

# The Worldradio News

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## Logging rules changed by FCC

Part 97 of the Rules Amended to Delete Certain Log Requirements for Amateur Radio Stations.

Section 97.103 of the Amateur Radio Service rules has been amended by the Commission to delete requirements for logging certain information by amateur radio stations (RM-2382).

The action was requested by the Maryland FM Association, Inc. in a petition questioning whether amateur station logs were essential to the Commission for station inspection and operation review, since maintenance of a station log was cumbersome and inconvenient.

The Commission said that while the logs required by Section 97.103 had no major role in its enforcement efforts, it had no information on their role in the amateurs' self-enforcement efforts. Noting that an amateur operator sometimes presented a station log to prove or disprove some aspect of his past operation, the Commission said that a well kept log could serve the operator and consequently most amateurs would probably continue to log data in addition to that required.

The Commission concluded that information on the location and dates for any operation, except mobile; signatures of visiting control operators; and third party traffic, should be logged. Upon the recommendation of the Maryland FM Association, the Commission also included a rule provision requiring a station to enter such additional information into the log as may be considered necessary by FCC. It noted that the requirements of Section 97.111(f) for logging certain technical data remained unchanged.

Because exceptions to the logging requirements, made for safety reasons such as operation of a station while driving an automobile, have had no noticeable impact, the Commission said there would be no significant degradation of the Service by extending the relaxation. Since the amendments consisted of editorial revisions and deleted rule provisions no longer necessary, the Commission said prior notice was unnecessary. The amendment becomes effective July 10, 1974. (Action by the Commission June 25, 1974, By Order. Commissioners Wiley (Chairman), Lee, Reid, Hooks and Quello.)

### Cincinnati ham saves girl's life

by Jim Weaver, WA8COA

Dave Heil, WB4KTR/8 of Cincinnati's Clifton Heights area, may have been primarily responsible for saving the life of a 3-1/2 year-old girl in Bogota, Colombia.

It was largely through Heil's efforts that two rare drugs—one from Abbott Laboratories in Berkeley, Calif. — were shipped on a veritable moment's notice to Bogota to treat the girl.

In a coma from blockage of the intestines and pneumonia, the child was fighting a losing battle for her life. The drugs needed for her to have any chance of surviving the complex disease state were unavailable in Colombia. The girl's doctor contacted a Colombian radio amateur and asked for his help.

"CQ Miami, CQ Miami, this is HK3CXB with a medical emergency" Camillo called.

"HK3CXB, this is W4CBP", came the prompt answer from Ted Wayne, of Miami.

The situation was quickly explained to Ted. A call to Abbott Labs was necessary.

"WB4CBP this is WB4KTR portable 8, Cincinnati. Can I help, Ted?" Dave asked.

With propagation to Chicago from Colombia unfavorable, as determined over the 24-hour operational Midwest Amateur Radio Service (MIDCARS), Dave placed a telephone call to Abbott. They could supply one of the needed drugs, but the other could be obtained only through Cutter in California. Abbott immediately agreed to ship a supply of the drug they had to Miami by special company courier—where the Colombian Air Force would meet the flight and rush it on to Bogota.

A brief telephone call to Cutter, however, uncovered a complication—not because of Cutter, but because of U. S. Food and Drug Administration regulations. The Cutter drug was available in the U. S. for experimental use only. FDA regulations prohibited Cutter from (Please turn to page 15)



Norm Brooks, K6FO, and Judy Yost, WA6RAN, operate Field Day station K6FO/6. The WORLD RADIO staff Amateur Radio Club went on Field Day aboard the Yost's ketch "Sea Goose". More pictures on page 6.

### Field Day tests emergency ability

From Hawaii to Nova Scotia and Puerto Rico to the Yukon, amateur radio clubs conducted a week-end drill operating under emergency conditions.

This was the 38th annual test of readiness sponsored by the American Radio Relay League. Over one-thousand participating groups tested their preparedness. Operating from generators or batteries, this exercise ensures that no community (with active amateurs) would be cut off from the outside world should a disaster occur.

This operation, which is the highlight of the year for many clubs, took place on 22 and 23 June. The training obtained during such an exercise has proved of tremendous value when emergencies occur. During the worst flood in U. S. history ( Rapid City, SD, June 1972) all the telephone circuits were out and amateurs were handling high-level government and relief agency messages.

The practice test is one of operating skill and the ability to set up a station quickly and totally independent of electricity from a utility. As so many times "the real thing" has been a flood, many groups set up their stations on hill locations away from the valley floor.

A striking instance of the use of Amateur Radio in the time of a catastrophe was after the Managua, Nicaragua earthquake. The only messages coming out of the devastated area were from amateurs using generators for their power.

Skill comes only from application. So, amateurs throughout the U. S. and Canada drill for something they hope will never be an actual performance. But they know the odds are that just about every community will be affected sometime. The most recent example being the devastating tornado that struck Xenia, Ohio on 3 April 1974. There again, communications and utilities were knocked out and the amateurs responded as they always have.

Many amateurs on Field Day know what it is to be involved in "the real thing" and those are the ones most active in maintaining their skills.

So they return home bleary-eyed, unshaven, with insect bites, hoarse voices and tired fists that are part of learning and developing techniques to provide efficient and effective communications.

Field Day is valuable practice.

### Choose your call?

Amendment of the applicable sections of Part 97 of the rules, has been proposed by the Commission to make any Amateur Extra Class licensee eligible to apply for and receive any available station call sign of his choice. These call signs would include 1X2 (single letter prefix, two letter suffix), 1X3 (single letter prefix, three letter suffix) and 2X3 (two letter prefix and three letter suffix) formats, consistent with the numeral designated for the geographical area.

The limitations on only one 1X2 format call sign per licensee, except for those already holding more than one, would remain. However, the same licensee would be eligible to also hold one or more 1X3 or 2X3 format call signs, the Commission said.

The Commission noted that it has frequently received requests from amateur operators asking to have specific call signs, or call sign formats, assigned to their stations, but that under the present rules, there were no provisions for satisfying these requests.

Stating that the Amateur Extra Class deserved first consideration in the matter, the Commission said the proposed rules, would at least satisfy some of the requests. Since the Amateur Extra Class licensees represent the highest skill level licensed in the Amateur Radio Service, and the class has the smallest number of stations, with most already having preferred call signs or call signs of long standing, the Commission said that the number of requests (Please turn to page 15)

### Mexico Convention

by H. R. "Duke" Ellington, W6OZD

Bound for Mexico! Yes indeed, we were headed south of the border as we gathered at the Long Beach airport terminal on Thursday a. m. and boarded a Greyhound charter bus for the first leg of a bus and plane trip to Guadalajara to attend the XLII Annual Convention of the Liga Mexicana de Radio Experimentadores. The travel party consists of sixty members of the "Colegas y Amigos" Group, their wives and friends from Southern and Central California, and Arizona.

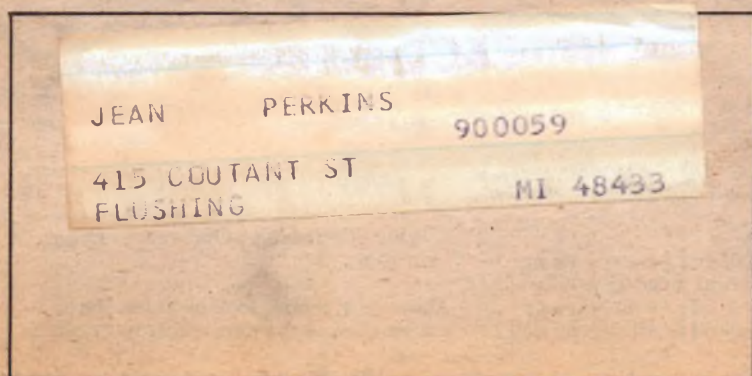
Upon reaching Tijuana, our bus was met by Sr. Eliseo Garcia - XE2NR, of the Ensenada Radio Club, and several other colegas from the San Diego area. We proceeded by two other charter buses to the Ensenada airport, joining 26 Ensenada Radio Club members and their wives on board the charter Lockheed Electra plane for a very

smooth non-stop flight to Guadalajara.

Deplaning was a notable event. Welcoming our group was a very large contingent of Mexican amateurs headed by Enrique Fernandez, XE1EEF, LMRE Presidente; Rafael Corcuera XE1EEI, Convention Chairman and a large mariachi band.

Thursday's time was consumed by checking into the Posada Hotel, getting settled and attending an informal reception on the rooftop solarium.

A very impressive inaugural ceremony kicked off the convention on Friday morning. Representatives of the State of Jalisco, civil and military, participated. Following the official opening, a LMRE work session took place in the auditorium of the Casa de La (Please turn to page 7)





## FCC

An action taken by the Chief, Safety and Special Radio Services Bureau, on December 21, 1973, which cancelled the amateur operator and station license WA5MTI issued to Louis C. Landon, Buchanan Dam, Texas, has been reviewed by the Commission on its own motion. (Landon's license was cancelled for failure to appear or failure to undergo an FCC supervised amateur examination.)

The Commission stated that the call-in procedures and cancellation of license provision of Section 97.35 of the amateur rules were applicable to all amateur licenses which were obtained by a mail examination under the supervision of a volunteer examiner. Since Landon's former Amateur Extra Class license had been obtained under the mail examinations for disabled applicant provision of Section 97.28 of the rules, the Commission said it was also subject to the call-in provision and cancellation for failure to appear at an examination point or to undergo an examination at home under FCC supervision.

The Commission found that Landon had been repeatedly afforded an opportunity to be examined at his home and that he had been further advised that his physical condition would be taken into account in both administering and grading the amateur examination.

The Commission said that in reconsidering the entire record it was unable to state that cancellation of the license was improper and not in accordance with the rules. Although review of the record did not reveal any substantial issue of fact, the Commission gave Landon 20 days to submit any further argument he might wish to present.

If such information is presented, and if Landon so requests, the Commission said it would decide whether the case warranted designation for a full evidentiary hearing. The Commission pointed out however, that in the interim the cancellation of Landon's license would remain effective.

(Action by the Commission June 19, 1974, by letter. Commissioners Wiley (Chairman) Lee, Reid, Hooks and Quello.)

## LATE FLASH

### ARRL BOARD MEETING

The July ARRL Board meeting (July 17, 18 and 19) was highlighted by a vote to increase membership dues to \$9.00 per year effective January 1, 1975. Life membership dues would also be increased to \$180. You can also look for an increase in the price of the ARRL Handbook to be effective with the 1975 edition.

This action evidently taken by the Board due to financial results of the first half of the fiscal year which reflects a \$47,963. loss vs a \$68,000 gain for the same 1973 period. This would indicate a \$116,000. operating difference between the same 1973-1974 periods.

Other action included a decision to retain the Phone DXCC certificate and to expand qualification space on ARRL election ballots.

Information also indicates a proposal to re-structure the amateur radio license procedures will be released by the Federal Communications Commission in August.



## ARRL

20 June

New simplified rules have been proposed by FCC for the Radio Amateur Civil Emergency Service in Docket 19723. The proposed rules would permit any amateur operator of any class to use his station in RACES if registered in and by the local civil defense unit. In addition, a RACES station license would be made available to local, regional or state CD organizations but only licensed amateurs would be permitted to act as control operators. Ordinarily all authorized amateur frequencies would be used on an equal basis with other amateur activities, but in the event of war emergency only certain specified frequencies would remain available. Drills would be limited to one hour per week. RACES stations could not be used for ordinary amateur work, but could also be licensed as club stations to amateur trustees for casual operation. Comments may be filed until September 25, reply comments until October 10. Full details will be in August QST.

27 June

On June 26, 1974, the American Red Cross and the American Radio Relay League signed an updated communications pact reaffirming their statement of coordination of activities for the public benefit. The signing by ARRL President Harry Dannals, W2TUK and ARC President George M. Ely documents the broad framework within which volunteer Amateur Radio Public Service Corps personnel may coordinate their facilities and equipment with Red Cross for communications in disaster relief. The agreement will be detailed in an upcoming issue of QST.

5 July

Attention DXers. Announcement is hereby made of the addition to the ARRL Countries List of Kingman Reef, KP6. Geographically, Kingman Reef is located at the northernmost tip of the Line Islands in the Pacific Ocean. It is owned by the United States. This addition to the ARRL Countries List is made under point one of the criteria by virtue of its separate administration from that of Palmyra and Jarvis Islands. Submissions of Kingman Reef confirmations for DXCC credit may be made starting October 1, 1974.

11 July

The threat to the amateur 420-450 MHz band posed by the emergency medical radio service proposals in Docket 19880 has been overcome. During the rulemaking proceeding, ARRL filed a strong opposition to use of three 449 MHz frequencies for medical radio paging. An FCC News release dated July 8 announces creation of the Medical Services category in the Special Emergency Radio Services but with all of the new frequencies being allocated coming from the existing mobile radio services blocks. The new category of service becomes effective August 15, 1974.

### OSCAR Educational Program

A complete curriculum supplement entitled "Space Science Involvement" has been prepared at the Talcott Mountain Science Center. It is intended to assist educators and radio amateurs alike in the preparation of classroom OSCAR activities.

