will be announced in September.

For information, QSL, or special test schedules, contact R.P. Haviland, W4MB, 2100 S. Nova Road, Daytona Beach, FL 32019, USA. Because this phase of the experiment involves effect of changing power levels, reports of signal strength at hourly intervals would be appreciated. □

Contest

(*continued from page 3*)

quest was relayed by others all over the country, both on and to either side of the emergency frequency. Unfortunately, there was a phone contest in progress, and contestants crowding the emergency frequency caused severe QRM conditions that seriously interfered with the critical traffic into and out of Tonga.

Such an inexcusable and outright disastrous situation demands that some changes be made in how our phone and CW contests are conducted. Two restraints should be imposed without delay for contests of any kind: 1) specific limited frequency segments of each band should be designated, and 2) power limitations should be imposed to minimize splatter. On CW, the use of automatic equipment should be banned. Such limitations would prevent the kind of fiasco experienced during the Tonga incident. And it would add a measure of challenge to contests. With a big beam, 2kW and a broad signal with lots of splatter, any LID can blow everyone else off the air. That's hardly a contest. In fact, it's lousy Amateur Radio operation but increasingly seems to be the rule rather than the exception.

Your club could render a valuable service to Amateur Radio by drawing up some reasonable guidelines for contest rules and regulations and submitting them in a forceful manner to ARRL.
— *Lincoln ARC, NE* □

Ham pirates sailing the seas

A landslide of mail indicates everyone is interested in high seas Amateur Radio piracy. You know what I'm talking about — the boys and gals with a boat using Amateur Radio and some phony call letters to report in on the "Mickey Mouse" nets and to place telephone calls back home. Now don't get me wrong — I am all for the safety aspects of having a workable radio system aboard the boat, but without a license, mariners should not attempt to pass any traffic, phone or otherwise, except in an emergency through maritime nets on the ham bands.

Maybe some people are plagued with the "anything if it's free" syndrome. Ham sets are great for free phone calls when at sea, right? Come on now — I am sure that a five minute call through the KMI marine operator service that serves all of the world won't bankrupt many mariners at a couple of bucks a minute, will it? The commercial telephone system is generally far superior to any Amateur Radio phone patch by a long shot. Three United States high frequency single sideband public correspondence stations can deliver ship-to-shore phone calls to you anywhere you cruise, day or night, and with almost any type of antenna aboard. Using rhombic antennas and several gallons of power, these worldwide marine operators are waiting by million dollar receivers precisely for handling telephone traffic from mariners. The rates are nominal, their service is phenomenal, and they don't even charge you a monthly fee if you don't place or receive any phone calls.

Maritime nets

Maritime nets are still plagued with ham pirates using phony call signs or Novice and Technician calls operating in the General Class portion of the band. We talked about this last month.

An organization called CLAMMARO (Committee for Legal Maritime Mobile Amateur Radio Operations) is doing something about it. Principal CLAMMARO figures include Ramsey Armstrong, W6ELU; Bill Hinton, W6RBH; Carter Kirven, WA6MGI; Thurman Smithey, N6QX; Carl Wallace, K6YEO; Leona Wallace, WA6OHB; Gene Stephens, KA6HOQ; and yours truly. We are all interested in exposing and removing from operation on the ham bands those maritime mobile operators of ham equipment who are either unlicensed or improperly licensed for operation in the General Class portions of the bands.

"We are not going to act like policemen. We are simply a service to net control operators to inform them of stations that may be unlicensed or under-licensed," comments CLAMMARO chairman, Thurman Smithey.

CLAMMARO chairman — Thurman Smithey, N6QX — at head of table.

Participating net control operators — such as Bill Hinton, W6RBH and other volunteer net monitors — routinely submit the call signs of mariners checking into the various nets and those wishing to pass phone patch traffic. CLAMMARO members will then work with local FCC offices to check out each call sign to insure authenticity and the proper license grade for the band and frequencies they are operating on.

"I was surprised — almost shocked — to find that about 12 percent of my check-ins were questionable," comments another Pacific Coast net control operator. (After rechecking those questionable call signs, only about eight remained on the questionable list.)

One tough task that CLAMMARO has is getting other maritime net operators to work closely with them. That's understandable. No net control operator likes being informed by someone else that some of the stations he is communicating with may be illegal. That's like a slap in the face. I wouldn't like it myself. In addition, net operators are there to provide help, and they truly want to help anyone asking for help. This, unfortunately, leads them into leaning too far in some cases toward not refusing anyone who comes up on the net — even those who are *obviously* not properly licensed amateurs.

However, the job of policing the ham bands needs to be a priority job of every amateur, particularly those who operate with maritime mobiles. Maritime net control operators are encouraged to submit their check-in lists to CLAMMARO, or to go down to their local FCC office and check the microfiche files for call authenticity.

What's next, after a phony or underlicensed station has been discovered? I'll tell you what's next — dealing with the questionable call sign marine station next time they appear on the net. Open challenges are frowned upon. Not that a bootlegger merits much in the way of courtesy, but the facts are that the latest published FCC information is often sadly out of date. The questionable station may, in fact, have recently upgraded and be perfectly legitimate. I recommend simply asking (politely) the maritime mobile station to phonetically restate his call sign. If it still comes up the same, confirm the listed name of the licensee on the FCC files. If this matches, ask for any recent upgrade details, such as when, where and whose signature is on the temporary permit of from the FCC engineer in charge.

Bill Hinton, W6RBH, CLAMMARO net control operator

Somewhere along the line, most bootleggers or pirates mysteriously disappear from the frequency. Maybe their transmitter died. More than likely, their alibi died!

If, however, the maritime amateur still hangs on to the story, maybe the FCC information *is* indeed out of date and incorrect. CLAMMARO will assist the net control operator in tracking down all the details, with possibly a phone call in order, to the FCC office that supposedly issued the license or upgraded license. In this case, however, CLAMMARO must have not only the call of the questionable licensee, but also his name, the office where he claims upgrading and the approximate date of upgrading.

Foreign call signs aboard U.S.-registered vessels are out. Our FCC office indicates that this is not a legal practice, and no net control operator should handle foreign call sign requests for phone patch traffic from U.S.-registered vessels or mariners signing with a foreign call while using an obvious Brooklyn accent. The old foreign-call-sign-aboard-a-boat trick is old hat.

Using a dead man's call sign is also pretty low, but lately the call signs of two Silent Keys have shown up on boats, according to CLAMMARO. And quite a number of cases have come to light where a maritime mobile has been discovered using the call (and sometimes even the name) of a properly licensed ham friend. This is a case of amateurs doing it to themselves. When these are discovered, CLAMMARO turns in information on both parties to the FCC. No license revocations of the call "lenders" have been forthcoming yet, but it could happen.

Amateur Radio operators throughout the country that routinely handle phone patch traffic from any type of station

The CLAMMARO gang

should double-check their Callbook for station and operator authenticity and legality. No amateur operator should be offended if the station handling the phone call asks, "Have you recently upgraded?" It's up to all of us to police our own airwaves.

FCC is still monitoring

The FCC is continuing to routinely monitor the amateur bands. Word has it that the Livermore, California monitoring station is fond of tuning in maritime mobile nets, checking for proper calls and proper traffic. Be very aware that FCC monitoring stations are handing out notices of violation left and right to mariners taking part in such traffic as: making airplane reservations; checking up on company business; ordering non-emergency parts from commercial companies; checking stock quotations; calls to businesses, asking for "any messages." Radio traffic like this should go over public correspondence channels, not ham frequencies.

To say it again — keeping our airways as clean as possible from pirates is every amateur's responsibility.

Multi-band mobile antenna review

Mariners running mobile antennas off the stern usually will not require a separate antenna tuner. Stern-mounted mobile antennas still require a copper foil groundplane as the counterpoise. Mobile antennas that refuse to resonate generally don't have a good groundplane at their base.

With a good groundplane all around the base of the mobile antenna, mariners will enjoy good high frequency operation. Although mobile antennas on the stern are not nearly as effective as a backstay, used with a coupler, mobile antennas are indeed useful for good 3,000-mile coverage on the high frequency bands.

A dangerous aspect of running a mobile antenna on the stern is changing coils in rough weather. Potential liabilities could be falling overboard during a coil change, breaking off the antenna, or simply dropping the coil into the drink.

The need for a truly multi-band mobile antenna that would require no adjustment after installation was paramount. The challenge was met by Fred Shmitka, K6AQI, with his relatively new "Spider Antenna." A special stainless steel model of this antenna designed expressly for mariners was presented to me for review.

The Spider Antenna is designed to operate on the 10, 15, 20 and 40-meter bands without any coil changes. Once it's tuned to the type of groundplane you have, it will cover all four bands simultaneously.

looks really weird. The 4½-foot shaft, for the marine version, is stainless steel. For regular use, the mast is made of ½-inch electro-polished aluminum.

Spider antenna

The radial 10, 15 and 20-meter resonators project out from the mast 12 to 22 inches, and are ½ inch in diameter. They are wound on fiberglass. The vertical 40-meter resonator is 20 inches high and ¾ inch in diameter, and is wound on nearly indestructible polycarbonate. Each resonator is covered with two layers of a tough and durable plastic dielectric.

You supply your own mount. It screws into the common antenna mount thread. Like all mobile antennas, it needs a good groundplane to work.

Tuning is a snap. We tuned the entire setup in less than 20 minutes. Starting at the 10-meter band, each resonator is tuned by means of a unique tuning sleeve which slides over the length of the resonator. Moving the sleeve in toward the mast tunes the resonator higher in frequency, and moving it away from the mast lowers it in frequency. This changes the L-C ratio, thus maintaining a base impedance of approximately 50 ohms at all frequencies. We found that changing the tuning of one resonator will not affect any of the others!

In most cases, it *will* be necessary to chop off approximately 10 turns of wire for each band. The antenna is purposely constructed to operate below each band in order to accommodate all proposed installations. If you are mounting your antenna on a good groundplane, it's quite likely that you will need to remove the little black cap and take off some turns. Once you are in the ballpark, the rest of the tuning is accomplished by sliding the white or black sleeves up and down the resonators.

In our maritime installation evaluation,

(*please turn to page 44*)

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

Greater love hath no man

Members of the Amateur Radio fraternity continually exhibit extraoardinary deeds and practices that reveal the special heart that beats within those attracted to this very special "so-called hobby." **Worldradio** has been a leader in helping to recognize some of the people and some of the deeds. In keeping with this tradition, we would like to mention some that have come to our attention this last month.

A well-liked San Francisco bay area amateur has for years been known for his many good Samaritan acts. These things have included many things happening on the streets and highways, because "Blackie", (Emory Blackmore, WA6QOQ) was a professional driver with years behind the wheel of big trucks. Recently, Blackie lost his right lower leg and spent many painful hours in the hospital. Through all his pain and suffering, Blackie was able to radiate an attitude on the air that brought warmth to all who heard him. I went to visit him prior to my second operation last August, when I was at one of the lowest times in my life. I went to cheer him up for his upcoming leg removal. Instead, I left his hospital room almost completely changed in my feelings of fear for my impending operation. He certainly did more for me than I did for him.

A couple of weeks ago, I returned from Los Angeles where I went to confirm the success of my operation at the capable hands of Dr. David Cook, N6EHM. One of the first things I learned was that Blackie was back in the hospital. It seems that a fellow amateur had come up with a sudden problem that required surgery. His wife needed a ride from Half Moon Bay, over the mountain from the hospital. Blackie, in his typical volunteer fashion, drove his specially equipped vehicle over the hill to get her. While at her house, their very excited dog knocked Blackie's crutch out from under him. He fell, breaking what was left of his amputated leg just below the hip.