Write to Bill Dunkerley, ARRL, 225 Main Street, Newington, Conn. 06111.



## Events

MIDWEST DIVISION CONVENTION

The 1974 Midwest Division ARRL Convention will be held at the Marina Inn in South Sioux City, Nebraska on October 4, 5 and 6. ARRL President Harry Dannals, W2TUK, will be attending. Events planned for the convention include: QCWA dinner and meeting, demonstration of a portable repeater, SSTV, fast scan TV, \$30 counter as per Jan. '74 QST. AMSAT demonstration, QRP session, Handi-Ham session, SCM meeting, Satellite locator as per May '74 QST, Grand Island FCC monitoring station presentation, 2 meter repeater forum, traffic forum, MARS session and an ARRL forum conducted by Director Paul Grauer, WØFIR.

The sponsoring group of the convention is the 3900 Club. The theme of the convention will be paying tribute to the handicapped amateurs and special presentations will be made at the Saturday evening banquet. Registration begins Friday noon, October 4th. Get acquainted dinners for OMs and XYLs are planned for Friday night -- separate dinners with no programs -- just old fashioned rag-chews. Special events are planned for the ladies, a special luncheon and tour. There will be the largest flea market in the Midwest, all indoors in a 40 x 80 room at no charge. Come and sell and trade. There will also be commercial exhibits.

Banquet tickets are \$6.00 each. Pre-registration for the convention (up to Oct. 1) is \$6.00. After Oct. 1 - \$7.00. Talk in frequencies 34/94, simplex 94 and 3900 kHz. Send registrations to Cliff Taylor, WØEQN, 3818 5th Ave., Sioux City, Iowa 51105. For motel information and prices write to Dick Pitner, WØFZO, Convention Chairman, 2931 Pierce St., Sioux City, Iowa 51105. Tickets to the Dog Races, popular in Iowa, are offered free to those desiring to attend.

1974 Pacific Division Convention and Greater Bay Area Hamfest. October 26, 27, 28, at the Royal Coach Motor Hotel, San Mateo, CA. Keynote speaker is A. Prose Walker, W4BW, Chief Amateur and Citizens Division, FCC. Other speakers include: Bill Orr, W6SAI, Antennas and Propagation; Ed Peck, K6AN, Towers, Zoning and the Law; Chuck Townes, K6LFH, Sister City International Program; Marion Henson, W6NKR, State RACES Director, Amateur Disaster Conference; Art Fury, WA6JLJ, Integrated Circuits and others. There will also be: main banquet, contests, prizes, exhibits, swap tables, Ladies program, ARRL forum and more including an OSCAR-AMSAT space symposium.

Sierra Nevada Hamfest will be held in Idlewild Park, Reno, Nevada, Saturday, August 10, 1974. Pre-registration \$10; after August 1, \$11. Western style barbeque dinner, and a lot of prizes to be given away. Free beer and soft drinks. For information, contact Nevada Amateur Radio Association, P. O. Box 2534, Reno, Nevada 89502.

Plans are now firming up for a fabulous DX Convention. Plans call for a date of September 28, 1974 at Reston, Virginia. For information, write to chairman Stuart Meyer, W2GHK/4, 2417 Newton Street, Vienna, VA 22180. Ask to be put on the mailing list for final details.

Plan Ahead - The Calgary Amateur Radio Association's Centennial meeting will be held on August 1, 2 and 3, 1975. Various activities are scheduled for all who attend.



## around the world



Aki Iizuka, JA1EOD

## In Japan

by Jack Jones, W6LOI

When reports of a general strike in Japan cast a pall over our planned departure with a charter group leaving on a vacation trip to the Far East April 17th, I fired up my rig, swung the beam toward JA land, hoping for up-to-the-minute reports on a strike settlement.

Soon heard, and got in QSO with Aki Iizuka JA1EOD, who works for a Tokyo broadcasting company. He commutes from his home about 50 miles away - by fast electric train. He explained that he only happened to be home midday due to the strike, but indications were (that was April 12th) it would only last a few days.

He mentioned he would appreciate it very much if I would purchase an ARRL 1974 Handbook for him, as they were still unavailable in Tokyo, (which I did). After exchanging family information - he had a son and daughter about 7 and 5 years of age - he invited me out to his home for dinner when in Tokyo, and asked all the info as to my flight number, arrival time, hotel etc.

The following day, Masa Futami, JHIPUR, filled me in on the progress of the strike, and then on April 14th at 04:35 GMT, S. Nagayama, JAICOR, informed me the strike had been settled just an hour before, so the trip was definitely on.

Shortly after arrival at the Keio Plaza in Tokyo, Aki phoned me and we arranged to meet in the lobby of the following afternoon after I returned from a scheduled city tour with my group.

About 3:30 p.m. the following day, we had a most delightful visit. He was particularly happy about getting the ARRL handbook, and spoke very good English even though I was the first person he had ever spoken English with face to face, except for his Japanese school instructors. They are particularly anxious to get the idioms and pronunciation instructors often can't give them!

The greatest disappointment of an otherwise enjoyable trip was our tight schedule made it impossible to accept the gracious hospitality of his home. The XYL and I would greatly have enjoyed meeting his wife and children.

The moral is to allow yourself enough time to get even better acquainted with the wonderful friends you can meet through ham radio.

Above is a photo I took of Aki in the coffee shop of the Keio Plaza in Tokyo.

# amateur radio - public service

Deliverance

By Ted Wayne, WB4CBP  
Vice Director, SE Div. ARRL

## Amateurs help health hikers

by Jim Weaver, WA8COA

As nearly 13,000 marchers wended their way sometimes not-so-merry way over Cincinnati and Northern Kentucky streets last Sunday, 22 radio amateurs worked behind-the-scenes to help keep them safe and as comfortable as possible. The hams were members of the Northern Kentucky Amateur Radio Club.

Starting from Cincinnati's Riverfront Stadium, the annual March of Dimes Health Hike throng walked to Fountain Square and south to cross the Ohio River into Newport, KY.

Other Bluegrass State communities that were invaded by the swarm of charity walkers, included Bellevue, Dayton, Highland Heights, Wilder and Covington. The 25-mile route then took them back to the Riverfront Stadium starting point.

With portable station K4CO at the stadium, instantaneous radio contact was maintained with each Hike checkpoint and the radio-equipped mobiles that patrolled the march route.

Communications were through the W4WYH repeater which has its input on 146.19 MHz and output on 146.79 MHz.

"A water carrier is needed at Checkpoint 3. See how soon the Army Reserve can get there."

"We are ready to close Checkpoint 8 and have 15 sore-footed hikers here. Send a bus over to take them back to the stadium"

"The nurse at Checkpoint 6 is out of adhesive bandages. Can someone get a supply of them here right away? We have quite a few more blisters that need taking care of."

These are just samples of the routine needs that were met with the assistance of the radio amateurs. There were several far-from-routine needs that required emergency attention.

"This is K4CO. The Red Cross nurse at the stadium has requested us to call for the Cincinnati Life Squad to assist a hiker who is in convulsions here."

"K4CO this is K4DEZ. I have dialed them and the phone is ringing now. I'll take care of it for you" came the immediate reply.

"A girl has collapsed from heat exhaustion in Wilder. Get the Highland Heights Life Squad here right away." another call rang out.

Of course, there were the expected calls to take care of cut feet and twisted ankles.

When asked what the outstanding features of the twelve and one-half hour communications effort were, Harold Blocher II, WB4VOA, of Southgate, Ky., said "We were surprised at the large volume of messages that had to be handled. But, probably the most pleasant surprise was that everything went so well for us," Blocher, communications chairman for the hike added.

Ward Jensen, W0TLE, St. Paul, Minn., received the first annual Achievement Award presented by the Dayton Hamvention. The ham of 40-years standing was given the award for his outstanding efforts to introduce handicapped persons to amateur radio, train them to obtain their licenses and obtain equipment to put them on the air.

Jensen's efforts are carried out through his directing of the Handi-Ham System in Minnesota. The system is a non-profit organization which is dedicated to opening the world to the exploration of the handicapped through the use of amateur radio.

## Search and Rescue

About 3:30 p.m., a helicopter carrying three men crashed near the Big Horn Mine, in a very remote area about 30 to 40 miles east of Lone Pine, CA. One man was killed, the pilot was injured (badly burned hands and a broken arm), while the third man was only bruised. The latter hiked out, which involved coming down a steep canyon with waterfalls and brush, to the camp of some miners who drove him to Lower Warm Springs in Saline Valley, where Al Weber, W6KJV, was camped. The survivor arrived there about 10:30 a.m. and Al immediately got on the air and checked into WCARS, with Howard Lakey WB6RJK, as net control. WA6DRG, in El Cajon, called the FAA, and after some confusion in the local office about which base line to use on the geodetic maps, the wreck was found by the searching helicopters at about noon.

However, the injured pilot, who had been left in the shade with water, was missing. He had become delirious, thought he had been there two days, and hiked out. Because of his injuries, his progress down the canyon consisted of rolling down the steep spots. Miraculously, he survived and wandered into the miners' camp: they brought him to Al's camp about 5 p.m. With short skip out, he got a station in L.A. to phone Bishop (charging it to Al's home phone), and the car taking the pilot out (a difficult 3 hour drive) was met by a helicopter, which took him to the hospital for emergency care, after which he was transferred to the Loma Linda burn unit, where he is recovering.

(WCARS "Sentinal:)

## Amateur First

by Lee L. Kanarian, K4WXS

During the annual Yacht Race between St. Petersburg and Isle de Mujeres, Mexico, "Dave" Albert Davis, W4GQ, headed up communications. Helping him were Jim Keyes, W4FCW, and Stan Hurst, WB4JSI.

In Yucatan, Alfred Dutton, XE3DE, was standing by. There would have been nothing unusual about this race, but for the fact that one of the entries, the Surefire, had her motor fail, then was lost sight of, and was entirely out of touch. The worst was feared, and help was sought from every source.

The Coast Guard responded, and then an interesting sidelight developed; something never before done.

The U.S. Coast Guard obtained, by communications at the top level, permission from the FCC for their search and rescue aircraft to communicate directly with the amateur stations involved, with both military and amateur stations operating within the amateur frequency bands.

As a result, the District headquarters of the Coast Guard in New Orleans, was able to receive hourly position reports of their aircraft with results of their search, which was practically impossible for them to get otherwise.

The happy ending to this was the Surefire turned up at Sanibel Island several days later, and towed into the port of Fort Myers by the Coast Guard.

(Florida Skip)

Dr. John Schindler, W4RFA, Miami, Fla. and Ignacio Torres, HC1IP in Quito, Ecuador, made arrangements with the help of Adan Henriquez, YS1ACE, for a woman who was flown to Miami for possible open-heart surgery. The timing had to be precise because the condition of the patient necessitated ambulance service and immediate entrance to the hospital.

## Because

by Charles Cotterell, W0SIN  
Denver Post Special Writer

Amateur radio operators lately have been hearing more often the phrase, "Amateur radio exists because it qualifies as a service." Yes, it's true, it is a service, existing alongside other radio and television services. One could ask, how does it qualify as a service when a lot of air time is devoted to "visiting", chasing DX or working contests?

All of these activities help develop a feel for the bands, sharpen one's operating ability, and create a feeling of friendship not only locally but also internationally.

However, the real task is in helping out in times when there aren't any other communications services available.

Many amateurs spend much of their time planning for and implementing efforts during such emergencies. Hundreds of amateurs participated in the 1974 ARRL Simulated Emergency Test or SET for short.

Remember, those tornadoes out in the Midwest last summer? Most likely, there were amateurs on the scene as quickly as anyone else. They soon sent and received messages for civil authorities under the RACES (Radio Amateur Civil Emergency Service) program or perhaps they helped find out if certain people or properties were okay. Generally, the AREC, ARRL's Amateur Radio Emergency Service, took care of these.

This author remembers one night last summer when the telephone rang after midnight and the caller wanted to contact another amateur station in a small city. One can certainly try. Soon the rig was warmed up and by carefully tuning the 75 meter band, we found a mobile station, taking messages for information. It took a few minutes to find an opportunity to break in and ask about the people that my caller wished to know about. The other amateur took the inquiry and drove to the street for a look. The tornado hadn't touched that part of the city and the numbered house appeared safe.

So my caller felt that all was okay and wouldn't ask the amateur to awaken them that night.

Large disasters of course involve more people, more destruction, more messages and instead of a few hours, the time may run into days and weeks.

For the organized amateur, it is a time to help - not only those in disaster areas but also fellow amateurs who may be willing to help but don't quite know what to do. That's the reason that all amateurs are invited to join in on the ARRL set.

Who can tell when it could be our turn to be snow bound, wind ravaged or even jolted by a small earthquake? We surely hope not, but we will be prepared to continue as a service.

## LATE FLASH

18 July

FCC has proposed three more rules changes affecting the amateur service. Automatically controlled repeaters would be permitted under certain conditions to operate without a control operator present at a control point. The prohibition on cross-band operation of repeaters would be deleted, as requested by ARRL in a petition filed in March. Provisions for the issuance of special short-term licenses to commemorative stations would be added to the rules. The usual fee schedule would apply for such special stations, and licenses would be issued only to Advanced and Extra Class licensees. Comment deadline of late October in each case provide time for study of the proposals.

Webster defines deliverance as liberation or rescue, it also implies something delivered or communicated. There could be no better description than this of a recent episode on 20-meters.

It was at 1830Z that Jim Paist - K4FCT, had the audacity to break into one of those beautifully inconsequential ragchews that we do dearly love on 40-meters. He was completely exonerated when he explained that there was an emergency CQ for Miami being transmitted on 20-meters and he knew that we could forgive his intrusion under the circumstances.

Camillo - HK3CXB, and his cohort Mario - HK3CXG, explained that a 3 1/2 year old girl was desperately in need of a certain medication and he had Dr. Maria Teresa Saade of the Clinica Colsubsidio on the patch to more implicitly diagnose the situation. Here his bilingual capabilities manifested themselves. It seems that the little girl suffered from what was described as Megacolon from which Bronchial pneumonia and an intestinal obstruction had resulted. She was presently in a coma. The doctor went on to explain that she desperately was in need of certain medications, Aminosal and Intralipid, together with Vitrum filters to administer the latter.

Here in Miami, Raul Mendez, OA8AB-W4, and I called several hospitals and the University of Miami Medical School. We were rewarded with the information that the Aminosal was a product of Abbott Laboratories in Chicago but not available locally. Ham radio operators thrive on challenges, and immediately Ron Dover K9WPH, in Hanover Park, Ill., Dave Heil, WB4KTR-8, in Cincinnati; and George Wattier, VE2DFW, in Montreal; started looking for a source.

Ron, very shrewdly, contacted Matt Fiore, Public Relations Director for Abbott Laboratories, and through him cut red tape left and right. Soon the required drug, in spite of many roadblocks, was on its way to Miami where Avianca Airlines was waiting to wing it on its way to Bogota.

In the meantime, Dave, an intrepid member of a rock group known as the Mudsharks used the facilities of Ma Bell to discover that the Intralipid, together with the necessary filters was obtainable from Cutter Labs in California. However, he subsequently learned the U.S. Food and Drug Administration had ruled that this Swedish drug was available in the U.S. for experimental use only. Undaunted, our heroic guitar player, pursued his search and found that a supply was available from a Cutter subsidiary in Mexico City.

Camillo and Mario met the challenge with alacrity. Through their efforts a Columbian Air Force plane was dispatched to pick it up. In approximately four hours, through dedicated cooperation, we had demonstrated an aspect of our hobby of which we are all justifiably proud. But, the best was yet to come.

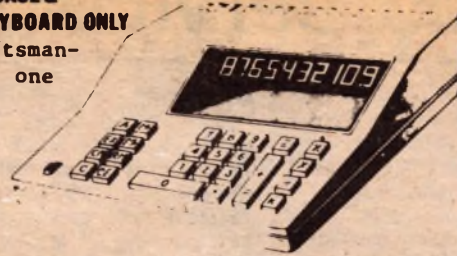
The following Monday Mario arrived in Miami and from the airport. through an interpreter, advised me that both the drugs and the filters had arrived before 10 p.m. that night and had been immediately administered. Before sunup the little girl had come out of the coma and on Sunday was able to leave the hospital. His message from the child's parents was brief and succinct, "May God Bless you all." ("Florida Skip")

## identification

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12-Digit display and calculate

Fixed decimal at 0, 1, 2, 3, 4, or 5

Leading zero suppression

7-Segment multiplexed output

True credit sign display

Single 28-pin chip  
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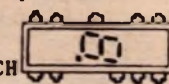
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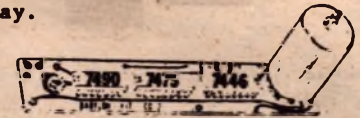
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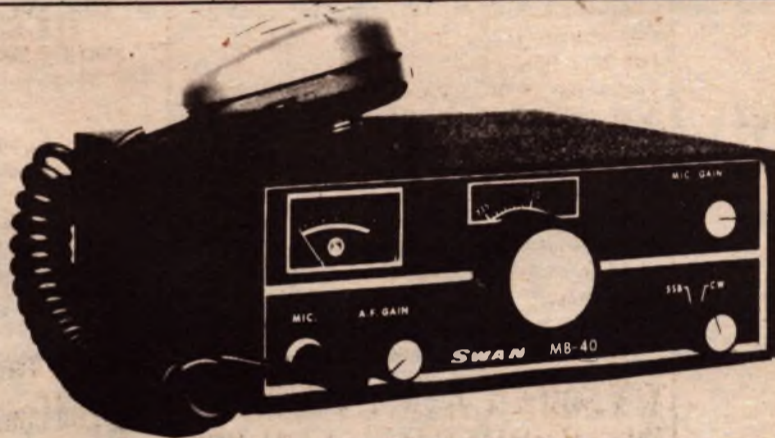


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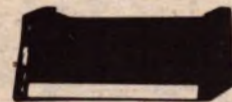
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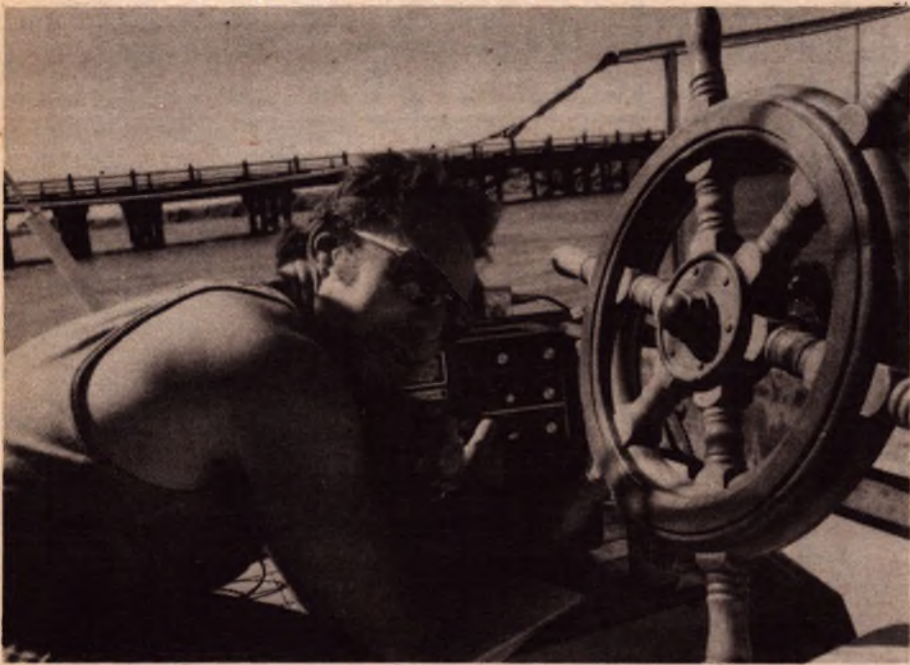
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# Field Day



Jack Schwartz, WA6TRZ

## worldradio staff arc



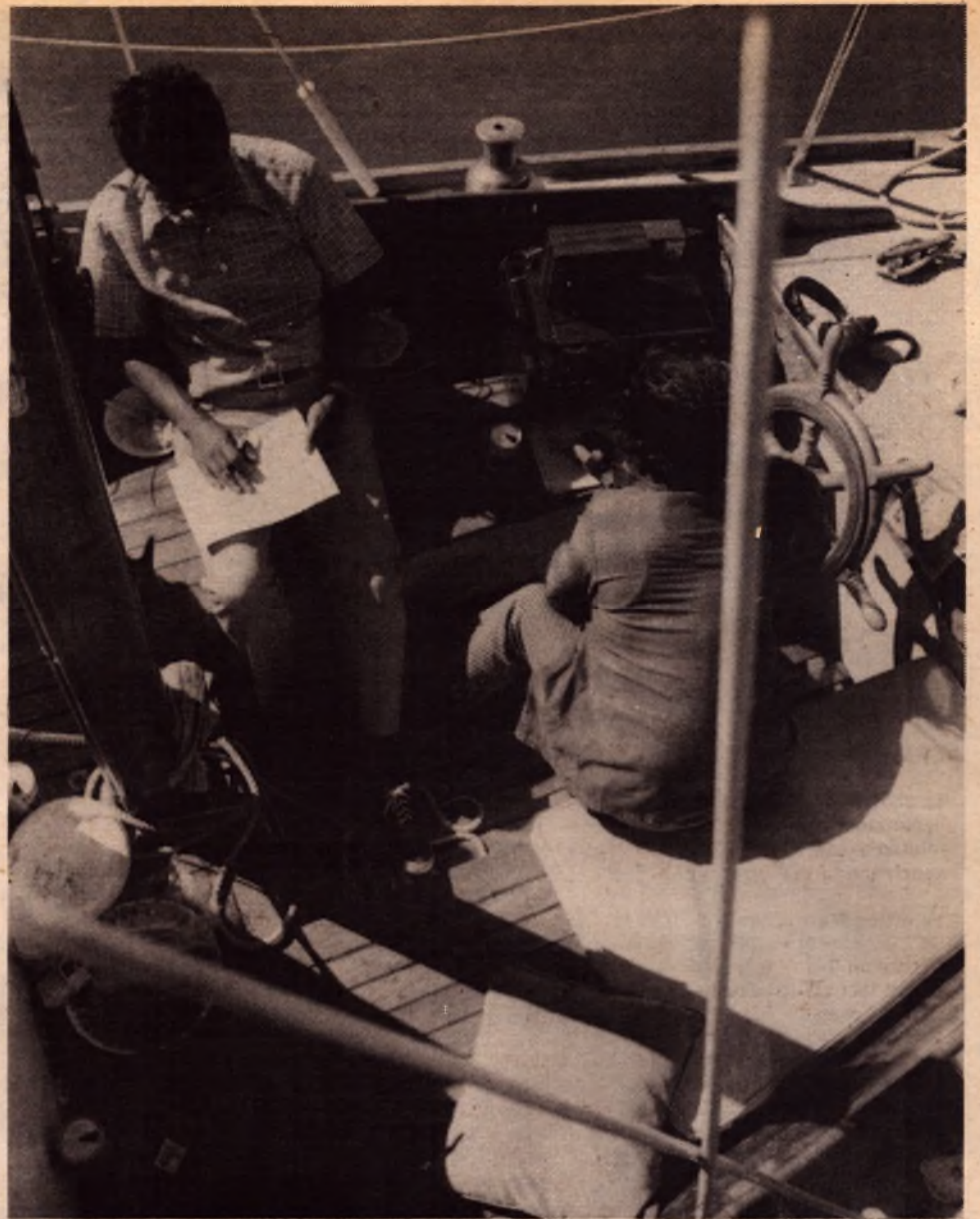
The ketch "Sea Goose"

Judy Yost, WA6RAN, operating 20 SSB. When she left that position and the guys took over, it turned into the usual Field Day mess, see upper right.



Dorothy Schwartz, XYL of WA6TRZ

Armond Noble, WB6AUH



Guy Lizotte, WA6RIF, and Jack Schwartz, WA6TRZ

This was the third year that the "Worldradio Staff Amateur Radio Club" (WB6QHL) went, as a group, on Field Day. (see QST, Nov. 1972, Page 56.)

This year's outing was on the ketch "Sea Goose" owned by Bill Yost, WA6PIU, the maritime mobile columnist for "Worldradio". Location was three miles east of Rio Vista, Calif.

Using the call K6FO/6 we made 746 QSOs. Antennas were an inverted V and sloping dipoles hung from the mast of the boat.

As you read on page 15 of this issue the FCC is considering deleting the practice of club call signs perpetuating the memory of a member. So, we decided to use K6FO/6 as our Field Day call so Norm could enjoy it while he was still here, hi. Or we could enjoy him, or something like that, oh well.

As a means of introduction to our friends, the Schwartzs and the Yosts recently joined in as partners in "Worldradio Associates" the publishers of this newspaper.

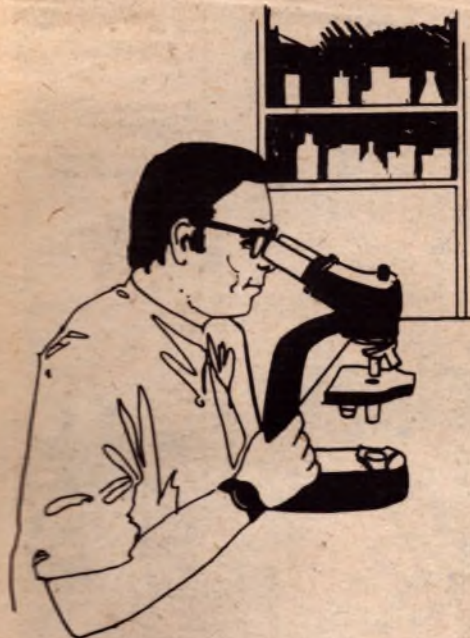
See you all again next year.

The next issue of this paper will have some interesting Field Day stories including one about a QRP operation that made contacts using discarded Polaroid batteries as the power source.