Even though he was in great pain, he drove her over the hill to the hospital, before he was taken to another hospital for heavy surgery and installation of a plate around the break. Even through all this new and additional pain, Blackie's spirits remained high. He still radiates that same happy spirit on the air from his hospital room. With all of the above, one of his concerns during his pain was that Kay Savage, WA6QFR telephone me when I returned and explain what happened — so that I would not worry about him and the possiblity he had complications from his earlier surgery. We salute these special qualities found in so many amateurs.

New book on ground ELT DF techniques

Along these same lines of human dedication by concerned amateurs, we received an autographed copy of a volunteer work done for the New Mexico State Police Search and Rescue Organization. It is entitled "Strategy & Techniques for Location of ELT Transmitters," and was written and produced by Rick Goodman, W5ALR and R.J. Chaffin, W5RGX and the same group of amateurs that did the very excellent film show on Hams in Search and Rescue that has been shown all over the world.

This book of 135 pages is not for sale to the general public, but was assembled in an effort to see more lives saved by sharing ham knowledge of VHF propagation characteristics and electronic formulas with others in the SAR community. It reflects tremendous dedication to produce such a long and detailed work, when the only profit one realizes for one's effort is the saving of lives. Having worked with Paul Hower, WA6GDC and Howard Bassham, K6RYA on the HAPPY FLYERS DF book, we know how much work it was for them.

The contents of this book contain technical information that reflects hundreds of hours of actual field direction-finding work, in some of the most rugged terrain in the United States. Unless you have pulled your body up and down mountainsides, in the thin air of their 10,000 foot and up "hills," you might not understand how hard it was to develop some of these techniques and formulas. What can we say to people with this type of dedication? Thanks is really not enough!

Even with all that they have done through the years, they are still among the most humble and cooperative people we have worked with. I must share with you the very kind message that Rick put on the cover of my copy of his book. "Hart, because of you, people are alive — what more could you say about a man?" I am humbled by those kind words from a man who has done so much more. He said it first, but it is really more true about those in that group in New Mexico, so at the risk of repeating his words — may we express our feelings that the same is true as a result of the work of each and every one of you who spend countless hours and dollars so that "others might live."

San Francisco earthquake drill

Each year, San Francisco attempts to remember the great 1906 earthquake by having a drill to minimize loss of life when the next one strikes. You will notice that I said when, and not "if." Scientists feel that one will strike — the only question is when, and perhaps how severe. They feel it will be more than just a little shake! Bay area disaster agencies have been gearing up for the inevitable as fast as possible.

Earthquake drill communications special RTTY/VHF FM CAP unit provided by Major Bob Fields (seated). Used for sending mock DWI traffic. It was mounted on wheels, self-contained and even had auxiliary gas-powered 120-volt capability. Standing on the right is Cadet 1st Lt. Mike Dinning of Pacifica Squadron 1, CAP, with Capt. Hart Postlethwaite, Group 20 Communications Officer, looking on.

We took part in this year's drill as part of the Civil Air Patrol's communications team. Group 20 (I am the Group 20 Communications Officer) was asked to provide RTTY, voice communications and personnel for the exercise. They also utilize communications teams from the local Amateur Radio clubs, Red Cross radio, citizens band, and the city radio system.

Major Bob Fields, Commander of CAP Squadron 110 and his volunteers provided an extremely valuable and versatile composite unit that he personally built. He is seated at the unit they provided and is sending part of 200 dependent welfare inquiries (DWI) that were being sent as part of the exercise. One cannot send the same amount of vital traffic via voice in the same amount of air time. It also provided "hard copy" for the records at both ends, as well as for any other disaster team that needed the information and had RTTY capability.

Bob's unit was unique in many respects. The normal teletype frame, including tape capabilities, had been fitted with large wheels for easy mobility. A special CAP van had been equipped with special tie-down rings and a hinged platform constructed that could be lowered to the sidewalk for easy, roll-in/out loading and unloading. The necessary radio transceiver required to send and receive on the CAP primary VHF repeater had been built into the RTTY frame. All interconnections for either voice or RTTY usage were installed and ready for use. Local or remote antenna connection was possible. Due to the 4.25 meg difference in transmit and receive frequencies, duplex operation was possible. He even provided a second model 28 RTTY unit for the Red Cross table in another part of the building. The special van contained a gasoline-powered generator that could have provided the 120-volt requirements of all of his equipment in the event of failure of the city system.

After seeing this totally prepared set-up, prepared mainly by one volunteer — and mostly at his own expense, I wonder how many others are as well prepared should a major disaster strike!

Communications skills

Each time I become involved in a disaster communications situation, whether real or a drill, I feel compelled to share some observations. Those of us who

use radios on a regular basis usually lose our fear of "being on the air." As a matter of fact, most people who use a radio a lot (regardless of the radio service) tend to feel rather comfortable while on the air. In disaster situations this can create problems. Last fall I did an article on some of those problems that surfaced during the "Medfly Red Cross evacuation center" communications. In that real situation, the worst problem seemed to be "editorializing" on the messages. We all realized that we should transmit what is

In this exercise, with multiple communication agency teams, the greatest problem I noticed was improper use of air time. Many non-essential communications took place on the assigned emergency net frequency. Friendly salutations were excessive. Test transmissions during set-up were often too long and caused delays at other stations. One amateur made a number of transmissions complaining that he had been there an hour and no traffic had been given to him. If he was not used within the next 15 minutes, he planned to go home. I looked at my watch and the schedule given us and noted that the communications part of the exercise was not even scheduled for another 20 minutes. He wasted air time, and no other station at any of the disaster centers could have passed routine set-up information while he was complaining. TV, radio and newspaper coverage of the event was huge. Much of what we were doing was being monitored.

We were all given identical messages to pass, with simulated damage reports, food supplies, medical assistance needed, etc. It was interesting to listen to each of the services do their job (we were all placed together in my shelter location). A printed format was used and it contained sentences with only the numbers from each center as the traffic. Some people read the preprinted format information as if they thought the net control operator was having to write each word. The result was that one operator took five minutes to pass his numbers, while another took less than a minute. (The sentences could be read rapidly, and then just the numbers given carefully.) It looks like we could all use some programs at our club meetings and SAR groups on proper communications techniques for emergencies. This could include: When to use phonetics (seldom necessary on VHF FM), when to stay off the air (such as using air time to tell another that you cannot call for an ambulance because you too, are mobile, keeping a base station from coming on the air to get the necessary information), etc.

Aircraft computer programs

My request for information on aviation and ham-related programs has begun to bring in some very interesting information that we will try to share with you in the coming months. It can be difficult to learn of these programs because some of the really good ones are not advertised commercially — or in places where you and I can see them. I trust you will enjoy some reviews and information.

The first packet of information received was from Prof. J.C. Sprott. He listed nine programs, all for the TRS 80. They included: Aviation Flight planner, Aircraft Instrument Approach Simulator, Simultaneous equations, Grade Distribution program, W9AV QSO message generator, W9AV Morse code translator, W9AV Morse code trainer, Amateur Radio logbook, and a very interesting W9AV Amateur Radio QSO Robot program that can complete a QSO with another operator completely automatically.

He sent me a sample cassette tape and program information on the approach simulator. I have an Apple II, so I will have to try his program on another HAPPY FLYER's TRS 80 to give you a good report. Looking at the paperwork, I wish he had his program available for the Apple. From the look of his paperwork and the descriptions, I believe many might be interested. He makes the source lists available from $4.95 to $7.95 and the cassettes from $9.95 to $19.95. They are available in Model 1 or 3 — level 2, TRS 80, from Prof. Sprott, 5002 Sheboygan #207, Madison, WI 53705. His prices are very low, for what he offers.

We also received information from Phil Salisbury about Skylark Flight programs (1711 Skylark Lane, Newport Beach, CA 92660). The sample printout of the Flight pak-80 he sent showed his flight log for use during a flight. The program will ask the pilot for his departure point, aircraft ID, type, cruising altitude, true airspeed, wind direction and velocity, amount of fuel on board, and fuel consumption.

Information for each leg is also prompted by the program by asking the route, course and distance to each point along the route. At the completion of the leg information, the computer will present on the screen the fuel used on that leg, and the time of fuel remaining until the fuel reserve. You can do many things with the information you enter, including a printout of information in standard FAA flight plan order, save to disk for future use, etc.
(*please turn to page 42*)

Summer doldrums

Traffic activity usually drops somewhat during the summer months, but it's encouraging to note that the drop has lessened somewhat in recent years. Who wants to stay inside at a hot rig fighting the noise from summer thunderstorms, when there's so much to do out of doors on the long leisurely summer evenings? Apparently enough of us do, as the nets continue to operate and traffic is handled.

It's not because there's no traffic to send. Actually, summertime offers special opportunities for a steady supply of messages for the traffic mill. People travel and want to keep in touch with the folks back home. Instead of writing, "Having a fine time, wish you were here," on a picture postcard, why not send it as a radiogram instead, and save a quarter? Amateurs in resort areas can get all the traffic they want, and many actually do.

The Knoxville World's Fair is in its first week of operation as this is being written, and already it is putting traffic into the nets at an impressive rate. This just might generate some surprising totals during the months ahead. We on the Eastern Seaboard are quite familiar with the activity engendered by the Florida State Fair every year, and the Knoxville fair could well keep up such a pace all summer.

The cure

Whether it's summer or winter, the only cure for low traffic totals is for amateurs to originate more. No traffic will ever get into the system unless somebody originates it. Phil Ward, N7AKX has some thoughts on the matter, which appeared in the bulletin of the Idaho-Montana Net (IMN) in March:

"The best way to generate one's own traffic. I don't know why so many amateurs seem so reluctant to generate traffic. Too many seem to just want to 'chat,' and seem unable to comprehend the value of disciplined activity (such as written CW traffic demands). I could recommend getting in touch with many group leaders in any community and 'selling' the public service amateurs can contribute — at no charge to anyone. Golden age clubs, hospitals, high schools and junior (community) colleges, agricultural groups, nationality groups (Redmen, Sons and Daughters of Norway, Deutsche Verein, Sociedad Cultural, etc.) can be shown how this public service can be used by their members, and routine collection of traffic (say once a week) might encourage traffic (especially when answers start coming back!).

"The biggest stumbling block to getting traffic (in my experience) is not the public but amateurs themselves, especially those who sit back and do nothing themselves and sneer at 'traffic hounds.' Those who ignore traffic are avoiding the very foundation stone of Amateur Radio — relaying of traffic. That was its original excuse for being. And, although times have certainly changed, the basic fundamentum of Amateur Radio today is still public service . . . .

"Without traffic we have not very much claim to any more special privileges than can be claimed for citizens band operators. It is my opinion that if we do not make sufficient showing in the public service areas, we may find ourselves lumped in without distinction with CBers, as far as FCC is concerned. If that day comes, we may find all of us have curtailed privileges."

I agree in general, but Phil maybe comes on a little too strong on the primary importance of traffic. Pete Gellert, W2WSS, writing in *QSB*, the Quarterly Second-Region Bulletin, takes a more moderate stand in the Spring Issue:

"The FCC rules for Amateur Radio outline the following basic purposes of the Amateur Service: 1) a voluntary noncommercial communications service, particularly with respect to providing emergency communications; 2) advancement of the radio art; 3) providing a reservoir of trained operators, technicians and electronics experts; and 4) enhancing international good will.