Jack Schwartz, WA6TRZ, Bill Yost, WA6PIU, Judy Yost, WA6RAN, and Norm Brooks, K6FO, after it's over. They say "wait 'til next year." There, W6CX!



# The world is their graduate school



by Karen Hunt, Associate Editor, Prism

Via shortwave radio, a group of 900 physicians bring medical aid to people in isolated areas and also pick up first-class experience in primary care.

The office staff of Walter Shriner, M.D., W9CBG, rarely makes appointments for patients on Thursdays, because that is the day their boss attends his own private graduate school.

The "class" is held in one corner of the Shriner family room in the doctor's lakeside home in Springfield, Illinois, and his books are the voices of people he hears over his shortwave radio.

For Dr. Shriner, who is president of Medical Amateur Radio Council, Inc. (MARCO), the whole world is his graduate school. "Where else," says Shriner, a gastroenterologist, "can I talk with a man who at the very moment of our conversation is treating a patient with a tapeworm 30 feet long? What medical school has a case like that? Where but on the radio can I talk to a man whose sole work deals with leprosy?"

Through such person-to-person discussions via shortwave radio, the physicians of MARCO get a chance to deal with problems, often in their own speciality, that they otherwise would not run into. In return, the doctors have provided people in underdeveloped countries and in isolated areas where a source of medical information and a network of trained people to help obtain equipment and drugs when necessary, as well as with someone to talk with when they get lonely in a far-off land.

**MARCO's Beginnings**  
About 900 physicians throughout the world, who are also licensed amateur radio operators, belong to MARCO. The organization was the brainchild of William Sprague, M.D. WA6CRN, an amateur radio enthusiast from Los Angeles. At an American Medical Association meeting some eight years ago Dr. Sprague met with another ham operator, Charles Gray M.D., of New York, and formed the nucleus of an organization that would use

short-wave radio communication to exchange medical information among physicians. Nominal dues (\$10 tops) are used primarily to pay the cost of a monthly newsletter, and the group meets once a year at the AMA June convention.

Most of MARCO's air time is spent in long-range diagnostic work, chiefly of tropical and parasitic diseases, for radio is the only link that many people in remote areas of Africa and South America have with the outside world. Physicians, Peace Corps volunteers, homesteaders, and missionaries call MARCO and ask for a physician's opinion on a particular set of symptoms that is unfamiliar to them.

I joined Dr. Shriner one Thursday to eavesdrop on the world. It's 10:30 a.m., and he is about to start answering calls. Patiently, he turns the dials of his receiver. All the equipment needed to send and receive voices thousands of miles away—a transmitter, receiver, speaker, and a 1,000-volt power supply—fits on a medium-sized utility table.

We have reached Al Russell, a retired telephone man in Detroit, Michigan, who does relay work for MARCO. Since practicing physicians cannot always be at their sets, they depend on auxiliary personnel, such as Russell, to receive and relay calls to them. A listing of MARCO members, their specialities, and call numbers is sent to Russell and other relay men and women. In case of emergency, Russell phones the nearest MARCO physician and asks him to go to his radio and respond to the call.

Throughout the day calls are collected from various relay operators around the world by a network control man in Miami, Florida. Every evening at 8:00 p.m. U.S. Central Standard Time, members are supposed to check in with network control; calls are then parcelled out to the appropriate physicians. Dr. Shriner spends a part of every evening at the radio, and all of his day off from the office. Today the controller in Miami is John Schindler, M.D., W4RFA, a retired urologist who has spent most of his life traveling and working around the globe. Schindler has been a ham for 50 years.

"I get a thrill out of running down a problem and troubleshooting it," he says. Through conversations with persons in isolated areas, he has observed that "people change when they get a chance to express themselves. It makes the individual feel that people care."

"Many times the questions we get keep us up on the books," he adds, "for we are dealing with medical problems over much of the world."

Dr. Shriner apologizes for the poor reception we are receiving today. "Ten years from now we will be able to talk around the world 24 hours a day," he says, "But right now, we are handicapped. We're at the bottom of the sunspot cycle, and some places can be reached only at late hours."

Indeed, amateur radio operators are at mercy of atmospheric conditions, especially during natural disaster. When, for

example, the devastating quake hit Managua, Nicaragua, last December, the MARCO doctors were on the air around the clock, working closely with the U.S. State Department and the Red Cross to bring huge quantities of supplies to the quake victims, as well as emergency-care information. Sometimes the voices in Managua faded out for hours.

"We never know what will happen next," Dr. Shriner reflects, in his easy manner "One second all is quiet, and the next there may be a flood, an earthquake or a political uprising."

When such events strike, the MARCO doctors and their families drop whatever it is they're doing and heed the call for help. Mrs. Ruth Shriner, who is coordinator of the Illinois Renal Disease program with the Illinois Department of Health, recalls a Saturday night when she and her husband were relaxing at home. A telephone call came for the doctor to get on the radio. There was a case of aplastic anemia in a remote area of Peru, and the proper drug was not available.

The Shriners called their local pharmacy and obtained the necessary amount of the drug. They then called the chief of flight operations at Braniff Airlines, who put the company's computer system in Houston to work on mapping out a relay system to deliver the medicine.

The drug was flown from Springfield to St. Louis, to Dallas, to Los Angeles, to Lima, Peru, where, with the aid of our State Department, a consular official accompanied it through customs. It was finally dropped by parachute to the villagers. The little package had been carried from pilot to pilot and within 11 hours was saving someone's life.

**Shortwave Consultations**  
MARCO physicians are also involved in consultation. Doctors in developing countries rarely have access to sophisticated technology that would help them diagnose mysterious ailments. One physician in South America, for example, forwarded a stack of reports in Spanish to Dr. Shriner asking for consultation on a patient, an old woman, who was not responding to treatment.

Shriner and his colleagues called in a high school Spanish teacher to help interpret the reports. They determined that the patient was a victim of some sort of pesticide poisoning and advised a bone-marrow transfusion. Though the diagnosis was made from several thousand miles away, it was correct. The South American doctor found that the woman had been trying to get rid of moths that had been dining on her clothing. To do so, she cracked mothballs with her teeth and blew them into an open garment bag. In the process, she swallowed some of the crystals.

A physician in Liberia, Polycarp B. Gadegebu, M.D., EL2CI, came across what he feared might be Lassa fever (named for an African town where it was first seen two years earlier). A deadly affliction, Lassa fever is caused by a mutation virus, (The disease is characterized by high fever, muscle aches, mouth ulcers, petechial rash, pneumonia, and

cardiac and renal damage.) The death rate during the first outbreak was 40-50 percent in two weeks.

With the help of MARCO and the Communicable Disease Center at Atlanta, Georgia, Dr. Gadegebu was able to identify positively the disease and its suspected transmitter—rats. A widespread extermination program was put into effect, and the outbreak of Lassa was stemmed before it had a chance to spread any farther. For his work in alerting the world to the dread killer, MARCO honored Dr. Gadegebu at the AMA's 1973 clinical meeting in New York.

It is now early afternoon in Springfield. Dr. Shriner has turned his antenna toward the southeast, and we are talking with a priest in Honduras. Father Cass is one of six Jesuits from New York City who lives in the tiny mountain village of Salva. His colleague, Father Bruce, is sick with what MARCO M.D.'s have diagnosed as hepatitis and typhoid. He is not getting any better, so the priests have requested a nurse to come to Honduras to accompany Father Bruce to a hospital in New York.

The hospital nearest to Salva is more than 60 miles away, and the town has an ambulance that doesn't always work.

**Equipment Requests**  
Some time ago the priest told MARCO that his community needed an x-ray machine equipped with a fluoroscope to examine stomachs. Today, Dr. Shriner is able to tell Father Cass that he has located a used machine in Peoria, Illinois, and that it will be routed to Salva through other MARCO members. Father Cass's voice fades out, and now we pick up a physician in Bogota, Colombia.

He tells us that he is a graduate of Harvard Medical School and is in group practice in that modern city of three million. He is a general surgeon, and most of his patients are attached to the various embassies. How different his life is from that of the physician in primitive Salva!

A half-hour later, at 3:30, we regain contact with Father Cass, who is now thanking his MARCO friends for the x-ray machine. "We would be grateful if you'd keep us in mind should you run across a fulgurator to cauterize warts," he adds.

Requests for equipment, such as Father Cass's, are often answered by physicians who are not MARCO members. One Springfield dentist has supplied dozens of dental forceps to M.D.'s and missionaries in South America and Africa, and a local eye doctor donated equipment to a Managua hospital to replace some of what was destroyed in the earthquake.

At midnight we establish contact with the South Pole—no less—where 40 men are stationed at a naval base. Some are talking by radio with their wives back home, so we must wait to ask them our questions. Finally at 12:30, we say "73", the radio term for best wishes and goodbye.

("Prism" American Medical Association)

**MEXICO CONVENTION** (from page 1)  
Cultura. Oskar Gonzalez, XE2DDP, of the Ensenda Radio Club presented a request for modification and revision of phone patch and third party traffic regulations in Mexico in order to conform to usage in other countries. John Huntoon, of ARRL and IARU spoke regarding the necessity of hams of all countries to present a united front at International Conferences at Geneva in 1979.

Friday afternoon was spent at a huge fiesta and a bull fight at Cortiji La Venta. Some of our gringos, including one young lady actually whipped the cape around

in front of a real bull. Larry Reed W6CTH, Oscar Moctezuma, XE2DDP, I and Amy Frater (teen-age daughter of Grover Frater-K6ZP) dared the bull without much harm on either side.

Returning to the Posada Hotel we were entertained on the rooftop floor once more by a very outstanding dance group of local professional talent.

A final business session of the Liga was held on Saturday morning followed by a bus trip to Lake Chapala for sightseeing and luncheon (Main dish—Chapala whitefish). Lots of mariachi music, and good

will. Then a surprise summer rain storm complete with lightning and thunder. Lake Chapala is 60 miles long and 20 miles wide and surrounded by high mountain ranges. A very beautiful spot! Saturday evening everyone was entertained in the Versailles Room, Hotel Posada with singing, dancing, music, food and friendship with a variety show by talented performers to complete the program.

A fairwell buffet luncheon was held Sunday noon in the Solarium of the Posada Hotel. Raffle prizes were distributed with the first prize being a Drake TR4C. Soon it was checkout time with many

farewells and good wishes, then boarding buses to the airport and finally the plane for the non-stop trip to Ensenada and the USA.

Parting thought: Guadalajara is truly a beautiful city. The 400 year old cathedral is so very solemn and impressive, the entire city is very picturesque with its many fountains, brilliant flowers, shrubbery, attractive buildings and friendly people. The altitude of over 5,000 feet makes for a perfect climate throughout the whole year.

The friendship and comradeship between the U.S. and Mexican

hams and their families during this Convention was a wonderful experience for everyone.

The next LMRE Convention will be held in Tampico on the Gulf of Mexico. This should be another outstanding event. We were all happy to meet and greet Sr. Antonio Pita, XE2CCP, in Guadalajara. He has been a bulwark for Amateur Radio in Mexico and throughout international circles. Eleven years ago he assisted in the "Colegas y Amigos" in securing temporary permits for our group "on the air" operation in Mexico courtesy of the Mexican Government.

# ZL3AAA and ZL3AAB visit the States



Marcia Rast, K6DLL, Lou Potter, K6VT, Ted Rast, W6SMU, Gary Stilwell, W6NJU, and Russ Garlick, ZL3AAA

"The amateur radio fraternity is fantastic".

Those were the words of Russ Garlick, ZL3AAA, as he and his wife, Zelda, ZL3AAB, were visiting Ted Rast, W6SMU, and his wife, Marcia, K6DLL, at their home in Sacramento, Calif.

The Garlicks, of Greymouth, New Zealand, arrived in Los Angeles on 19 June for a combination 6 week business and vacation trip.

"What a welcome we received in Los Angeles! We stayed with Duncan McDonnell, K6LHA, and his wife Joan, WA6QKC. Em Brakensiek, WA6OCT, took us out to lunch and dinner. He really 'turned it on' for us, terrific. And we got to meet Walt Henry, W6ZN, at his Anaheim store, after talking to him on the air for many years.

"Bob Alm, K6QXK, met us at the airport in Los Angeles. And what a help it is when someone meets you at an airport in a strange city. Especially Los Angeles, it's enormous.

"Ron Jones, WA4YQQ, who lived in Greymouth for a year, spent a day with us at Disneyland. It was about ten times bigger than we thought it would be. We saw Olvera Street, Port O'Call, Lion Safari, Forest Lawn and at the Music Center, 'The King and I'. Being unaccustomed to smog, it did make our eyes run.

"We had a wonderful time in San Francisco. Jack Striker, W6MOV, invited us to stay at his home. I went to the meeting of the Grizzly Peak VHF club (WR6ABM) and really enjoyed it. What a lively group they are. Had a nice time at a breakfast meet-up of the San Francisco Communications Society (WR6ACS). Zelda was the guest of honor at the BAYLARKS YL meeting." The Electronics Museum at Foothill College was most interesting".

From San Francisco the Garlicks went to Sacramento. Their hosts, the Rasts, took them to the State Capitol Building, Lake Tahoe and Reno, Nevada.