"Note that, while traffic and emergency preparedness is mentioned first, it is not given primacy over the other purposes — presumably the dedicated but courteous DX hound, the builder who gets on the air but once a month to test his latest adjust-

Nets in Novice bands

Net name	Freq.	Days	UTC	Coverage
Adair County Emergency Net (ACE)	3,710	MWF	0000	Adair County, MO
Alabama Emergency Net D (AEND)	*3,725*	*Dy*	*2330*	*Alabama*
Albany Traffic Emergency Net (ATEN)	7,112	W	0100	Albany County,
	21,150	W	0200	E NY
Cape Breton Net (CBN)	3,735	Sn	1730	Maritime Provinces
Carolinas Novice Net (CNN)	*3,715/7,115*	*Dy*	*2300*	*NC and SC*
Colorado-Wyoming Net (CWN)	*3,715*	*Dy*	*0230*	*Colorado & Wyoming*
C. Q. Radio Club Novice Net	28,125	Th	0000	NW Connecticut
Diamond State Slow Net (DSSN)	*3,735*	*W-F*	*0030*	*Delaware*
		Sn	*2300*	
Early Bird Net (EBN)	3,715	Dy	1100	E US
E Mass/RI Slow Speed (EMRISS)	*3,715*	*Dy*	*0130*	*E Mass & RI*
Florida Slow Speed CW Net (QFNS)	*3,715*	*Dy*	*0100*	*Florida*
Georgia Training Net (GTN)	*3,718*	*MWF*	*2315*	*Georgia*
Hit and Bounce Slow Net (HBSN)	3,714	Dy	1230	E US & Canada
Indiana Code Net (ICN)	*3,708*	*Dy*	*0015*	*Indiana*
Iowa Code Net (ICN)	*3,713*	*TThS*	*0100*	*Iowa*
Kentucky Novice Training Net (KNTN)	*3,727*	*Dy*	*0000*	*Kentucky*
		SSn	*1400*	
Lehigh Valley Net (LVN)	*3,740*	*S*	*2130*	*Lehigh & Northampton Cos., PA*
Louisiana Slow Net (LSN)	*3,703*	*Dy*	*0130*	*Louisiana*
Maui Emergency Net (MEN)	7,120	T	0600	Hawaii
Michigan Novice Net (MNN)	*3,722*	*Dy*	*2230+*	*Michigan*
			0100	
Minnesota Slow Speed Net (MSSN)	*3,710*	*Dy*	*2345*	*Minnesota*
Mississippi Slow Net (MSN)	*3,733*	*M-F*	*0100*	*Mississippi*
Missouri Traffic 'n Training Net (TNT)	*3,730*	*SSn*	*2130*	*Missouri*
National International Net (NIN)	21,150	Dy	2300	Worldwide
New England Novice Net (NENN)	3,720	Dy	2315	New England
New Jersey Slow Net (NJSN)	*3,735*	*Dy*	*2330*	*New Jersey*
New York Long Island Slow Net (NLS)	*3,710*	*Dy*	*0030*	*NYC/Long Island*
Ohio Novice Net (ONN)	*3,708*	*Dy*	*2330*	*Ohio*
Oklahoma Liaison Net (OLZ)	*3,705*	*Dy*	*0030*	*Oklahoma*
OMIK Slow CW Net (OSCW)	*21,110*	*Th*	*0200*	*Local in Ohio*
PHD	21,114	F	0130	KansasCity vicinity
Red Rose 2nd Net (RR2N)	*3,735*	*Th*	*0100*	*E Pennsylvania*
San Diego Section ARES Net (SDN)	*3,725*	*Sn*	*1630*	*S.D. & Imperial Cos., CA*
Tennessee Slow Net (TSN)	*3,710*	*Dy*	*0000*	*Tennessee*
Texas Slow Net (TSN)	*3,745*	*Dy*	*0200*	*Texas*
Texas Slow Speed CW Training Net	*3,745*	*T-S*	*0130*	*Texas*
Triple States Slow CW Net	28,120	W	2300	N West Virginia
Tuolumne ARS Net #3	3,710	Sn	1530	Tuolumne Co., CA
Utah Code Net (UCN)	*3,710*	*Dy*	*0215*	*Utah*
West Coast Slow Speed Net (WCN)	3,702	Dy	0300	W US & Canada
West Indies Net Slow (WINS)	*3,710*	*Dy*	*2230*	*West Indies Section*
	7,110	*SSn*	*1700*	
W Massachusetts Training Net (WMTN)	3,722	Dy	0130	W Massachusetts
West Virginia Novice Net (WVNN)	*3,730*	*Dy*	*2315*	*West Virginia*
Williamsburg ARC Net (WARC)	3,748	Sn	1330	Virginia
Wisconsin Novice Net (WNN)	*3,723*	*Dy*	*0000*	*Wisconsin*
Young Amateurs Net (YAN)	7,135	TFSn	2345	N US

NTS Nets are printed in italics.
Days of the Week: Sn M T W Th F S

Most nets meet one hour earlier than listed when Daylight Saving time is in effect. (UTC one hour earlier, local time same). From ARRL Net Directory.

ment, or the operator who spends his time QRQing on 7030 is fulfilling the purposes of the service as much as I am. No doubt, net operation and the attendant training for emergency operations *are* a valuable activity, and that is a motivating force in our participation. But let's be honest — for the great majority it is not the primary motive: there are very few of us who reluctantly but regularly tear ourselves away from the 15-meter pileup or the workbench — or even from the TV — to 'pay our dues' by participating in a net and handling some messages. No, we do it because we enjoy it!"

Even if traffic work is not quite as important as Phil says, however, his remarks on originating traffic should be noted. Unless someone originates something, there won't be any. And there's nothing deader than a traffic net that never handles any traffic! Even if you don't have any way to solicit it from the public, can't you send an occasional message to a friend or relative in another part of the country? Even if you don't want to participate in traffic handling yourself, any traffic you can put into the system is much appreciated.

Putting it into the system

If you have an amateur friend who checks into a net even occasionally, you have someone who can put your message into the system. A message put into any net anywhere will be passed along to its destination, as long as there is someone in the net who knows how to do it. You can take it for granted if the net is part of the National Traffic System (NTS). An independent CW net will usually also be able to handle it, and sometimes even more rapidly than NTS. On voice nets, it's a toss-up. Many traffic handlers tend to steer clear of voice nets that are not primarily for formal traffic as they seem to accomplish so little for the time involved. That's the way the traffic hound sees it. The others on the net would say they don't have to sit around and twiddle their thumbs while the net clears the formal traffic and they wait to get to the activity that brought them to the net, chewing the rag.

If you know someone who can put your message into the system, it's easy. If you don't you could ask around and you will probably soon find someone.

But why not try it yourself? Check into any net that regularly handles formal traffic, tell the net control station where your message is going (the city if within your state or province, otherwise the state or province, or region or area). You should have it written up in proper form before you check in so that you can read it off when you are told to send your message. If you're not sure of how to go about it, tell the net control station and ask to have someone move off the net frequency with you to help you, and maybe take the message too. That way, you won't be taking up the time of all the others on the net. Better yet, read up on it in the ARRL's booklets and figure it out for yourself.

If you're only a Novice, or a Technician in an area where there are no traffic handlers within VHF range, you will have to do it on CW. But that should be no problem. Despite the fact that more amateurs use voice than CW these days, it is still true that more traffic is handled by CW. And there are nearly four dozen CW nets that meet in the Novice bands, so you should be within range of several regardless of where you live. A listing of nets in the Novice bands appear elsewhere on this page.

But you're not good enough at CW to handle traffic? Don't be like the person who didn't want to go near the water before learning to swim. Handling traffic is one of the best ways to improve your code capabilities. In other amateur operation you can get away with a rough idea of what the other person is saying, but in traffic handling, 100 percent accuracy is a must. After a few months you will be able to keep up with the best of them. It's not because you have to be good to handle traffic by CW that so many CW traffic handlers have Extra Class licenses; it's the other way around: they improved their abilities by handling traffic, and before long were able to pass the 20 wpm test.

Meanwhile, don't hesitate to ask people to slow down. Say QRS. And break in at once; don't wait until the message is all finished and then ask for a repeat. Not all amateur stations are equipped for break-in operation, but many are. Sometimes an operator will send QSK before beginning to transmit a message, meaning, "Break in if you need a fill or want to stop me for any reason. I can hear you whenever my key is up." Others have what is known as semi-break-in, or VOX break-in, which turns the receiver on during longer pauses, such as between letters or words, but not between the individual dits and dahs. In any case, make use of it, even if your station is not so equipped. Send a row of dots or dashes to stop the other operator, then ask for what you need or say QRS. It's no fun to send a long message and then be told at the end, "Sorry, OM, you went way too fast. Please send it again."

Sometimes operators have only themselves to blame when the other station sends traffic too fast for them to copy. Generally, the more experienced operators will transmit at the same speed you use to transmit to them. If you use your keyboard and send 30 or 40 wpm to an old-time brass pounder, you had better be prepared to have it come back to you at the same speed. When two of them work together at that speed, they can clear a lot

(*please turn to page 42*)

The 1982 Dayton Hamvention is now history and this year's was the biggest and best. For SSTVers there was a new color conversion, a new black-and-white (B&W) scan converter, a new computer SSTV system, and some experimental projects on display. Those who were waiting for 8-second color or a new scan converter from Robot were disappointed, and will have to wait at least another year.

SSTV get-together

About 150 attended the Friday night SSTV get-together emceed by Robert Suding, W0LMD. Jim Schueckler started off with a demonstration of his computer-based digital image processing system. Syd Horne, VE3EGO next showed his new color conversion kit for the Robot 400, called Colorscan 403. There are several new features included in this conversion for $550 and very little wiring is required.

For more information, write Syd at Sycel Communications, P.O. Box 893, Belleville, Ontario, K8N2G6, CANADA. A full report next month.

Ken Rothmuller, WA6NFA, demonstrating his ColorCaster SSTV system for the Apple II at the Commsoft booth.

Ken Rothmuller, WA6NFA gave a slide presentation of the features of his new stand-alone SSTV system for the Apple II, called ColorCaster, described in last month's column. This system is far superior to anything formerly available for the Apple II.

For more information, write to Commsoft, 665 Maybell Ave., Palo Alto, CA 94306.

George Steber, WB9LVI showed his new B&W scan converter — the Microcraft MSC1000 — featuring high-resolution B&W pictures which take 17 seconds to transmit. Specs are still tentative, but the two-memory unit will sell for $895 and be available by 1 September. The two memories are combined to get one high resolution 256×256 picture.

Tom Hibben, KB9MC received a good response from the crowd when he showed his animated motion mod for a three-memory Robot, described in last month's column. Finally, Robert Suding showed his experimental scan converter with more memory, high-resolution B&W SSTV, a total of 146 ICs, and total component costs of $710. This will not be offered commercially, but a board may be available for advanced builders only.

Syd Horne, VE3EGO, demonstrating his new Colorscan 403 color SSTV conversion for the Robot 400 at the Friday night get-together.

SSTV forums

The highlight of the Saturday afternoon SSTV forum was an interesting slide and video demonstration by Jeremy Royle, G3NOX, stressing the importance of proper RGB gain and balance in setting up a color SSTV picture. He showed the results of proper and improper color gain and balance. He also showed how SSTV techniques are used in his business of making quality fine art reproductions. George Steber closed the forum by discussing how the microprocessor will be the base for the next generation of scan converters.

Exhibits

On the exhibition floor of Hara Arena, I bumped elbows with the more than 23,000 amateurs in attendance. I visited the Colorscan 403, Microcraft and Commsoft booths where their products were being shown. I certainly appreciate the time Ken Rothmuller spent giving me a complete demonstration of his ColorCaster system for the Apple II. My son, Andy, was rewarded with a hard copy printout of his SSTV picture from an MX-80 printer attached to the Apple, another feature of that system.

At the experimental booth, Don Miller, W9NTP showed his version of an 8-second color system. The only picture shown was of white lettering with a red background. Unfortunately, his is an AM system and he says he has much work yet to do on it.

Maureen and Sam Mormino, WA7WOD at their Interface Systems booth at the Dayton Hamvention.

I stopped by the Interface Systems booth and found Sam Mormino, WA7WOD and his lovely wife Maureen busy showing their 3000C color conversion system. They were also demonstrating the 4×3 aspect ratio mod or full screen color SSTV and the automatic sequential TX/RX mod described in last month's column. The full screen color looked great and no loss of resolution could be detected. Tom Hibben had his animated motion mod going here and this booth turned out to be the center of SSTV activity and the place where we met all our SSTV friends. I am sorry that Howard McAfee, KD6HF was unable to attend this year's Hamvention.