Russ says, "I'll never forget that gambling. Never saw anything like it. Zelda lost five dollars at the slot machines but Marcia won 22 dollars." There was another new experience for the Garlicks as they went bowling for the first time. Russ had never seen an indoor bowling alley before as in Greymouth there is only the English lawn bowling. In his first game he rolled a 98.

The Rasts and the Garlicks have been talking to each other on the 20-meter band for about seven years. Russ says it started as a YL to YL series of contacts between Marcia and Zelda. They had come to talk quite a bit about one of the couples going to visit the other and it was becoming a toss-up which couple would travel first.

While the Garlicks were staying at the Rast's home in the Sacramento suburb of Fair Oaks, the Rasts threw an open house in honor of the Garlicks on 7 July.

Food, drink and amateur radio talk made it an extremely pleasant afternoon and evening. One of the highlights of the get-together was a slide show presented by Lou Potter, K6VT. The show covered several years of Field Day of the North Hills Radio Club. Lou has a way of making things rather humorous.

After the party, "WORLDRADIO" interviewed the Garlicks. Russ, licensed since 1960 is immediate past vice-president of the New Zealand Amateur Radio Transmitters, the national amateur radio organization in New Zealand. He is deeply concerned about amateur radio matters saying, "I fear for the safety of our frequencies. Also upsetting us is the lack of allocations in the UHF bands."

Russ told that the NZART has built up a fund to send representatives to the ITU conference. Two ZL delegates went to Japan the year before to attend the Region Three meeting. He feels the upcoming conference will be important as "some nations could topple Amateur Radio."

Russ feels we have to sell Amateur Radio in their own country, referring to the emerging nations who each have one vote at the conferences. He mentioned that possibly films would help. But, he said, the most important approach was to try to think like the people of these other nations. Figure out what Amateur Radio could do for them and present it in a way showing the benefit to their country.

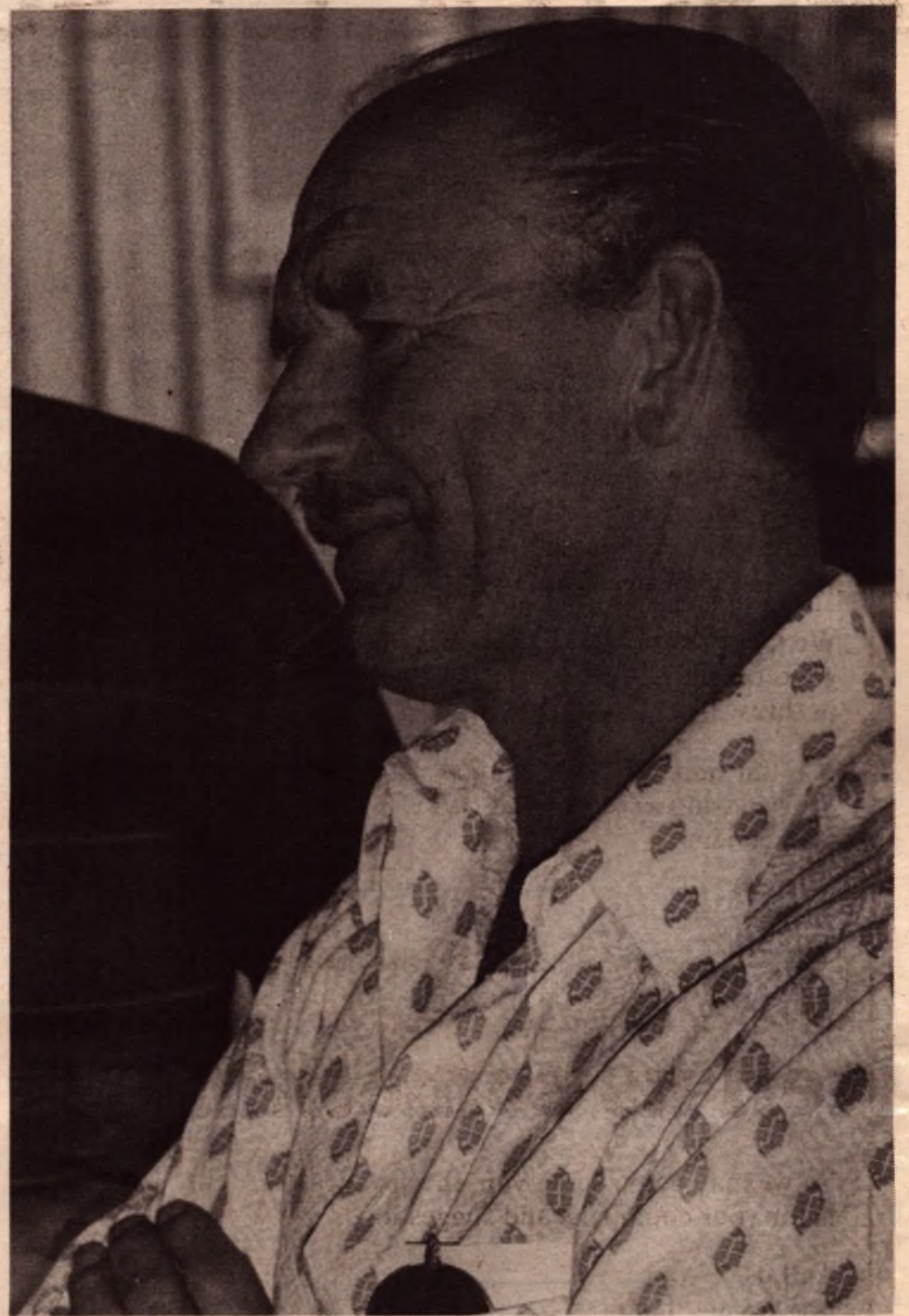
Russ said he thinks that countries that are asked to give aid to emerging countries in telecommunications should recommend Amateur Radio. He believes the countries giving aid could have great influence and could be good ambassadors for Amateur Radio.

Amateur Radio has hardly a better salesman than Russ. He readily speaks of the many friendships that Amateur Radio has brought to him and the wonderful feeling that exists between amateurs. He says he really enjoys it when an amateur visiting New Zealand knocks on his door.

Russ' attitude must be well-known for when he announced that he was coming to the States he received "far too numerous invitations, it would have been impossible to stop even at the door of every place we were invited."

He speaks of the time he checked into a repeater in the San Francisco Bay Area and the warm greetings that came from a dozen operators on the frequency welcoming him to their area.

Russ has made a strong effort in recruiting new amateurs. He teaches a licensing



Russ Garlick, ZL3AAA

class and is proud of the fact that Branch 49 has the highest ratio of amateurs to population in New Zealand. The population of Greymouth is 10,000 and they have 25 amateurs.

Asked to compare the differences between Amateur Radio in New Zealand and what he had seen of it so far in the U.S., Russ replied, "There is so much more equipment available over here. It's not there at home. You can't just walk into a store and buy it over the counter. First, you have to obtain a bank draft in the amount of the cost of the equipment. You then send that to Henry or another store. The import duty and tax adds about another 20 percent to the price.

"You can't buy a tower in New Zealand. You have to make one or have one made for you". Russ is president of R.I. Garlick, Ltd., an engineering firm and he has made a few towers for friends. He calls it "a job you do for the love of it. You go down on Saturdays and work on them." His secretary is Marge Brett, ZL3TC.

While in Reno, Russ met "Stub" Reeve, WA7NLC, who is going to New Zealand in January. Russ said he "got quite a kick out of meeting him". After leaving Sacramento the Garlicks were looking forward to going to Phoenix and staying with Lemar Lundstrom, K7OGA, "good friends with whom we exchange gifts at Christmas."

From there it is to the Grand Canyon, Flagstaff, Dallas, New Orleans and the

French Quarter and then on to Little Rock, Ark.

There they will stay with Dr. George Bean, W5MY, and his wife, Penny, WA5OTK. "They have visited New Zealand twice, they are keen fishermen and we know them well." From Little Rock they will fly back to Los Angeles and then back home.

This was Russ' first real trip to the States. During WW II he was a Sgt. Pilot with the RZNAF and shuttled Hudson bombers and PBV Catalinas from San Diego to Hickam Field to Fiji to Guadalcanal. He says, "I didn't get to see very much then". He later was based at Henderson Field, Guadalcanal, Bouganville, and spots in the New Hebrides.

Now he runs a Drake TR4C into a five element wide space 20 meter monobander. Mobile he runs a Yaesu FT-101. That rig also goes to their cottage at Lake Kanieri. When Zelda and the children are at the cottage and he's at home she fires up the diesel generator and they talk on 75 meters. He says, "The good Lord planted two trees about 130 feet apart and we have a dipole up 65 feet".

Zelda and Russ studied for their amateur licenses together and took the test on the same day. She was asked her impressions of the U.S. "There is such a greater variety of things. Going in the stores here you see so many products to choose from, even in salad dressings. Your restaurant meals are different. We were surprised to get a huge plate of lettuce salad first. That (Please turn to page 15)



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# Kingman Reef

As told to WORLDRADIO by "Rusty" Epps, W6OAT, and Pete Grabosky, WB6OOL.

"A super experience" that's how Rusty summed up Kingman Reef. And he was quick to mention the cooperation from so many people who made it possible to give out a new country to thousands of amateurs.

Rusty, a 30 year-old law student had a ten week summer job with Watkins-Johnson. They gave him a three-week vacation. He called engineering manager Rolan Hagely, K6AFL, "a delightful guy" who really got caught up in the excitement of the DXpedition. He was keeping everyone at work posted on our journey."

Rusty also talked about Roy Henning, in Quality Control at Watkins-Johnson. "Roy was with Pan Am in Oakland in 1934-38 when Kingman was used as a refueling stop. He used to talk to Kingman on the radio. Roy steered us to people that had knowledge of Kingman."

Pete, WB6OOL, a 21-year-old electronics technician also received cooperation from his employer. Pete works at the advanced products lab at EIMAC, a firm known for its active and involved management enthusiastic about Amateur Radio.

Rusty was quick to laugh as he told about one incident during the planning of the trip. He and some of the members of Northern California DX Foundation (who sponsored the trip) were in a Los Altos restaurant "The City Dump". They were talking about leaving Palmyra for the next leg of the trip. The maitre d' said "You must be going to Kingman". Seemed he had also once been with Pan Am.

Also in the planning for the DXpedition was scientific research. Samples of marine life were to be collected for the Lawrence Radiation Laboratory. Brought back, the specimens were to be cremated and then tested for amounts of mercury vapor. This would tell the amount of pollution in the sea. Live coral was to be collected which would have told the levels of radiation fallout coming from the nuclear tests in the Pacific.

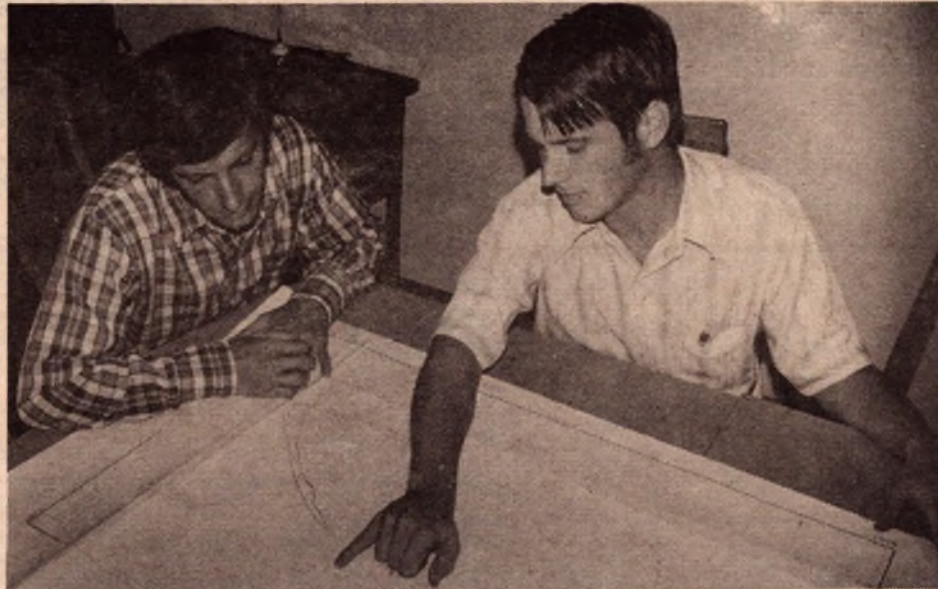
"We're sorry we didn't get a chance to pull off the collecting. We just got the bottles of formaldehyde ashore when the storm came up and we had to get off the reef."

"We had also intended to conduct propagation experiments with various levels of power. The results were to be turned over to Stanford through Professor Oscar Villard (W6QYT). We did get to do some work on that coming back on the boat. We had a Heath HW-7 modified by David Palmer, W6PHF. We ran power levels down to one-tenth of a watt output. On 15 meters W6s wouldn't hear us but the 5s and the 7s would, then in a little while the situation would reverse. We also operated on 40 and 20 meters. The results of the QRP experiments will be released when they are all compiled."