I brought a color SSTV test tape to Dayton made up of several RGB 2, 2 and 2 shots recorded off the air. This tape was played through the various color SSTV systems on exhibit. The Colorscan 403 and Interface Systems conversions had no trouble accepting the tape and gave excellent color reproduction. The ColorCaster Apple II system also had no trouble accepting the tape and did a good job of reproducing the colors in a cartoon drawing with its limited color capabilities. However, at the KW Control Systems booth where the German SC422A scan converter was shown, there were problems. It took six attempts for their unit to accept the standard format tape and display a color picture. When the picture was finally loaded, adjustments had to be made to the color monitor to get accurate color representation.

Every station I have worked which uses the SC422A has either expressed difficulty in operating that unit or has had problems with it. A full report on the SC422A next month.

Conclusions

The 1982 Dayton Hamvention was a huge success. With rapid developments in the IC industry, more memory can easily be put into scan converters with fewer chips. The microprocessor will undoubtedly be in the next commercially available scan converter. There was considerable interest at Dayton in color SSTV. The introduction of Colorscan 403 along with Interface Systems conversion gives you two excellent choices for getting into color SSTV.

There are several people working independently on 8-second color SSTV. There is no telling now whose system will be on the market first and perhaps set the standards. There are many problems yet to be solved, and it will be some time before 8-second color is available. The HF SSTV bandwidth limitations may make successful development impossible without sacrificing some of the excellent quality color SSTV we now enjoy.

The introduction of high-resolution 17-second B&W SSTV pictures raises a few questions. There is no doubt that the resolution is somewhat better than today's 128×128 pictures. However, people are waiting and asking for 8-second color because RGB color takes too long. We have had many years of very good 8.5-second B&W SSTV. Will you now accept B&W SSTV which takes twice as long to send and receive to get a little better resolution? For those of you who were waiting to see what Dayton brought, will you now go for a color conversion to your 400, scrap your 400 for high resolution B&W SSTV, or enjoy what you have and wait for Dayton 1983?

The 1982 A5 Magazine International SSTV contest will be held 17-18 July 1982.

Next month — Colorscan 403 and the SC422A. 73s from Ron Flynn, KB8LU, Rt. 2 Box 204, Bangor, MI 49013. □

Traffic

(*continued from page 41*)

of traffic in a short time — usually quite a bit faster than is possible by voice. But when it becomes necessary to get fills, the advantage of the higher speed is quickly lost. It can easily take longer to pass a message at 25 wpm with a lot of fills than to pass it at 15 with solid copy the first time through. The International Radio Regulations tell ship operators to keep their speed down to 16 wpm for distress traffic, for example, in cases where delay can put lives in danger. As the admiral told his signalman, "This message is urgent — send it slowly." □

HAPPY FLYERS

(*continued from page 39*)

The present program is for TRS 80 Model I or III, 32K disk system. The printer must be capable of 80 columns. The cost is $45. The Apple version should be ready in July, and I will give you a complete evaluation after I receive my copy.

One of the things we are looking for in these programs is the dual usage of navigation programs for DF and Search and Rescue coordinate applications. We will appreciate continued feedback from all readers. We will try to share as much of the incoming information as possible in our column each month. □

CONSTRUCTION

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Preventive maintenance

Every boat, automobile or aircraft owner knows, or should know, that neglect of preventive maintenance can endanger people's lives. This is generally not true of an Amateur Radio station. In fact, the old farmer's advice, "If it ain't busted, don't fix it," in many instances can be the wiser course to take. And yet, there are some items in many amateur stations that regular or occasional maintenance can help.

The rig

The old farmer's advice is particularly applicable to most amateur rigs, whether transceivers or separates, and for any frequency band. Most electronic equipment is constructed with the thought in mind that it will rarely be serviced, and too much monkeying around inside the box can easily weaken or damage something. So, ordinarily, you will get the best results if you leave well enough alone.

The manual for your equipment may have some maintenance recommendations, however, and of course you should observe them. There might be a cooling fan, for example, that needs occasional lubrication. But even here, don't overdo it. If the manual doesn't say anything about oiling it, don't. Oil in the wrong place, or too much oil even in the right place, can damage an electric motor.

If your rig uses tubes, eventually you will have to replace them, but usually the practice is to wait until one goes dead or until the poor performance indicates one of them is weak. When you replace a tube, however, there are some additional factors to consider. If the tube is in the RF power amplifier circuit, you may have to replace all the tubes at once and install a matched set of tubes so that they will share the load equally. If so, your manual should tell you. And if the tube is elsewhere in the RF or IF circuitry, it may be necessary to touch up a coil or capacitor to compensate for the slight difference in inter-electrode capacitance of the new tube.

In fact, by the time you have to begin replacing tubes, or when a solid-state rig is a few years old, components will have aged and will have changed in value. A realignment may improve performance considerably. The manual should tell you how to go about it. Ordinarily, you can use any steady signal to align a transceiver. It's only when circuits are way off resonance that you need laboratory equipment. The crystal filter or mechanical filter sets the IF and is not adjustable. All you usually have to do is adjust each transformer for maximum output. For best results, disable the automatic volume control circuit. If no switch is provided for the purpose, use a strong signal and turn the RF gain down, to reduce the effect of the AVC on the circuit's gain.

As mentioned, the manual should give alignment instructions for the specific set you are working on. They often include easy ways to do it that have been engineered into that particular model, and may also mention possible pitfalls to be avoided.

Some amateur gear, however, seems to have been intended only for appliance operators, and the manuals discourage users from ever removing the cover and looking inside. "If trouble develops, send the equipment to an authorized service station." It is said that a shipboard radio operator read a sentence like that in the manual of a piece of the ship's radio equipment that he was trying to repair in mid-Atlantic!

Something to keep in mind when you buy amateur gear: can you service it yourself? Look at the manual and see.

Will it void the warranty? By the time your rig needs any such attention, the warranty should have been long expired. Personally, I think many of us are too concerned with not voiding the warranty, often even after it has expired. It may be that we have been brainwashed by the advertisers into thinking that the warranty is for our protection. Actually, it's for the manufacturer's protection, not the user's.

Power supply

An ordinary AC power supply should need even less maintenance than the associated transmitter or receiver. Usually only an occasional cleaning to prevent buildup of dust on heat-radiating parts is what is needed, until some part fails and has to be replaced.

If you use power from other sources, however, some maintenance will be required. This is particularly true of engine-driven generators. The engine needs regular maintenance similar to that given to an automobile engine, lubrication and tune-ups at stated intervals, attention to the cooling system and battery. The manual should indicate the proper program for the specific unit you have.

It is important also that engine-driven generators are given regular exercise runs to keep the oil circulating, to clean contact points, to charge the battery. Run it for several minutes at least once a month. Once a week is better. And operating it with a moderate load is better still. The ideal would be to use it to power an operating session about once a week. In that way you also acquire experience in using it — experience that could be valuable should you need to use it in an emergency.

Storage battery maintenance involves keeping the battery properly charged and adding water to replace that lost through evaporation and electrolysis. Lead-acid batteries generate hydrogen gas when in use, and must be adequately ventilated to reduce the explosion hazard. Modern nickel-cadmium batteries are sealed and require no addition of water and release no gas in normal use. But they must be charged according to the manufacturer's instructions for best life.

The electrolyte in lead-acid batteries, dilute sulfuric acid, can freeze in cold weather when the battery is discharged and most of the sulfate is on the plates. To prevent this, keep the battery fully charged. The more concentrated acid of a fully charged battery won't freeze unless the temperature goes down to 60 below or so.

Other types of alternate power sources, such as windmills and water wheels, have their own maintenance needs, which should be well known to their owners. Except for an occasional cleaning to maintain efficiency, solar cells seem to be about as maintenance-free a power supply as one could desire.

The antenna

One place where maintenance is essential in an amateur station is the antenna system. Unless you have something more than a hand-held transceiver with a rubber duckie, you will have periodic work to do on your antenna, or soon you just won't be getting out.

Outdoor antennas are exposed to the weather. Wood rots and is eaten by termites. Iron and steel rust. Aluminum corrodes, too. Wires stretch. Electrical connections deteriorate. Paint weathers. Plastics are affected by sunlight.

It's a good idea to check the whole antenna system twice a year, say in the spring and in the fall, and make any needed repairs and replacements. If you have a rotary beam, make sure it is properly lubricated. See that all the tower bolts are tight and in good condition. It's a good idea to check for electrical continuity in the antenna system. A quad is easy to check because it is a closed circuit for DC. You can check the feedline of open-circuited antennas by shorting the line and measuring the DC resistance. You might be surprised. Modern receivers are much more sensitive than necessary to receive HF signals, so you could be losing 40dB of the received signal and not notice it because you would be losing an equal amount of the background noise. But the kilowatt you put into the feedline would reach the antenna as 100 milliwatts and you would be wondering why other people don't have better receivers; you can hear them loud and clear and they can't hear you. And don't forget to check the ground connections.

Don't depend entirely on your SWR meter for an indication of trouble in the antenna system. A low SWR does not necessarily mean an efficient antenna. Actually, a high SWR at the transmitter is a sign of an efficient feeder, as it shows that energy is being reflected back with little loss. A 1:1 SWR means only that the antenna system is taking all the energy being supplied by the transmitter and dissipating it somehow. That somehow can be by radiating it into space, as we want it to, or it can also be by converting it into heat.

Back in the 1920s, many amateurs used copper-oxide rectifiers and electrolytic rectifiers (using an aluminum plate in an alkaline electrolyte) in their homebrew power supplies. We don't use them any more, but copper oxide and aluminum hydroxide are still semiconductor

materials and still rectify. Poor connections between wires in the antenna system and between wires in the antenna's immediate field can act as rectifiers, as diodes generating harmonics, mixing signals, and thereby generating a lot of racket that can find its way into neighbor's TV sets.

One more item to check for is antenna maintenance. Of course, the bad connection can equally well be at the neighbor's antenna and there's not much you can do about that, but at least be sure your own house is clean.

Contact cleaner

Modern electronic equipment needs relatively little maintenance because it has few moving parts. It still has switches and other controls that have moving contacts, however. And after a few years, these contacts often begin to act erratically because they need cleaning. Relay contacts can be cleaned by inserting a piece of paper between the contacts and sliding it around while holding pressure on the contacts. Other moving contacts — such as switch points, volume controls and variable capacitor shafts — can be sprayed with contact cleaner, available from any radio parts store. It may be called contact cleaner, control cleaner or TV tuner cleaner, but it's actually a general-purpose lubricant and cleaner that you'll find useful for many jobs around the station. □

Maritime Mobile

(continued from page 37)

we found that the bandwidth of the antenna was quite acceptable for working all portions of each phone band. At 10 meters, we had better than 500 kHz of bandwidth. At 15 and 20 meters, 250 kHz. At 40 meters, a whopping 90 kHz before 1.5:1 SWR was reached. Our solid-state transceiver gave us full output into the antenna. We were able to use the built-in SWR meter on our solid-state rig for tuning out the antenna. A noise bridge, an outboard SWR meter, or even the solid-state output meter of your set may be used for initial tune-ups.

Since the antenna is entirely top-loaded, SWR was not affected by anything near the lower mast. You could even touch the lower section at reduced power levels and not change the SWR one bit! This is a very good feature in heavy seas when the base may be drenched with sea water.

Performance

The performance of the Spider Antenna was compared to individual continuous loaded fiberglass whips twice the size. In every case, the Spider Antenna performed just as well as the longer fiberglass whips. We were amazed.

We also compared it to several other popular center-loaded mobile whip antennas, and again, the Spider with four-band operation worked just as well. Again, we were amazed!

It is impressive that a smaller antenna for four-band operation will perform as well as longer whip antennas for single-band operation. We doubt that any other antenna will stand up as well as the Spider will in the marine environment. I might caution mariners not to choose the regular mobile Spider, but rather the Spider "maritimer" that has been especially designed for use in salt water. The fittings at the top and bottom of the mast are made of bronze, nickel-chrome plating, and comes with some sealant to keep everything dry within the coupling that accepts the coil.

Mariners looking for an alternative to the single whip on the stern should investigate the multi-band "Spider maritimer" antenna.

For more information, contact antenna expert Fred Shmitka, K6AQI, 7131 Owensmouth Avenue, Suite 63C, Canoga Park, CA 91303.

I have tried every mobile antenna on the market, and I was favorably impressed that this one performs not only just as well as individual whips, but on all four bands without me having to do a thing! □

Letters to WB6NOA

I have enjoyed your maritime column in **Worldradio** for a long time. While not a sailor, I have been interested as I have been operating in Kenya for many years in the bush with amateur gear outside the ham bands. I was formerly — in the early part of the last decade — living in Africa filming wildlife. Living in tents for a year or more at time, I realized soon enough that I had need for a radio to do my supply shopping with (much as you and I use a phone).

To make the tale short, I went into a radio shop and inquired about purchasing an HF set for the radio call frequencies in use in Kenya for phone patching into the local phone network. On being told that a set with six crystals cost upwards of $2,500, I said to the fellow that I could have a KWM-2A for $1,400 which would do it all. He said I must be a ham, and so the tale begins.

This was in 1973, before the solid-state stuff was on the market. Ten-Tec had just started and Atlas was on the way. For a year I used the Collins, switching to the Atlas in the mobile, operating all over the HF bands. I learned through published accounts how to modify Hustler whips for the 5 and 9 MHz band, and used either dipoles or long wires with an L network in the base. I had a giraffe tamed to hold one end of the long wire and whatever direction I wanted to head, I would merely place a feed bag out in the bus for Gerry (the giraffe, of course!) to eat out of. Antennas and tuners were what I played with mostly, and converting ham sets for general coverage was the next problem.

Now, of course, life is a snap. I still use the old Atlas with crystals, but as it didn't cover a few of the frequencies I wanted, I grabbed one of the early TR-7's and within an hour of receiving the shop book, gave it a lobotomy. That is a great set to use, and I prefer it to the ICOM 720. It's not as small, but I think a bit more reliable. The ICOM was also a snap with the little wee blue wire under the small cover to HF but I was never sure if the ICOM's bandpass filters were general coverage or just wide enough for the ham bands. I would appreciate your thoughts on that. I do note that your May column mentioned that the tuner was ham-only — what a pity!

One of my sailor ham buddies recently asked me for the best set he could have for both ham and commercial backup and I said the KWM-380. I had HF'ed mine, with the addition of the filter board and the ROM, and it was no problem doing it again. The reason I highly recommend that set is because the two-frequency memory can be split to any, repeat any, frequency between 1.8 and 29.99 MHz. Thus, for emergency use, one can go semi-duplex on the marine channels with splits outside the usual ham bandwidth of 500 kHz. The stability of frequency is also super, and we find it more versatile than the ICOM. Let's face it, if you can afford a nice boat for ocean sailing, you can afford a dependable radio to save your life if the balloon goes up or the mast comes down.

I would like to alert the fraternity to the fact that Cubic makes very nice HF sets in the Astro configuration known to amateurs, which can be set up for simplex general coverage. They are small, reliable and come in many variants. I recommend — like you — the Cubic tuners; they are made for HF general coverage use and tune anything, anywhere. There are Astro Ds, and Cs, and Bs and 150s. They also supply solid-state kW's, which appear to be TWC jobs as advertised in **Worldradio** as Metrums. I use one of the commercial amps in my Toyota, with surplus Army whips (up to 16 feet) and a capacitor to tune out the reactance, and people in the states don't believe me when I tell them I am mobile in Africa.

I would like to see your recommendations on other amps, as well as tuners that are general coverage compatible. Keep up the good work. Sorry this letter has gone on and on, but you see I have meant to write it for years and years!

73,
BILL LEVY, WA2RUD
Mt. Kisco, New York □

Re your column in May Worldradio
DO NOT DO NOT DO NOT DO NOT cut the blue wire. The manufacturer of the bandswitch in the '720 says that the switch should last several hundred operations *if and only if it is not ever hot-switched* . . . and cutting the blue wire allows the radio to hot-switch. (It defeats a safety lock-out!!) One-time switching and accidentally transmitting, and you have one dead radio!

Instead, remove diode D-44 on the logic board. Turn the radio on its back, take off bottom cover of the radio, remove the one plug that will allow you to fold the front panel out and away. There on the front edge of one of the PC boards, you will see D-44 . . . remove it with any amount of sophistication desired, which may range from crushing it with pliers to lifting one end by unsoldering so that the modification can later be restored. Presto — transmit everywhere, with TX inhibited during switching; no worry about doing *several hundred dollars* worth of damage to the radio.

If you would coordinate things like this with the manufacturers involved, you would find that ICOM came out with this modification *over seven months ago.*

Please disseminate info on "crunch the diode" to as many people as possible, as if they did the "cut the wire" mod that you apparently are still passing out they stand a *very good chance of doing major damage at large cost* to their radio — due to bad information from Gordo!! *PLEASE!!!* and 73

DALE PORRAY, AD7K
Las Vegas, Nevada □

Success story

(continued from page 1)

surprisingly turned out to be amateurs (KA6CZL and KA6AYJ, respectively). That, by the way, was pure luck. Her personal friendship with KN6H's XYL might have helped. Maybe the club name carried some clout. Of primary importance, however, was probably the timing. The initial Hughes letter arrived just as the council was completing hearings from cable TV companies, yet before preparation of the cable TV ordinance, and well before any hardware had been installed. Amateurs considering a similar presentation in their communities should aim for this "window," when the council is most receptive. If the "window" is missed, at least try to get in before the cable company has installed anything. Once cables have been strung, changes will be more difficult with resistance rising in direct proportion to the cost of redesigns.

Excerpts of the Torrance ordinance and/or other related correspondence may be obtained by forwarding a business-size SASE with at least 37 cents postage to KN6H at 1843-244th St., Lomita, CA 90717.

If desired, the entire 60-page ordinance and the Teleprompter letter referenced therein may be ordered from the City Clerk at 3031 Torrance Boulevard, Torrance, CA 90503. The cost is $1.50 by check to the City of Torrance. Specify Ordinance Number 3034, plus the Teleprompter letter to the City Attorney dated 23 February 1982. The City Clerk can also be reached at (213) 328-5310. □

Morse Code Communications

The Morse Code Communications program provides the means to both send and receive Morse code. It can be used on the air or as an effective Morse code instructor. Perfect Morse code is generated up to 40 wpm, and signals can be copied at over 100 wpm. Copy is obtained even when the speed varies up to 24 percent. Messages and CQs may be sent in response to a single key stroke. Very little additional hardware besides the computer is required because the cassette I/O is used.

A Model I or III with Level II and at least 16K of memory is required. The program on cassette with a nine-page instruction booklet sells for $19.95 postpaid and is available from ROGO Computer Products, 4752 DeBeers Drive, El Paso, TX 79924. □

Video enhancer

MFJ introduces its new Video Enhancer, model MFJ-1420. It dramatically improves TV picture quality — makes fuzzy pictures sharp and clear.

Enhance Control dramatically improves picture clarity, detail and sharpness. Increases contrast. Noise Cancel Control picture noise. Gain Control boosts weak signals, improves faded picture due to low VTR signals. Makes copies as good as the original. Makes viewing quality of six-hour mode recordings com-

parable to two-hour mode recordings. Bypass switch compares enhanced with unenhanced picture.

MFJ-1420 is housed in an attractive eggshell white and simulated walnut grain cabinet measuring 6 by 2 by 6 inches.

MFJ provides a 30-day money back trial period. If you are not satisfied, you may return it for a full refund (less shipping). MFJ also provides a one year unconditional guarantee.

The MFJ-1420 Video Enhancer is available from MFJ Enterprises, Inc. for $119.95 plus $4 shipping and handling. To order, call toll-free 800-647-1800 and charge it to your VISA or Master Charge account or mail order to MFJ Enterprises, Inc., 921 Louisville Road, Starkville, MS 39759. □

New from Yaesu

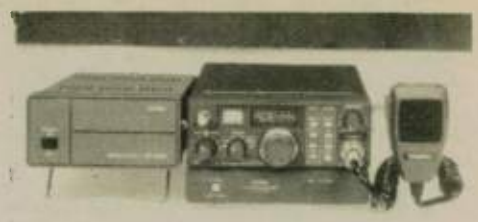
Yaesu Electronics Corporation announces the availability from stock of several unique products in the Amateur Radio market.

FT-ONE

The FT-ONE is an all-new Elite Class HF transceiver covering 150 kHz through 29.99 MHz on receive, with transmit coverage of all present and proposed amateur bands. Included in the feature package are front panel keyboard frequency entry, scanning with AGC slope detection for scanning stop, full CW break-in, and three selectivity positions for CW using optional filters. A dual digital display reads out the operating frequency, clarifier offset, and indication of the VFO channel in use (10 VFOs are standard). The FT-ONE is equipped for AC and DC operation.

FT-708R

The FT-708R is a 440-450 MHz synthesized hand-held transceiver with 1 watt (minimum) output. Featuring 10 memories, priority channel with search-back, and full scanning with pause and restart, the FT-708R also has a limited band scan feature that allows you to scan or exclude a particular band segment. The FT-708R uses an LCD digital display with night light, and styling is similar to the FT-208R 2-meter hand-held. A full line of accessories is available.



Yaesu's FT-290R multi-mode battery portable transceiver for 2 meters

FT-290R-FT-690R

The FT-290R and FT-690R are multi-mode battery portable transceivers for 2 meters and 6 meters, respectively. Designed for 2.5 watts output on SSB, CW, and FM (FT-690R also has AM), these transceivers use LCD display, and include scanning in variable steps. The FT-290R and FT-690R are powered by alkaline or NiCd C-Cells (not supplied).

FV-101DM

An all-new synthesized, scanning external VFO for the FT-101ZD Mk III is now available. The FV-101DM includes keyboard entry of the VFO frequency, 12 memory channels with offset tuning, scanning, and 10 Hz tuning steps.

For further information, contact Yaesu Electronics Corporation, Amateur Products Division, P.O. Box 49, Paramount, CA 90723. □

Electronic keyer

Daiwa introduces a new precision electronic keyer — the DK-210. This new keyer does most of the work for you by eliminating fatigue and improving your "fist." Features include semi-automatic, automatic, and tune modes, as well as dot/dash memories. The handy LED speed indicator gives an instant readout of the DK-210's 8 to 50 wpm capability.

There are two types of solid-state keying outputs to suit almost any transmitter. A variable frequency sidetone monitor is also included. The keyer is available without the LED speed indicator in the model DK-200. Suggested list price for the DK-210 is $99; for the DK-200 — $82.50.

For more information, write to MCM Communications, 858 E. Congress Park Dr., Centerville, OH 45459. TLX 288349; (513) 434-0031.

All-mode HT amplifier

Mirage Communications Equipment, Inc. is pleased to announce the release of our new 220 MHz amplifier to our ever-growing product line of amplifiers and peak-reading WATT/SWR meters.

The C22 solid-state all mode 220 to 225 MHz amplifier has the same famous five-year warranty (one year on RF power transistors) as all Mirage products.