Pete, WB6OOL, told of being in Hawaii in January of 1974 when Jack Wheeler, KH6-CHC, and Ed DeYoung, KH6GLU, were working on going to Fanning, Palmyra and possibly Kingman. So on June 7th, Pete, Jack, Jack's wife, two daughters, son and a friend sailed from Honolulu in the "Poseidon" and arrived on Fanning seven days later.

On the night of June 14, VR3AG opened up from Fanning. Mike Smithwick, WA6TUF, was the first station to work Pete. At the same time Mike's father, Dr. Robert Smithwick, W6JZU, was at a meeting of the Northern California DX Club. Mike then patched VR3AG through the NCDXC two-meter repeater (WR6AIZ) to W6JZU. With his hand-held unit he put the signal into the public address system at the meeting.

Rusty was at the meeting and he tells that Pete's signal was greeted by thunderous



"Rusty" Epps, W6OAT, and Pete Grabosky, WB6OOL, show the chart of Kingman Reef.

applause and cheering. It should also be noted that Pete's seven day journey was the first time he had ever been on a boat overnight.

The original plan was for the DXpedition to fly to Palmyra, on a chartered plane, from Honolulu. A 7,000 foot runway had been built on the now uninhabited island during World War II. Pete and Jack Wheeler were to clear the overgrown runway. As there are no navigation aids in the area they had planned to set up a beacon on the 160 meter band, using a Drake transmitter, to guide the plane in to Palmyra.

Many people wanted to help, James Carr, W6FAY, who had been on Palmyra many years ago, and operated from there, sent the group a collection of slides he had taken there and tape recorded a narration.

Later when the DXpedition was on Palmyra they operated from the same building he had. His call, KP6AZ, painted on the wall, is still there. And recently John Jones, WA7LXE, flew over the island and took pictures of the runway.

Then trouble struck. On Monday, June 3, Merle Parten, K6DC, called Rusty to say the FAA would not approve the flight plan to Palmyra. The charter service was told they could not fly passengers to the spot because the runway was considered unusable.

Rusty - "I was low".

"On Tuesday, phone calls went all around, everywhere.

"Then on Wednesday, Bob Ferrero, K6-AHV, (owner of Ham Radio Outlet) got hold of Larry Briggs, president of Windjammer Cruises in Honolulu. After much negotiation a 44 foot motor sailer was rented and Larry would go along as skipper and bring another crew member. Rusty said, "Bob's phone bill came to \$280. He pulled it out single handedly."

In what was almost a portent of things to come, Larry Briggs said he had been to Palmyra before. He had tried to reach Kingman but bad weather drove him back.

Meanwhile, the equipment for the Kingman DXpedition had been sent far in advance to Honolulu. It had been loaded aboard the "Poseidon" and now was at Fanning. Pete was giving out contacts. As he put it, "It was a huge monstrous attack. I was mobbed from the first contact." He operated a Yaesu FT-101 with a Hy-Gain 14 AVQ set in the lagoon. The radials were in the water and it was a direct salt water path to the States. Operation was also on 40 and 80 meters. Pete had high praise for his used 1500 watt generator manufactured by the Dayton company.

Pete told about the trip to Palmyra. "We spotted the island, then that night the autopilot malfunctioned and we found we had been going in circles for about three hours. Everyone woke up when Jack was banging on it, trying to fix it.

"Avoiding the reefs was tricky. There is only one channel into the main island, Cooper Island. That's where the strip is. It's about one-and-a-half miles long and about a quarter mile wide. It was completely overgrown and we had to cut trails with machetes. Many years ago the CAA had a navigational radio beacon there. Now there are just abandoned warehouses and trucks. Thirty years of storms and ocean rot took its toll. We found a ledger book with an entry of March 12, 1941.

"Today the island is inhabited by a million birds and when they take off the sky goes black. Operating as KP6PA I was on all day and all night. In seven days I gave out more than 4,000 contacts. And I gave a lot of guys contacts on all five bands."

Meanwhile, Rusty, Bob Ferrero, K6AHV, (top USA Single Operator scorer in the 1973 CQ DX contest) and 25 year-old Jim Rafferty, WA9UCE/6, (who got time off as a photographic salesman for Burke and James) were leaving for Hawaii. They were given a big send-off at San Francisco International Airport by the Northern California DX Club.

The plan was to get off the plane in Honolulu, go directly to the boat and put out to sea. All had put in a full day at work so by the time they got to the boat they were rather tired.

Rusty says "Pan Am had oversold coach so we were all put in first class. Since we were going directly to the boat, we were in Levi's, tennis shoes and our special T-shirts. Esther Forbes, (wife of Jack, WB6-QDC; and mother of Ross, WB6GFJ) made us T-shirts with "Kingman Reef" on them and the daughter of Jack Troster, W6ISQ, made us T-shirts with KP6KR on them. We must have really blown the minds of the other passengers.

"The boat was under way almost immediately after we boarded, about midnight Hawaii time. We set up a Yaesu in the galley and that was the first operation of W6WX/MM. (The call is the club call of the NCDXC)

"It took us six days to get to Palmyra. Pete cheered when we arrived, he could take a break. We kept operating and together we must have given out nearly 7,000 contacts. I'm sure we worked everyone that wanted Palmyra. We explored Palmyra, it had big palm trees. The birds would fly right along side of you, just an arm's length away, staring at you.

"We transferred the radio gear from Jack's boat to the boat we had. Then we headed for Kingman. It is 33 miles from Palmyra to Kingman. It took us two days to find it. We probably will never know exactly what happened.

Three major ocean currents converge out there. They are tricky currents, and they shift. When you stop you drift like mad. There are three times in a day when you can take a navigational fix. The first is half an hour before sunrise. Then you can still see the stars and there is enough light to see the horizon. Then at local noon you can take a sun shot. Half an hour after sunset you can see the stars and there is enough light to see the horizon. The morning and night star shots are the most important. With the sun you only get latitude.

"It was incredible. The skies were so overcast we couldn't get the star fixes.

"We spent two days under full power just looking for Kingman Reef. Here was the problem. The deck is about five feet above the water and we were looking for something that is only about five feet above the water. It is maybe three to four hundred yards long and at high tide is fifty feet across. There was nothing in sight but water. It was the most miserable time of my life. We were scared in the daytime that we wouldn't find it. And scared at night that we would... by running into it. At night we stood double watches, listening for breakers. From a sun shot we figured we were on the right latitude and it was either to the right or left of us. So we would go three hours one way, return and look for three hours the other way. The skipper now is beginning to doubt if we had enough fuel to get back to Honolulu.

"He said if we didn't find it by noon on Sunday we would have to return to Hawaii. Now there was an hour of daylight left. You are looking for something black against very dark water. And now we were heading due west, looking into the sun. We were feeling pretty low. We had spent two days looking into bright glare. You think you see the breakers telling you there is some land. In ten minutes you can see 14 reefs. None of them are real. It becomes like a mirage.

"Briggs was up on the mast. Suddenly he came down and hit the throttles ahead full. We thought we saw it. But then we thought we had seen it before. Then in 15 minutes, we saw it for real.

"The fathometer which registered down to 240 feet, which had been off-scale moved up and registered 25 feet in a period that we travelled no more than fifty feet. A lot of hams wondered why we said we were there and then went off the air. Here's the reason. The engines were cut way back so we wouldn't hit the reefs in the dark at any speed. The generator was run by the engines. When the engines were cut back the voltage dropped too low to operate the radios. We dropped anchor on the 29th of June, Saturday night. It was such a relief. We went from very low spirits to euphoria.

"We were up at the crack of dawn. The boat had to go around the reef and enter into the lagoon. Bob and Tony, the 21-year-old crewman, went ashore in a dinghy. As they started out we saw a sailboat nearby.

Could it be the Southern California DX Club? Someone kiddingly said, "That must be John Cashen, W6KNC. (See WORLDRADIO, July 1974, Pages 7 and 8 "Tongareva")

"Bob found that Kingman was a mound of coral, very uneven. There was nothing solid. We just pounded the verticals in. The only vegetation was one coconut that had washed up on the reef. And we saw one (Please turn to page 29)



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# Walk-A-Thon



Judy Yost, WA6RAN, Bill Yost, WA6PIU and Les Cobb, W6TEE.



Dave Conkling, WA6IQK, at the control station.



Doris, WA6UAF, and Mike Keller, WA6RWR, in the truck and Les Cobb, W6TEE, mobile on the bicycle.



Wally Wynn, WAØZUK/6, at a checkpoint.

## Public Service Communications-Use of Ham Radio to Support Local Events

by Les Cobb, W6TEE

Amateur Radio communications for home-town public events provide a worthwhile service and generate good publicity for us.

Such events may be chairitable, such as a marathon fund-raising walk or bike ride, or they may be civic, such as a parade. Whatever the activity, they all have one thing in common. The workers directing or aiding the event are at separated locations and have a need to keep each other informed of problems and progress. The RAMS (Radio Amateur Mobile Society) help out on several such activities in Sacramento each year. This is a description of one such undertaking for those who would like to become similarly involved.

### 1974 Sacramento Walk

The Sacramento Walk (Walk for Development) is a youth-organized event. Participants collect pledges on themselves by the mile, and undertake a long-distance endurance walk. The longer the walker goes, as indicated by check-point stamps on his pledge card, the more his pledges are worth. The walk this year was over a 30 mile loop.

The money raised went to selected projects to combat hunger locally and internationally. This was the fifth year for this event.

The first indication that organizing efforts were starting for 1974 came in a short blurb buried in a local news column in one of the Sacramento newspapers in January. This event is normally held in April, but it's always important to make an early contact, even if you have worked with the group previously.

Chairmen change, notes are lost, and they may have no idea how to get in touch with

you. It's even more important to get in on the ground floor if the organizing group has no previous knowledge of your capabilities to help them. In both cases, competition may jump in ahead of you as we will discuss later.

At the early walk meetings, we acquainted the newer committee people what with Amateur Radio could do for the event. We stressed that amateur volunteers would pass communications between walk workers. Use of radio had to be considered in their planning so people in a position to report and to solve problems would be working through the communications network. Without someone with the authority to act on the receiving end, the whole communications effort would be wasted.

We asked for a central location for a control station where our equipment and operators and our walk committee counterparts could be stationed. A church along the route was chosen for this purpose. Since we were using a two meter repeater, the exact location was not critical for good coverage of the route. But, this may be a consideration for groups using other bands or two meter simplex.

RAMS members volunteering were assigned a specific four hour period during the walk. They were free to participate for longer periods, but the assigned times were used for our advance planning.

They day of the walk, mobile operators, with or without an advance time assignment, checked in with the NCS and were sent wherever they were needed at the moment. Assignment locations were changed as the main body of walkers progressed along the route and as other operators required relief. Typical assignments were to cover a check-point, or to sweep a section of the route. Both mobile and hand-held rigs were used, including two bicycle mobiles.

The demands on our operators on this occasion were relatively light. The number of walkers was down considerably from the high of 12,000 two years ago. The on-the-air traffic was also down as a result. However, our radio work was again of great value to the walk committee to determine the progress of the walkers and to identify food and other supply problems at specific check-points. As the day wore on (and feet wore out) locations where "poop-out-pickup" cars were needed were identified by amateur radio.

For our operators, the day began at 6:30 a. m. and it didn't end until 8:30 that night. Some contributed a couple of hours, some worked the entire period, but they all helped make the communications exercise and the Sacramento Walk a success.

Competition. One reason for volunteering your service early is that local public service Citizens Band groups such as REACT may also be looking for these activities. (There are four such groups in this area and one did try to get in on the Sacramento Walk!) Many hams have taken the attitude that local communications should be left to the CBers. However, with the recent explosion of interest in two meter FM and repeaters, many ham groups now find themselves in a position to offer superior local communications and they enjoy doing it.

Observation of CB public service efforts shows their communications range to be spread thin by some of the longer events. Relays and even unanswered calls to outlying units seem to be common. But don't underestimate CBers. Faced with such problems, they have been known to overcome them by the sheer number of people and units available. Recently, however, such organizations seem to be fielding smaller groups as bootleg operations becomes the dominant CB pastime.

CB rules prohibit using CB stations for communications other than for the licensee except for emergencies or aid to travelers. This would seem to rule out CB for most other public service activities, but the FCC apparently has not taken this stand. After all, there are much worse uses for CB.

Sell Yourself. It helps greatly to have a handout sheet describing what Amateur Radio can do for public events. Such a handout should emphasize the value of instant communication of problems and progress to any activity involving widely separated locations. The safety aspects should not be ignored, either. Since such a sheet will generalize, the recipient should be invited to contact you to work out possible details before making a yes or no decision. A permanent address such as a P. O. box number should be given. Such handouts have a way of drifting back after a couple of years, and today's activity chairman may be tomorrow's "Moved-left no forwarding address".

You will find that many people do not know the difference between our radio and CB. Your handout should include a short explanation, not as a put-down on CB, but to inform those who have had CB assistance in the past and had their fingers burned that this is something different.

Make your handout sheet clear, literate, and to the point. Use a good printing process so that it is easy to read. Get copies out to those who may generate activities that you may wish to help. Contact them again when the activity planning is started. Don't assume from one year to the next that they remember you or that the same people are involved. Start from scratch.

Good Luck.

# Obstacles? What Are They?

by Pauline Jordan

The young man sitting at the table filled with electronic equipment turns dials and switches, presses a bar on a microphone and says "W8ZXE, W8ZXE". He releases the mike bar and a voice crackles through the receiver, "Hi, there, Rick. H'ya been?"

What follows may include as many as five voice "tune-ins" by "ham" amateur radio operators who get to know one another by sharing the airwaves.

The caller sitting at the table littered with the tools of communication is Rick Hayner, 25, a ham operator since the sixth grade when he earned a Novice operator license. That initial step to the wonders of the airwaves demands sending and receiving International Morse code at five words per minute plus passing a Federal Communications Commission test.

Not satisfied with being a mere neophyte, Hayner kept practicing and, at 12, advanced his code speed to 13 words per minute and passed a second FCC examination.

Hayner now talks with other hams from New Zealand to Detroit, "A hobby," he says, "which opens up the whole world to you."

For Hayner, the observation is important,

(he is blind, afflicted by cerebral palsy and has had 10 major operations before he was 12).

One of his first contacts, when he was 14, was one of Hayner's "most exciting", he said.

A Novice, in code only, he got an unexpected contact with a "YL" (young lady), in Columbus, Ohio, who was also blind.

She sent young Rick "88's" (kisses) and in his haste to reply he knocked the sending key to the floor, it fell apart, the spring flew out, he crawled around and found it, tried to hold the wires together with his fingers and got "zapped", and then when he got the wires together he was too excited to send code, he laughingly recalls.

His farthest contacts have been Christ Church, New Zealand, and Mt. Gambia, Australia. Once he handled a "relay" message through the American Radio Relay league (ARRL) from a victim of Hurricane Camille in Mississippi, through contact with another operator in Detroit, who got relatives on the phone via a "patch".

Hayner became interested in radio at the Michigan School for the Blind, where he also learned to play the guitar and tune pianos.

He has "perfect pitch," and now also plays

the four and five string banjo, mandolin, Hawaiian guitar and the family's electric organ. He attended Portland High School for three years and earned a diploma.

Hayner spends 50-60 hours weekly at his radio rig. He prefers code to voice contact, he says, and three-fourths of his time is used contacting Novice operators who can only communicate by code. He estimates there are 10 to 15 thousand novices in the United States.

He got his first 50 Watt input rig in August, 1963. His present equipment has an input of 1,000 watts.

"I can send 40 words a minute in code, and 'copy' 75 words a minute in my head, if I don't write it down," he says.

His father Lewis Hayner, joined him in his hobby in 1966. "If you can do that, so can I" his dad said, and installed six and two meter equipment upstairs in their home, and a two meter rig in the car.

The basement radio room of the Hayner home is an attractive carpeted area where the clock on the wall keeps only GMT (Greenwich Mean Time).

He reads a lot, and said, "My reading Catherine Marshall's 'Beyond Ourselves' changed my life". He sent her a cassette

tape telling her how much he liked the book, and she replied by tape and read him an entire chapter of the book she is now writing.

Hayner is available for hire to tune pianos, and he also gives guitar lessons. Every Wednesday afternoon you'll find him at St. Patrick's Elementary school working with 130 fifth and sixth graders as they plan their weekly Thursday morning guitar mass. He has accompanied this mass for the past two years.

But this remarkable young man's first love is his ham radio rig.

"It's a hobby which is never boring - no way can you ever get bored on the air," he says.

As you leave you get a warm handclasp and a "It sure was good seeing and talking to you. Hope I can see you again soon."

Rick Hayner sums up the business of successful living, no matter what obstacles are placed in your way, with the statement:

"Nothing is a handicap unless you let it be."

If this were a voice contact on his rig he'd say: "W8ZXE. This is WA8JKV sending 73 (best regards) and signing clear."

(From Lansing, MI "Journal")

## ZL3AAA

(Continued from page 8)

was just about a meal in itself. At home we eat the salad with the meal. You have a greater variety of meats to choose from. Our meat prices are about one-third yours, but our wages are lower. And good clothing here seems to be expensive.

"And those freeways, cars above you, below you, left and right, hundreds of cars around you. Our area at home is a dairy farm and coal mining area and our 'freeway' is two lanes each way.

"The most impressive thing is the friendliness of the people. So friendly. When you're in a shop, people don't know you but they speak to you. While people in the smaller New Zealand cities are very friendly, I think people here in the larger cities are friendlier than people in the large cities of New Zealand. When people hear our accent they would ask us where we were from and wish us a good trip."

Zelda, a nurse at Grey Hospital, said "Amateurs are so hospitable. We get to see people at home with their families. You wouldn't get to know this country, the way we have, on a whirlwind tour on a bus. The personal side is important, to know people as they are, and we've been impressed".

The guests at the Rast's had many questions of the Garlicks and they answered questions about politics and economics in New Zealand. We learned that medical care is free. Russ said his personal income tax rate is about 20 percent. The property tax on his home is but \$54 dollars a year. He also owns a boat on which no

tax is collected. A few ohhs went up from the people listening.

Russ said the television picture over here is coarser than the one at home. New Zealand is on the PAL system which is over 700 lines to our 525 line system. They have only one channel. Commercials are limited to three nights a week and there are no commercials allowed in the news programs. A government license to have a TV set costs \$15 dollars a year. An Amateur Radio license is \$6 a year.

Asked to make other comparisons, the Garlicks said household appliances are less expensive in the U.S. and automobiles were about half the price of that in New Zealand. He explained that cars from Britain and Australia have a five percent duty and cars from Japan and Germany have a forty-eight percent duty. You don't see American cars there. Gasoline is 68 cents a gallon (the imperial gallon, about one-third more than the U.S. gallon).

Another difference was brought out during the slide show of Field Day. In ZL land Field Day starts at 2 p.m. on Saturday and continues until midnight. It then resumes at 6 a.m. and finishes at 2 p.m.

Amateur Radio means a great deal to Russ and Zelda. He says, "I'm very pleased to be an amateur. It has brought many friendships to me. It has fulfilled my desire for a hobby. Around the world amateurs are a great breed." The Garlick's 17 year old daughter and 14 year old son will be taking the examination in September. Amateur

tests are given only on the first Wednesday in March and the first Wednesday in September.

According to Russ, "New Zealand is wide open for amateur radio tourists. They are always very welcome. Bring your license and you will virtually get a license in a matter of hours, with no charge. You will get a call sign on the spot. When George (W5MY) and Penny (WA5OTK) Beam came to New Zealand they walked into the office of the Sub-district Radio Inspector in Greymouth and walked out with their call signs."

Which brought Russ to a complaint. "This reciprocal licensing seems to be a bit one-sided. We give licenses almost immediately. When I was planning on coming to the U.S. I talked to one of your FCC officials on the air. He said my application for a reciprocal license could not be processed in under six months and it could take up to twelve months. I'm going to write to Senator Barry Goldwater (K7UGA) about that. And, we don't charge for the visitors license but the FCC charges us nine dollars."

"We've hosted quite a few amateurs at our place, coming to mind right off are Fred Lubach, VK4RF; Tony Freitas, VK9-FS; George and Penny Beam, W5MY-WA5-OTK; and Ken Zahn, KL7AP. Bill Schroeder, formerly WA9LIT, visited Greymouth and decided to stay here. He's a high school teacher and is now ZL3ADF."

Russ is currently building a CW sending keyboard. He told that to get a license

in New Zealand the CW test is 12 words per minute. The test is sent for three minutes and the applicant is allowed no more than three mistakes and three "overwrites" or corrections. When going for the Grade 1 license the speed is the same but the copy has to be near perfect.

Russ sees a good future for Amateur Radio in the hands of the young people coming up now. He tells that when his 14 year old son, Peter, wanted to build an audio amplifier he went to the transistor and didn't even think of using a tube. "The sign of the times is that young people are very solid-state minded. They are interested in VHF and UHF and the satellites."

Zelda wanted us to be sure and mention the WARO which is the Women's Amateur Radio Organization in New Zealand. They have over 50 active members and hold their annual convention in conjunction with the NZART gathering. Non-ZL stations can work five ZL-YLs in the different districts and receive an award.

The Garlick's are "plugged in" to many Amateur Radio activities even to the sending of books to the Airmen's Memorial School in Ewasse, New Britain, operated by Fred Hargesheimer, W0EBG-P29FH.

As for his view of "the Yank" on his trip to the U.S., Russ said, "We're very impressed. If it wasn't for the accent they could be very good Kiwis."

"We'll go home broke, but we're so very glad we came."

## CHOOSE YOUR CALL

(from page 1)

for special call signs should come within reasonable limits.

The current 25 year eligibility requirement for a 1X2 call sign would be deleted, the Commission said, noting that amateurs meeting this requirement have had ample opportunity to exercise this option.

It said the proposal would undoubtedly result in the limited number of 1X2 format call signs becoming rapidly exhausted, but noted that eventually was only a few years off anyway since the number of

amateurs completing 25 years in the Amateur Radio Service should begin to increase sharply, reflecting changes in the operator license structure in the early 1950's. It said that for this reason, it was proposing to delete the availability of in memoriam call signs to club stations (a club may apply for and receive a call sign that was assigned to a deceased member and use it for the club call sign to perpetuate his memory).

Only call signs having prefixes in the series now normally assigned to primary and secondary stations

would be available initially, if the proposed rules were adopted, the Commission said, with additional prefix series possibly being added at a future date. It also said that call signs having the prefix K, W, WA and WB, would be available immediately, as would those call signs normally assigned to stations not within the 48 contiguous United States. For stations outside the 48 contiguous United States, only a choice of call sign suffix could be made.

Comments on the proposal are due by October 9, 1974, with reply comments due October 24, 1974.

Action by the Commission June 26, 1974 by Notice of Proposed Rule Making. Commissioners Wiley (Chairman), Lee, Reid, Hooks, and Quello.

## CINCINNATI HAM

(from page 1)

making it available except on special authorization.

The problem was quickly solved by having the rare, potentially life-saving drug, shipped by commercial airliner from Cutter's subsidiary in Mexico City, Mexico, to Bogota.

The call for help from Camillo was placed at about 1 p.m. The second of the two needed rare drugs arrived in Colombia's capital city before 5 p.m. the same day.

In Colombia, there are a mother, a father and a doctor who say a prayer of thanks every now and then for radio amateurs.

In Cincinnati, there is Dave Hell, who, when he is not playing guitar for the Mudshark Bank rock group says a prayer for a little girl in Colombia.

(Cincinnati "Enquirer")



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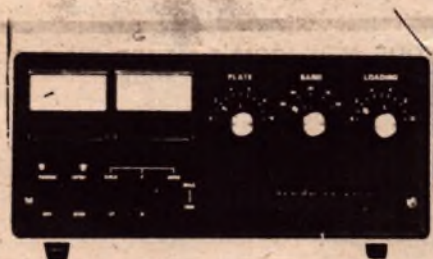


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# DXing in the Caribbean



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The DX banquet table is an ever-changing feast with ever-changing diners so that the above order of difficulty should not be taken completely rigorously. For example, a few years ago Swan Island would have been on the list, Navassa Island would have been as rare, or rarer, than Aves Island, and today Montserrat should be closer to the bottom of the list thanks to the strenuous efforts of Michael Badolato, W5MYA, and his friends.

This list agrees remarkably well with my own earlier experience from California where I had worked 22 of the 32 countries listed above, but none of the top six. Aves, Bajo Nuevo, Serrana Bank and Navassa are all special cases--no jet airports there!

Aves Island is being kept artificially rare by the Venezuelan hams, who successfully blocked at the last moment, a well-equipped and licensed U.S. DXpedition from operating on Aves, despite reciprocal licensing between Venezuela and the United States. Twenty-six of the remaining twenty-eight countries--the two exceptions being Cuba and Guantanamo Bay--should pose no special difficulties for a U.S. ham on a suitcase DXpedition. Anyone of these countries, with the possible exception of Puerto Rico, should be able to generate a pileup quicker than one can say QRZ. The surprising thing is that only a half dozen or so of these 32 countries are activated during any given DX Contest.

The two biggest problems, in my opinion, are (1) getting the license to operate and (2) the QSL card problem. The first of these is solved by deciding on two or three possibilities a year or more ahead of time. No matter how long you think it will take to get the license, it will take much longer! Once you have the license, it can be easily renewed. ARRL Headquarters is useful for the appropriate addresses and, for the French countries, the application forms needed (4 copies). Despite reciprocal license treaties there is no guarantee that your license application will be automatically approved.

The QSL card problem is far more serious. QSLing thousands of QSOs can be extremely time-consuming and expensive and is undoubtedly the reason why most of the Caribbean "locals" quietly steal away to the beaches during a DX Contest period.

My own solution to the QSL card problem may perhaps sound weird at first, but I'm convinced it is the quickest and cheapest technique and, with some minor qualifications, by far the most satisfactory to all concerned.

I make up my own QSLs, 3 at a time, on a ditto (duplication) machine, so that my "cards" are really "papers"; they most certainly are not works of art--but why should they be? One stencil is good for

about a thousand cards and the whole job may take a long-day's work to produce 4,000 cards at negligible expense. Typed information, descriptive of the operation and QTH and as complete as possible, go on the cards, much more so than is customary. A card is made out for each and every QSO and one can be turned out every 10 to 15 seconds, going right down the log. This takes about two days, or even less, for 4,000 QSOs.