The C22 has many features:

- Biased as a linear amplifier IE: FM, SSB, CW
- Can be keyed with as little as 300mW
- 2 watts in equal 20 watts out
- DC power 13.6VDC at 3 amps (full output)

As with all Mirage products, they are only available through our worldwide dealer network. □

New video enhancer/stabilizer

MFJ introduces its new Video Enhancer/Stabilizer/Distribution Amplifier for video tape recorders that make fuzzy pictures sharp and clear.

Enhance Control dramatically improves picture clarity, detail and sharpness. Increases contrast. Noise Cancel Control reduces picture noise. Gain Control boosts weak signals, improves faded picture due to low VTR signals. Makes copies as good as the original. Makes viewing quality of six-hour mode recordings comparable to two-hour mode recordings.

Bypass switch compares enhanced with unenhanced picture. Stabilize Control removes copyguard and stops picture roll and jitter. Lets you play copyguarded tapes on any TV (requires RF Modulator). A Stabilize Control bypass switch is provided.

Distribution Amplifier gives three outputs. Can be used as a distribution amplifier with Enhancer and Stabilizer bypassed. Power OFF mode connects input to one output. For video use only. RF Modulator is required with standard TV sets.

MFJ-1421 is housed in an attractive eggshell white and simulated walnut grain cabinet measuring 7 by 2 by 6 inches.

MFJ provides a 30-day money back trial period. If you are not satisfied, you may return it for a full refund (less shipping). MFJ also provides a one year unconditional guarantee.

The MFJ-1421 Enhancer/Stabilizer/Distribution Amplifier is available from MFJ Enterprises, Inc. for $139.95 plus $4 for shipping and handling. To order, call toll-free 800-647-1800 and charge it to your VISA or Master Charge account or mail order to MFJ Enterprises, Inc., 921 Louisville Road, Starkville, MS 39759. □

Antenna tuner

Dentron is introducing a new value-engineered antenna tuner, called the Clipperton T, featuring 1.8 to 30 MHz continuous frequency coverage and a power capability of 2000 watts PEP, 1000 watts continuous.

In addition to extended performance, the Clipperton T features a simplified front panel layout which organizes controls for clearer and easier operation. It is designed to complement the popular Dentron Clipperton "L" linear amplifier, but its modern, attractive styling is at home with any station configuration.

The Clipperton T offers extended line tuning compared to previous Dentron offerings. The new model provides a minimum of 50 to 750 ohms balanced and 30 to 2000 ohms unbalanced matching, plus the ability to tune out large amounts of reactance.

Outputs for Coax 1, Coax 2, and dummy load are standard SO-239 connectors; balanced and wire antenna outputs use high voltage feedthrough insulators. Switch selection allows the tuner to be bypassed to any output position. A single wattmeter shows 2000 or 200 watts full scale in forward and 200 watts in the reflected mode with ±10 percent full-scale accuracy.

For more information on the Clipperton T antenna tuner, contact Tim Neill, Technical Sales Representative, Dentron Radio Co., Inc., 1605 Commerce Drive, Stow, OH 44224; (216) 688-4973. □

VHF/UHF interference filter

High band and UHF images or intermodulation — so long a plague of metropolitan scanner users — may be reduced or even eliminated, thanks to a new tunable filter from Grove Enterprises, a leading manufacturer of accessories for radio reception.

The FTR-3 Scanner Filter may be adjusted from the front panel for any notch frequency from approximately 80-220 and 400-512 MHz. Rejection of unwanted signals is as great as 40dB on high band and 25dB on UHF; insertion loss is less than 1dB.

Images and intermodulation interference from aircraft, FM and TV broadcasters, mobile telephone repeaters, radio amateurs, and weather service transmissions are common in metropolitan areas. The FTR-3 is designed to substantially reduce the signal levels of these signals without seriously attenuating nearby desired frequencies.

Scanner Filter requires no power source; it is a passive high-Q notch filter and comes equipped with standard Motorola cable and connectors for use with all scanning receivers. Full instructions are included.

FTR-3 Scanner Filter is only $39.95 plus $2 shipping. To place your order, call our toll-free order desk 1-800-438-8155 (continental U.S.); North Carolina residents call collect, 1-704-837-2216. For further information, write Grove Enterprises, 140 Dog Branch Road, Brasstown, NC 28902. □

3-band package

Dentron Radio Co. is introducing a new 3-band 25-watt CW transceiver and accessory package designed to help the Novice learn CW operation or to allow the experienced amateur to keep in touch when he's away from a traditional power supply.

The transceiver covers 80, 40 and 15 meters and will receive SSB as well as CW. A bright LED display gives a positive frequency reading to aid the Novice in tuning.

In addition to the transceiver, the complete package includes a code key, 3-band dipole antenna, head set, logbook, an ARRL license

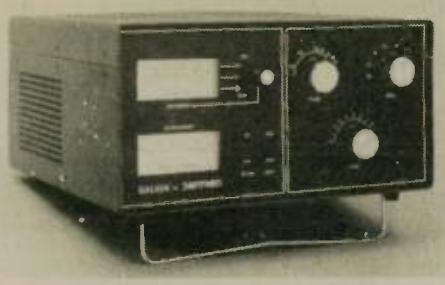
manual, and a complete radio and code course on cassette tape.

According to Tim Neill, Technical Sales Representative for Dentron, "The Station One package was designed as a complete, affordable station to provide the beginner with everything needed to make the transition from listener to participant as a CW hobbyist."

In addition to its attraction for the Novice, Station One will also appeal to the experienced amateurs who enjoy backpacking and camping because it will run off any 12VDC battery.

Optional accessories for the Dentron Station One include a 120VAC power supply with built-in speaker and an antenna tuner.

For more information on the Station One transceiver package, contact Tim Neill, Technical Sales Representative, Dentron Radio Co., Inc., 1605 Commerce Drive, Stow, OH 44224; (216) 688-4973. □



Linear amplifier

A new 1200-watt SSB, 1000-watt CW linear amplifier covering 160, 80, 40, 30, 20, 17 and 15 meters is being introduced as the first item in the Dentron Radio Co. new Galion line of value-engineered ham equipment.

According to Tim Neill, Technical Sales Representative for Dentron, "The Galion Series of ham accessories is being designed specifically to be aesthetically compatible with the streamlined yet rugged military look of modern amateur transceivers."

The Galion amplifier features a rugged, reliable 3-500 grounded grid triode, full-function metering, and internal in-out switching. A built-in dual power supply allows it to operate from either 120 or 240VAC lines while reduced voltage tune assures peak efficiency, regardless of mode. The Galion amplifier includes a tuned input circuit for compatibility with either solid-state or tube-type exciters of any manufacturer.

Improved reliability and performance are provided through an exclusive linearity test circuit, which instantly verifies proper tune-up and operation, and a two-speed blower to provide high volume cooling capacity.

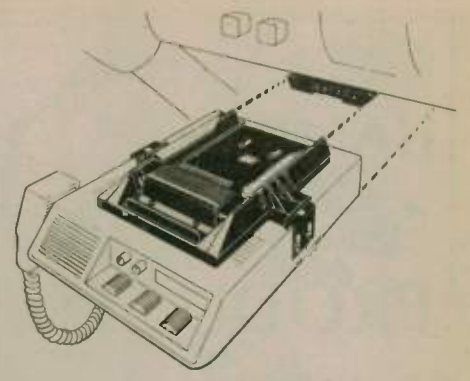
A modification kit available for the Galion amplifier will extend frequency coverage to the 12 and 10-meter amateur bands and associated MARS frequencies.

For more information on the Galion Linear Amplifier, contact Tim Neill, Technical Sales Representative, Dentron Radio Co., Inc., 1605 Commerce Drive, Stow, OH 44224; (216) 688-4973. □

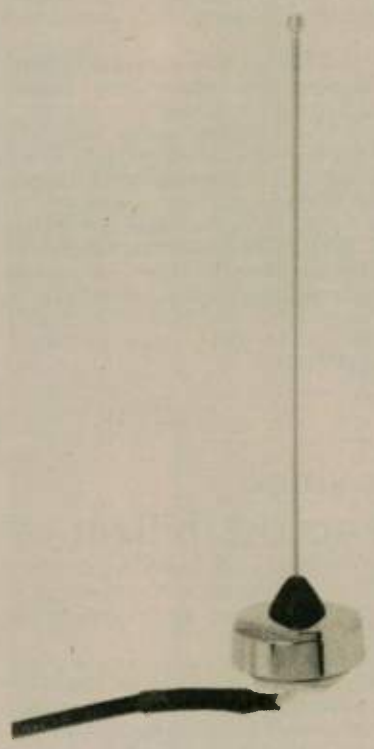
Radio mount system

Larsen Antennas' new QUIK Change Radio Mount system lets you change your mind — and your radio — fast. The innovative new mount allows temporary expansion of a delivery fleet, interchangeable use on farm equipment or easy removal for protection against theft from unattended vehicles. It's a flexible product with flexible use. Transfers take only a minute. Radio malfunctions can be checked quickly and replacements installed easily in any vehicle. The QUIK Change is tough enough to stand heavy equipment vibration.

There are no manual connections — just a simple latch release that disconnects the positive power lead, then the ground and speaker leads and the antenna connection. Reinsertion connects positive power last to protect the radio. First class connectors are used throughout with connections provided for power, ground and speaker screw terminals.



Larsen Antennas' new QUIK Change Radio Mount system gives flexibility for every user — fast. □



Quarter-wave antenna series

With the addition of two new quarter-wave antenna series, the Antenna Specialists Co. now provides the mobile radio industry with a variety of quick-install economy antennas, offering excellent performance in both VHF and UHF. The new quarter-wave antennas require no field tuning and can be mounted in several configurations, especially important in today's down-sized vehicle market.

The ASP-1610 unity gain series covers UHF from 406-512 MHz. It will accept 150 watts of power and exhibits VSWR of 1.5 to 1 or better. The stainless steel radiator, approximately 6 inches long, insures long-life and service free operation.

The ASP-1410 series covers the 136-174 MHz VHF band. They are factory-tuned to eliminate field adjustment. Power rating is 150 watts maximum, with VSWR of 1.5:1 or better.

Both series are available in low-profile rooftop, magnetic or trunk lip mounting configurations. A low profile conversion model, less cable, is also available in each series.

For more information, contact: Marketing Department, The Antenna Specialists Co., 12435 Euclid Ave., Cleveland, OH 44106. □

Pass it on . . . WORLDRADIO

'Stubby' antennas

Two new 406-512 MHz "Stubby" portable radio antennas recently developed by The Antenna Specialists Co. are designed to withstand the rough handling — typical of portable operations — that often quickly destroys telescopics. Model PD22 fits General Electric PE Series UHF portables. They are particularly suited for airport systems, building security systems and urban systems employing a comprehensive receiver voting configuration where maximum radiation efficiency is not required.

Jacketed with a high temperature PVC coating, both models are completely insulated and cannot be accidentally shorted out. Length is approximately 2½ inches. Nominal impedance is approximately 50 ohms, depending on the groundplane of the portable.

In all, The Antenna Specialists offers more than 100 flexible antennas for portable applications, at every frequency range. The firm developed the first flexible antenna in the mid-'60s.

For detailed product information, write to: Marketing Department, The Antenna Specialists Co., 12435 Euclid Ave., Cleveland, OH 44106. □

Arizona

The Amateur Radio Council of Arizona will hold their 32nd annual hamfest in Flagstaff, Arizona on 30-31 July and 1 August 1982 at the Fort Tuthill fairgrounds, just a few miles south of Interstate 40 in the cool pines.

There will be thousands of dollars in prizes, improved XYL activities, swapfest, and transmitter hunt. There will be excellent speakers and forums, awards, entertainment on Friday and Saturday nights, exhibits of all kinds, and an all-around get-together for all. Overnight camping facilities will be available. Talk-in frequency will be on 147.870/147.270 portable repeater.

For further information, contact William Oliver Grieve, W7WGW, 4301 N. 31st Ave., Phoenix, AZ 85017 or call (602) 246-0200. □

California

The Tri-County Amateur Radio Association is having its annual hamfest/picnic on Saturday, 7 August from 7:00 a.m. to 1:00 p.m. and will be held at the Los Angeles County Fairgrounds in Pomona. All buyers, sellers and computer buffs are welcome. Prizes, exhibits and refreshments planned.

Talk-in frequency is 146.025/625.

For more information write to TCARA Hamfest Chairman, W6ELZ, P.O. Box 142, Pomona, CA 91769. □

Colorado

The Ski Country Amateur Radio Club will hold its first annual swapfest on 24 July 1982 from 9:00 a.m. to 5:00 p.m. at the Colorado Mountain College Building, 1402 Blake Avenue, Glenwood Springs, Colorado.

Admission is $3. Tables are $5. Flea market, commercial exhibitors, door prizes and refreshments.

Talk-in on 146.07/.67.

For further information, Frank Ketter, WA0BBI, P.O. Box 280, El Jebel, CO 81628. □

Delaware

The 7th Annual New Delmarva Hamfest will be held Sunday, 15 August 1982 at Gloryland Park, Bear, Delaware (five miles south of Wilmington). Admission is $2.25 in advance, $2.75 at the gate. Tailgating is $3.50. Limited tables available under the pavilion, but bring your own to be sure. Food and drinks available. First prize is an Atari® Home Video Game System. Many other prizes. Talk-in on 52 and 13/53.

For more info and a map, send SASE to Stephen Momot, K3HBP, 14 Balsam Rd., Wilmington, DE 19804. Make checks payable to Delmarva Hamfest, Inc. □

Florida

The Greater Jacksonville Hamfest Association is pleased to announce the 9th Annual Jacksonville Hamfest and Northern Florida ARRL Convention, 7-8 August at the Orange Park Kennel Club. This facility is conveniently located near the intersection of I-295 and U.S. 17 just south of Jacksonville and offers over 30,000 square feet of indoor display space.

The FCC will administer amateur and commercial radio operator exams on Friday, 6 August at the hamfest site. Those wishing to take the exams should apply to the Atlanta FCC office as soon as possible. Headquarters Hotel will be the Best Western First National Inn just across from the hamfest site and special rates may be obtained by writing to Jim Canfield, KD4CG; 996 Dostie Cir.; Orange Park, FL 32073. A full slate of programs is scheduled along with meetings of statewide and regional nets and organizations. Competitions, including a rabbit hunt and pileup contest, are also on tap.

Talk-in by club station W4IZ will be on 146.16/.76 and 146.07/.67.

Advanced registrations are available from Robert J. Cutting, W2KGI; 1249 Cape Charles Ave.; Atlantic Beach, FL 32233 and are priced at $3.50. Registration at the door is $4. Swap tables are available through Andy Burton, NX4G; 5101 Younis Rd.; Jacksonville, FL 32218 at $12 per table both days. No one-day tables. Registrations may be ordered with the tables through NX4G. The hamfest is sponsored by the six Amateur Radio clubs of the Florida Crown area. □

Maryland

The Baltimore Radio Amateur Television Society (BRATS) presents the famous BRATS Maryland Hamfest at the Howard County Fairgrounds, Route 144 at Route 32, adjacent to Interstate 70, about 15 miles west of Baltimore, Sunday, 25 July 1982. Indoor tables with AC power, $15 each; without AC, $10 each. Indoor tailgating $5 per space, outdoor tailgating $3 per space. Overnight RV hookup available.

For information and reservations, write to BRATS, P.O. Box 5915, Baltimore, MD 21208.

Minnesota

The Range-Wide Hamfest will be held 18 July 1982, from 10:00 a.m. to 4:00 p.m. at Gunn Park, six miles north of Grand Rapids, Minnesota on Highway 38.

Talk-in 52 and 146.28-88.

Prizes will be awarded. Admission and tables are free. Bring the family for picnic, games and fun! Plenty of blacktop parking and campgrounds are available.

For more info, write or call: Bob Grussendorf, WD0AAF, 736 Crystal Springs Rd., Grand Rapids, MN 55744; 218-326-2268 evenings. □

Ohio

The 17th Annual Wood County Ham-A-Rama will be held Sunday, 18 July 1982, at the Wood County (Ohio) Fairgrounds, Bowling Green, Ohio.

Gates officially open at 10:00 a.m., with free admission and parking. There will be drawings for prizes: tickets $1.50 in advance, and $2 at the gate. Trunk sales space food available. Advance table rentals $3 to dealers only. Saturday set-up available until 8:00 p.m.

K8TIH talk-in on .52.

For more info, or dealer rentals send an SASE to: Wood Co., ARC, c/o S. Irons, P.O. Box 73, Luckey, OH 43443. □

Ohio

The Northern Ohio Amateur Radio Society (NOARS) will hold its annual ARRL-approved NOARSfest on Saturday, 24 July 1982 in Wellington, Ohio — 18 miles south of Lorain, Ohio — at the Lorain County Fairgrounds, one mile west of Rt. 58 on Rt. 18.

Over 100 prizes include the ICOM 730 and power supply, Ameritron Inc. AL-80 linear amplifier, and ICOM IC-2AT. Winners of the top 10 prizes need not be present.

There is a huge blacktopped flea market area with well-marked parking spaces at $1 per car space. Plenty of *free* parking in large general parking area. Large indoor exhibit hall. Refreshments available, with 807's furnished by NOARS. Campers may park overnight Friday at no charge; however, no hookups.

Mobile check-in: Call K8KRG on 146.52/52 MHz. Directions and information on 146.10/70 MHz.

Indoor exhibit space with 8-foot tables are available at $8 each. Send check for advance registration to: Ernie or Pat Jackson, 201 Park Avenue, Elyria, OH 44035.

Admission tickets are $2.50 advance, $3 at the gate; children under 12 free. Admission ticket also serves as ticket for all prize drawings. Order admission tickets from: NOARSFEST, P.O. Box 354, Lorain, OH 44052. □

Ohio

The Warren Amateur Radio Association Inc. will host their 25th annual hamfest on Sunday, 15 August 1982. The hamfest will be held at Kent State University (Trumbull Campus), Warren, Ohio, at the intersection of State Rt. 5 Bypass and State Rt. 45.

The flea market opens at 6:00 a.m. There will be five acres of flea market space, $2 per 10-foot space. Registration is $2.50 in advance, $3 at the door. Hourly door prizes will be given away; main prize drawing at 4:00 p.m. — winner need not be present.

Technical forums and various programs will also be offered. Guest speakers will be: Bill Clepper, W3HV on OSCAR; Bob Schenck, N2OO on DX; Bob Heil, K9EID on 10-meter FM; Art W2LH and Madeline Greenburg, W2EED on antennas; Clarence Teter, W8PKC on ATV; Leo Fry, K8PYD on the 8th QSL Bureau; and Clark Sutton, W8CMS with a Spark Gap demo.

A $10 buffet banquet will be held Saturday, 14 August, 8:00 p.m. (7:00 p.m. cash bar) at the Jamestown Inn. Deadline for reservations is 1 August. Speaker will be Ed Byers, WB8WMS, who will make a presentation on his spring trip to New Zealand and Fiji.

Talk-in on 146.37/97.

For more information, QSL to Warren Hamfest, P.O. Box 809, Warren, OH 44482 — Dick Hunter, K8WYY. □

Oklahoma

The Central Oklahoma Radio Amateurs, Inc. is pleased to sponsor the Oklahoma State ARRL Convention at "Ham Holiday '82," 23-25 July 1982 at the beautiful Myriad Convention Center in downtown Oklahoma City.

This year, Ham Holiday will also feature a Computer Fair with new programs on personal computers, plus an ARRL forum, AMSAT, DX and the Art of QSLing, FM, Antennae and Alternate Energy Sources. There is a 30,000-square-foot air-conditioned indoor flea market, commercial displays and an excellent ladies program. Ham Holiday is a family event, so plan to bring the entire family to enjoy the ham events plus nearby attractions which include the National Cowboy Hall of Fame, National Softball Museum, National Firefighters Museum and the exciting Omniplex Science Center.

Pre-registration is still only $6. Flea market tables are *FREE* to preregistrants. The preregistration award is a Radio Shack TRS-80 Color Computer. Ham Holiday's Oklahoma Diamond Jubilee Banquet is Saturday night, 24 July and a real ole'-fashioned "dirt-kickin" western dance follows the banquet. There will be *free* Western dance lessons at the dance. Ham Holiday Grand Award will be presented on Sunday, 25 July. An ICOM transceiver, power supply and mike will be one of the many awards to be given.

Write for registration forms and additional information: CORA Ham Holiday '82, P.O. Box 15013, Del City, OK 73155. □

Pennsylvania

The 45th Annual South Hills Brass Pounders and Modulators hamfest will be held on 1 August, from 10:00 a.m. to 4:00 p.m. at South Campus, Community College of Allegheny County, Pittsburgh. Admission $2 or 3/$5. Computers, OSCAR, and ATV demo., flea market.

Talk-in on 146.13/73 and 146.52.

Further information from Andrew L. Pato, WA3PBD, 1433 Schauffler Drive, West Homestead, PA 15120. □

Pennsylvania

The Mid-Atlantic Amateur Radio Club announces its annual JBM Hamfest to be held on Sunday, 8 August 1982 from 9:00 a.m. to 4:00 p.m., rain or shine. Tailgate setup begins at 8:00 a.m. Route 309 Drive-In Theater, ¼ mile north of Route 63, Montgomeryville, Pennsylvania (six miles north of the Fort Washington interchange of the Pennsylvania Turnpike).

Admission: $2.50 with $1 additional for each tailgate space. Non-licensed XYLs and children free. Ample parking, refreshments, raffles, door prizes and more.

Talk-in on WB3JOE/R, 147.66/06 or 146.52 simplex.

For further information, write the club, P.O. Box 352, Villanova, PA 19085. □

Washington

The Radio Club of Tacoma "HAMFAIR 82" will be held 14-15 August at Pacific Lutheran University Campus. Flea market, technical seminars, commercial booths, ARRL meeting, VHF tweak and tune clinic, repeater forum, Loggers Breakfast, prizes, raffles and much more. Talk-in on 147.88/28.

Contact Grace Teitzel, AD7S, 701 So. 120th, Tacoma, WA 98444. Phone (206) 564-8347. □

West Virginia

The Triple States Radio Amateur Club will hold its 4th annual hamfest at Wheeling Park, Wheeling, West Virginia on Sunday, 25 July, from 9:00 a.m. to 4:00 p.m. Admission donation $2; children under 12 free. Major prizes/cash prizes/plus door prizes every 15 minutes; 15-minute auction every hour on the hour; 1,000 car free parking; indoor dealer displays, 16,000 square feet available; ARRL/SWOT/TSRAC booths, etc.; flea market — three acres available; refreshments. Added park attractions have family appeal, and reasonable motel accommodations can be made by committee. Catch the Saturday-night WWVA Jamboree.

Talk-in on 146.31/91 and 146.52; all area repeaters are cooperating.

For more information, contact TSRAC, Box 240, RD 2, Adena, OH 43901. □

World Wide DX SSTV Contest

This is the "big one"! Don't miss it! Our 2nd Annual International World Wide DX SSTV Contest starting at 0000Z Saturday, 17 July and ending at 2400Z Sunday, 18 July 1982. Once again, our successful and fun operating contests have been due to the emphasis on "quality," not quantity. A 48-hour SSTV-video contest on 10-80 meters within the recommended SSTV calling/operating frequencies listed below with special "bonus" points awarded to those operators who exchange "mugshots," half-speed format, color, motion animation, and a new bonus qualification of quarter-framing grab and replay.

Call signs and video reports must be in "video" form, mugshots of the station operator and/or family/friends can count only once; slower clock-rate speeds are encouraged in either 128 16.5-second or 256 32-second time bases. Color work must contain a minimum of two-color overlay to qualify with standard RGB frame transmissions; motion SSTV must have a minimum of two frames sent with automatic receive switching circuitry or manually operated switching by the receiving operator, and 64 × 64 "quadrant" storage of no less than four separate pictures with replays.

To encourage all-band contest usage and promotion, extra bonus points are granted on the 10-15-40 and 80-meter band segments. Single and multi-operator stations are recognized with crossband contacts not permitted. Individual contacts count only once per band with repetitive multi-band contacts acceptable. Stations over 25 DX countries worked add 25 points; 50 DX add 50 points; over 100 DX add 100 points! Each SSTV two-way contact is worth 5 points (plus band and bonus multipliers) within the same country; 10 points for DX out of country.

Submission of logs with totaled scores must be postmarked no later than 1 August 1982 and submitted to: Contest Manager, A5 ATV Magazine, P.O. Box H, Lowden, IA 52255-0408. (Logs will be returned as will any photos, etc.)

Frequencies of operation (sug.)

80 meters	3.845	3.990
40 meters	7.220	7.290
20 meters	14.230	14.340
15 meters	21.340	21.440
10 meters	28.680	28.680
6 meters	50.150	50.150
	Advanced/Extra	General

Bonus points/Multiplication factors

Mugshots	1 point
Slow-speed	2 points
Quad-frame	3 points
Motion SSTV	4 points
High resolution	5 points
Color SSTV (RGB)	10 points
6 meters	times 2
10 meters	times 2
15 meters	times 2
40 meters	times 3
80 meters	times 3

Awards: 1st place winner receives a three-year subscription (worth $60 surface U.S./Canada $78 foreign surface) to **A5 ATV Magazine** with front cover picture plus Gold Certificate. 2nd and 3rd place winners receive one-year's subscriptions and Gold Certificates. All entries, regardless of score, will receive Gold Certificate suitable for framing. Results will be in the November issue; some log sheets and DX country lists are available from WB0QCD. Contest entry verifications audited by Ralph Wilson, WB0ESF of Cedar Falls, Iowa. Good luck! □

International QRP Contest

The first international QRP contest under the sponsorship of the World QRP Federation (WQF) will be held 17-18 July 1982, with a variety of awards for leading stations.

Separate categories for single- or multiple-operator stations and for those fixed or portable will be available for entrants in this CW-only event.

Competition begins at 1500 UTC, 17 July for 24 hours. Multi-operator stations may be on the air the full 24 hours, but single-operator entries must be off the air at least one eight-hour period.

Crystal-controlled stations will be worth bonus points. Extra credit can be earned for being crystal-controlled and/or for working a crystal-controlled station (see rules for details).

The traditional QRP frequencies will be utilized: 1810, 3560, 14060, 21,060 and 28,060 kHz, all ± QRM.

WQF is an umbrella organization of QRP clubs from around the world. Its members include groups in Australia, Belgium, Brazil, Germany, Italy, Japan, the Netherlands, the United Kingdom and the United States.

West Germany's DL-AGCW will offer awards for fixed-station entries, while the U.S.-based QRP Amateur Radio Club International will provide trophies and certificates for portable stations. All awards are without regard to the nation from which entries come.

Exchanges: RST, QSO serial number and class (559 001/2D). Add an X after RST if crystal-controlled (559X 001/2D).

Classes: 1 = single-operator; 2 = multi-operator, A = fixed station, up to 2 watts input or 1 watt output; B = fixed station, up to 10 watts input or 5 watts output; C = portable station, up to 2 watts input or 1 watt output; D = portable station, up to 10 watts input or 5 watts output; E = QRO stations of more than 10 watts input or 5 watts output.

Points: 1 point for QRP to QRO contact; 2 points QRP to QRP contact. All stations may be worked once per band for QSO and multiplier credit.

Multipliers: 1 point if both stations are in same country; 2 points if other station is in another country but on same continent; 3 points if other station is in another country and on another continent. For scoring purposes, all call areas within a country are counted as multipliers (e.g. 10 for W; 8/VE, 10/PY, etc.).

Bonus points: For crystal-controlled stations with a maximum of three crystals per band, QSO and multiplier points are doubled. Contacts with crystal-controlled stations count double.

Scoring: QSO points per band × multiplier points per band = band points. Add band points from each band for final score.

Awards: DL-AGCW will provide awards for fixed-station leaders and band leaders. QRP ARCI will provide plaques to the first-place single- and multi-operator portable stations worldwide plus certificates for the multiple- or single-operator portable station in each country with two or more entries.

Send logs within six weeks of conclusion of the contest as follows: **FIXED STATIONS**: Siegfried Hari, DK9FN; Spessartstr. 80; D-6453 Seligenstadt; WEST GERMANY. **PORTABLE STATIONS**: William W. Dickerson, WA2JOC; 352 Crampton Drive; Monroe, MI 48161. □

Brothers and Sisters

The Central Oregon Radio Amateurs (CORA) will have a "Brothers and Sisters QSO Party" Saturday, 24 July 1982, 0600 hours to 1800 hours, Pacific Daylight Time.

Operations will be from Brothers, Oregon (WN7ODD), located 42 miles east of Bend, Oregon on Highway 20 and from Sisters, Oregon (N7CSH), located 17 miles west of Bend on Highway 20. Both locations are in Deschutes County.

Phone frequencies will be 10 kHz up from bottom portion of General bands. CW will be 15 kHz up from bottom portion of Novice bands.

QSL via CORA, P.O. Box 723, Bend, OR 97709. Send SASE 4 by 9 inches for QSL cards and certificate for working both Brothers and Sisters, Oregon. If you are in the area on that date please drop in for a cup and an eyeball. □

New Jersey QSO Party

Rules

1) The time of the contest is from 2000 UTC Saturday, 14 August to 0700 UTC Sunday, 15 August and from 1300 UTC Sunday, 15 August to 0200 UTC Monday, 16 August.

2) Phone and CW are considered the same contest. A station may be contacted once on each band — phone and CW are considered separate bands. CW contacts may not be made in phone band segments. New Jersey stations may work other New Jersey stations.

3) General Call is "CQ New Jersey" or "CQ NJ." New Jersey stations are requested to identify themselves by signing "DE NJ" on CW and "New Jersey calling" on phone. Suggested frequencies are: 1810, 3535, 3900, 7035, 7135, 7235, 14035, 14280, 21100, 21355, 28100 and 28610. Suggest phone activity on the even hours; 15 meters on the odd hours (1500 to 2100 UTC); 160 meters at 0500 UTC.

4) Exchange consists of QSO number, RST and QTH (ARRL Section or country). New Jersey stations will send county for their QTH.

5) Scoring: Out-of-state stations multiply number of complete contacts with New Jersey stations times the number of New Jersey counties worked (maximum of 21). New Jersey stations: W-K-VE-VO QSOs count as 1 point; DX stations count as 3 points. Multiply total number of points times the number of ARRL sections (including NNJ and SNJ — maximum of 74). KP4, KH6, KL7, etc. count as 3 point DX contacts and as section multipliers.

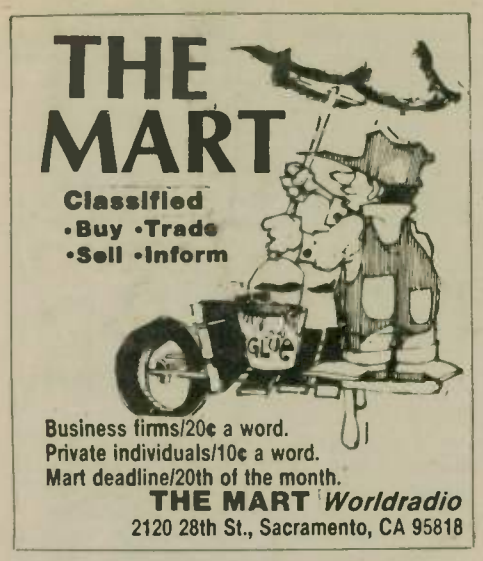
6) Certificates will be awarded to the first place station in each New Jersey county, ARRL section and country. In addition, a second place certificate will be awarded when four or more logs are received. Novice and Technician certificates will also be awarded.

7) Logs must also show the UTC date and time, band and emission, and be received not later than 11 September 1982. The first contact for each claimed multiplier must be indicated and numbered and a checklist of contacts and multipliers should be included. Multi-operator stations should be noted and calls of participating operators listed.

Logs and comments should be sent to: Englewood Amateur Radio Association, Inc., P.O. Box 528, Englewood, NJ 07631-0528. A #10 size SASE should be included for results.

8) Stations planning active participation in New Jersey are requested to advise the EARA by 1 August of your intentions so that we may plan for full coverage from all counties. Portable and mobile operation is encouraged. □

"The older a ham gets, the faster he could copy code as a boy."



RTTY JOURNAL — Now in our 30th year. New Beginners Handbook just out; $8.00 PPD USA, foreign add postage. Year's subscription to the RTTY JOURNAL, $7.00, foreign $13.50. Send to: RTTY JOURNAL, POB RY, Cardiff, CA 92007.

THE BEST HAM RADIO/PERSONAL COMPUTING INSIDER NEWSLETTER IN THE BUSINESS! Published twice a month: $18.00/year. Twice as many pages as Westlink Report! (Sample: FREE!) THE W5YI REPORT; PO Box #10101W; Dallas, TX 75207.

The SOCIETY OF WIRELESS PIONEERS, Inc., invites all professional operators, active or retired, military or commercial, to join the world's largest organization of its kind. Many active nets. Write Box 530, Santa Rosa, CA 95402 for details or send $1 to pay postage on sample SPARKS JOURNAL.

WYOMING AND UTAH RANCH LAND. Wild horses, antelope, deer. Near paved road. 10 acres — $60 down, $60/month. FREE information, maps, photographs. (Offer void in Calif.) Will trade equity for ham gear, home computer, test equipment, etc. Owner — Dr. Michael Gauthier, K6ICS, 9550 W. Gallatin Road, Downey, CA 90240.

RIG TROUBLES GOT YOU DOWN? You stand a good chance of fixing it yourself. Get help with your own copy of "Owner Repair of Radio Equipment." Shipped postpaid for $8.95 from Frank Glass, K6RQ, 14910 LG Blvd, Los Gatos, CA, 95030.

WOW! LARSEN 2M 5/8 magnet or trunk lid mount antennas, any style, $36 complete, postpaid. Check or M.O., no COD. AMATEUR ACCESSORIES, 6 Harvest Ct., Flemington, NJ 08822. (201) 782-1551.

QSL CARDS $12.50/500. Free 400-illustration catalogue. BOWMAN, 743 Harvard, St. Louis, MO 63130.

YC 221 DIGITAL DISPLAY for FT221, new in unopened box, six mos. warranty left — $65 duty and postpaid. R. Grandbois, 20352 40A Ave., Langley, B.C., Canada, V3A2Y8 or c/o General Delivery, Blaine, WA 98230. (604) 530-4551.

SALE: ICOM IC-245 SSB/CW CES touchtone mike — $300; Heath HW101 (new tubes) with SB-600 power/speaker — $300; Mor-Gain antenna 80-10 inverted vee, used but operating — $40; Clegg 6m. AM 66er with xtals — $45; Audio gen. 10Hz-100KHz — $35; freq. multiplier — $25; music inst. tuner, perfect pitch — $35. All items plus UPS ship. Floyd Fellows, WA4CLG, 2449 Duncan Drive, Belleair Bluffs, FL 33540, or call (813) 585-2440.

WORLDRADIO ON CASSETTES — **Worldradio** for blind amateurs on cassettes. To receive this free service send $3.00 (one-time only contribution for tapes) with your name, address and call to George Hickin, W4GH, Box 7453, Macon, GA 31209.

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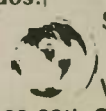

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