I was fortunate during this part of the game, to have the experienced help of Ed Berzin, W2MIG, who made the whole task much easier and quicker. The cards are then sorted into 12 piles (10 U.S. call areas, VEs, and DX) and two additional sortings get them into "apple-pie" order, most useful for Contest scoring, duplicate contacts, SASE matching, etc. At this point about 300-500 SASEs have come in and these can be quickly matched up and shipped out. Some 4 or 5 weeks after the last QSO from the Caribbean has been made, the incoming SASEs have settled down to a dull roar and the remaining cards are shipped off (cheap!) to the appropriate QSL Bureaus and, with a few exceptions, one can forget the whole thing and dream about the next DX QTH and just where the necessary \$400 is going to come from!

I am a firm believer in what I call the inverse Box 88 syndrome--get out the cards to the customers as fast as possible. I am never pleased and often irritated on receiving a card for a QSO that may have been made back in high school.

Picture postcards can be dressed up to make wonderful QSL cards, especially when graced with the appropriate (Samco) stick-ons, but the expense of these run close to 25 cents apiece, so I necessarily limit these to a couple of dozen special ham friends. In Marigot I was fortunate to wangle about 30 beautiful hotel postcards from the hotel manager, these being especially appropriate.

I've found it advisable to make up a check list of things to do some 3-4 months ahead of time, to be continually updated. High on this list should be background reading material. The beautiful 1967 National Geographic book: *Isles of the Caribbees* by C. Mitchell first brought my attention to Sint Eustatius, along with the fact there are no licensed hams living there--even now. Two National Geographic articles of special Caribbean interest are to be found in the January 1970 and the October 1966 issues--see your local public or school library.

The Golden Rock of St. Eustatius is called, was once the most thriving and prosperous of the Caribbean islands, until, some two centuries ago (1771), Admiral Rodney visited the place "in anger" and proceeded to take it apart, acquiring a large personal fortune in the process. St. Eustatius has never recovered. I operated from the Admiral's bedroom, the former government guest house now called Anderson's Guest House.

My written request for a room reservation reached Andy a few minutes after my own arrival! I was told of one theory regarding delays in incoming mail; somewhere there is a large unlabelled mail bag into which St. Eustatius mail is put letter by letter. In due time, whenever the bag is filled, it is locked shut and sent off to the South Pole. A more realistic explanation is that mail addressed to the Netherlands Antilles may wind up 550 miles to the southwest in the big ABC group (Aruba, Bonaire, Curacao) from which it must backtrack to the tiny three-S group (Sint Maarten, Saba and Sint Eustatius, 14, 5, and 12 square miles in area respectively.)

Both St. Eustatius and Saba are very accessible, being only a few minutes flight by Windward Island Airways from Sint Maarten with its jet airport. My Winair pilot's brow was deeply furrowed, a fact readily explainable from our first look at the Saba airport, whose 650-foot long runway bears close resemblance to a Band-Aid. Saba looks like Napoleon's cocked hat and has been called such; it's really not so much an island as it is the tip of a tre-

mendous extinct volcano rising steeply to its peak of Mount Scenery, 2,854 feet high.

The paved road, switch-backing up from the airport, looks as if it was held there with spit and mass hypnotism and most trails I've encountered in the Sierra Nevada are less steep. However, it can only be considered a high-speed highway if your brakes should fail. I stayed four nights at Scout's Place, formerly the Windwardside Guest House, a most colorful spot to operate from. When I return I plan to walk the two blocks to the beginning of the 1,064 steps leading to the top of Mount Scenery, where the view of Sint Maarten, 30 miles to the north northwest and St. Eustatius, only 15 miles to the southeast, must be superb. Saba was not only the most colorful of my QTHs--it was also the coolest, the 1,600-foot altitude of Windwardside making about nine degrees difference as compared to sea level. Saba is probably the only island in the Caribbean that doesn't have a beach. The Sabans are mostly very poor people, by U.S. standards, but you would never know it from their freshly painted, clean, well-kept up homes.

The origin of the island's name is so improbable that I dare not repeat it here; the interested reader can find it in the 1972 paperback: *The KLM/ALM Guide to the Dutch Caribbean* by Ian M. Keown, a present to me from my travel agent that I found extremely useful; it even gives pertinent and practical information on French St. Martin and Surinam.

The island of St. Martin is split along an east-west line, the north 55 percent being French (very rare) and the south 45 percent being Dutch (not quite so rare). The reason for this particular division is another improbable story. Sint Maarten, together with Saba and Sint Eustatius, counts as a separate ARRL country as distinct from "the Netherlands Antilles", which is the ABC group, 550 miles to the southwest. The only licensed French St. Martin permanent resident is Yvon Kergullen, FG7AK who, with Kenneth Palmer, K2FJ, was most helpful in getting me set up, in digging up a needed 2:1 stepdown power transformer, and in introducing me to the local gendarmes.

My site turned out to be a very good one: Room 6, Hotel Le Pirate in the outskirts of Marigot, reached by a relatively short taxi ride from the Sint Maarten airport. My Hy-Gain 18 AVT/WB 5-band vertical antenna was located on a flat sandy spot just to the north of my hotel rooms and so close to the Caribbean that the water tickled the ends of my radials at high tide. I can heartily recommend this spot: 3,850 QSO's were made in less than 6 days and WAS (confirmed!) was made in 4 1/2 days. The last morning the manager inquired just how far I could talk with "that thing" and his eyes widened with astonishment when I said I had talked with the South Pole. Of course I didn't tell him I only got a 4 by 1 signal report out of KC4USN. Nevertheless it was most satisfying to do this, my signals going right through the hotel--and the manager! I can also highly recommend his sumptuous ham-and-eggs-plus breakfasts along with the evening shish kebab.

FGØZZ was a high-powered, multiop DXpedition also operating during my stay in Marigot. These experienced hams had a 6-element HyGain beam atop an enormous telegraph pole on a 1,400-foot peak and at times were heard working stations I couldn't even hear. I operated as FGØAFA/FS7--too much of a mouthful--and when I got home found a letter from the Guadeloupe authorities stating that the FS7 suffix is not official and need not and should not be used! The FGØ prefix is reserved for foreigners (as is PJ8); if you work an FGØ it could be either Guadeloupe or French St. Martin, but would probably be the latter.

One of the interesting sidelights of my Marigot stay was working simultaneously on the same frequency for many hours at a time with my friend Ken Palmer, K2FJ, who was operating four miles away in Philipsburg as PJ8DX/PJ7. The first Saturday of the October DX Contest we (Please turn to page 47)

by John B. Irwin, K6SE/2

Psychologists tell us that deeply and invisibly engraved across the chest of every individual--and some more deeply than others--are the words: "I want to be important".

Christianity teaches us that "It is more blessed to give than to receive". These two statements might seem to be in sharp conflict, but they surprisingly reinforce each other as justification for going on a DXpedition where one may operate hour after hour handing out a rarish country to a pileup of hams, frantically eager to get your attention.

Last October I packed my Swan Cygnet into a briefcase and operated for six days and nights from Marigot, French St. Martin. Three months later I repeated this intriguing experience from Saba and Saint Eustatius in the northern Dutch Antilles.

My hope is that others who read these words will be stimulated to do something similar. It is a most rewarding experience albeit a far cry from a typical, easy-going holiday on the beach.

I am not the first, nor shall I be the last to say that the Caribbean can be extraordinarily beautiful. Fifteen years ago I managed to route myself back from South America by island-hopping from Port of Spain (Trinidad) to Miami via Barbados, Martinique, Guadeloupe, Antigua, Sint Maarten, St. Croix, Puerto Rico, Dominican Republic, Haiti and Jamaica. The beauty of the changing colors of the water is etched in my memory.

At that time I didn't know the difference between a KP4 and a KV4, but my resolve to go back for a second and longer look was strengthened by a re-awakened interest in amateur radio in 1968, at which time I discovered there were more than 30 "DX countries" in this area, most of them relatively rare. In 1972 I attempted to find out just how rare each one was by polling 201 American-Canadian (recent) DXCCers, as listed in QST, to find out what was the order of difficulty of all the ARRL countries, and with the following results for the Caribbean islands. The number after each country corresponds to the number, of these 201 DXers, who had worked this country. In the total picture of more than 320 "countries", Aves Island ranked 44th, Baja Nuevo 99th and Guantanamo Bay 279th.

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# profile

## Josephine Clark, WB6ZUC

by Jack Troster, W6ISQ

"Now Hear This... all you ex-Dog Faces and Swab Jockeys (Marines at ease). The next time our NCDXC Secretary Josephine Clarke stands up to read the minutes, I want all you punks to snap to. That just ain't no ordinary Secretary we got there. That's ex-Army WAC Captain. That's an order. And all you Marines---make sure them other yehoons stand to. Dismissed."

It's a fact, ladies and gentlemen. When the Big One began brewing, Josephine decided to make her fortune with the U. S. Army. So she joined up as a "Private No Class" at \$21/month in 1942... and she was on her way. We'll let Jo pick up the story here... "I served with anti-aircraft command in Boston (her home town by the way) and with Hq, Replacement and School Command in Birmingham, Ala. where I was the ammunition officer distributing ammo to 26 centers such as the Armored School, FA School, Infantry School, Camp Roberts, Camp Blanding, Hood, Riley, Sill, etc. I was an officer with the first WAC company to be assigned to the field with the AAA in Boston and my most unusual assignment there was to be the map reader and navigator for a British Squadron from Malta which was learning to use the Navy TBF plane. We made ten simulated bombing runs over Reading, Mass. and Newport, R. I."

No doubt there's a lot of you fellas out there who got your ammo through Jo's good offices. And I'd personally like to thank Jo for the ack-ack protection while I was in Boston!

In addition to her Army credentials, Jo also has her teacher's credentials which she obtained from Washington State College and

the University of Washington. Jo was an English literature major and taught English in High School, so don't nobody dangle no participles or use no crummy English, no how.

Jo's introduction to Amateur Radio came about through her son, John, WB6YAK, now a junior at Princeton. When John got his Novice license, the code fascinated Jo. Does sound a bit like ack-ack at times, doesn't it! Anyway, and Jo tells the story... "Once I was interested in the CW part I decided that it would be fun to surprise my family with an accomplished-fact Novice license. So without even telling my husband I started practicing the code and memorizing theory and when ready found a local ham who was home during the days when everyone was out---he gave me the test and I passed. Six weeks later, I phoned WB6YAY, a friend of son John's, and with his help we stunned the family in this way, I went to YAY's house where he tuned in the Novice frequency, called John, and said that he thought that he heard someone calling him and would he get on. John did and I called him. It took about fifteen minutes of convincing but he finally believed that it was his mother and went SSB with his father and sister too all congratulating me. We all love surprises and this is one of the best ones that we ever experienced, all agreed. I might mention that during the long weeks while I waited for the ticket it was especially fun to ask dumb questions of John about theory---really stupid ones."

That was the beginning of WN6ZUC---way back in February of 1968. Jo pretty much shares the rig with son John. A Drake Pair---R4C and T4XC with no linear---imagine that as a member of any DX Club with no linear! A Curtis keyer (for herself) and on those occasions where she has to go fone---there is a Magnum Six. Actually, Jo thinks the Drake twins are perfectly adequate for the DX she is chasing and enjoys the challenge to work through the mob with lower power. She doesn't bother with SSB in the pile-ups because why fight the KWs... dunno Jo, remember lil David. Being an ex-Army Person, Jo believes in the old Army maxim---"Listen carefully"---

believe that is correct. Anyway, as Nathan Bedford Forrest admonished... she believes in... "get there firstest with the mostest"... and if ye don't have a "mostest" KW, anything will do. But Listen. Lot of us might remember that.

It was "DX" for Jo for the moment that son John put up the TH6DXX at 91 feet, of course, when John is at Princeton, Jo is at 45 feet because this a hand-crank tower. However, after reading through the above, none of us would be surprised if Jo has taken up jogging and karate... and one morning when Mt. Athos is coming through long path, she will run outside and crank the thing up herself and clean us all!

Everyone knows Jo's peripatetic proclivities---and even at this writing she is in the far reaches of the Pacific Ocean area. This has been a hobby within a hobby---traveling and meeting hams overseas. Actually, it begins at home before the trip when Jo studies up on the customs, cultures, etc. of the areas she plans to visit. When she was in OK-land she met OKDDK and OKIAAJ. The chief topic of conversation was Jo's age which she found hard to understand until they told her that the OK-women look old by age 30 because of the manual labor which most do (Note: in USA, it is the men who look ancient at age 30). So the OKs marvel at the Americans in this respect. Then Jo noticed that most of the road repair was done by women and many do very hard work in the fields. No doubt Jo saw the same thing in Southeast Asia when she visited there and met many hams last fall.

Jo also visited the British Science Museum and had a chance to operate GB2SM a few years ago. Incidentally, Jo recommends a visit to that museum for early radio buffs who might be in London. Besides radio of early vintage, there is also an excellent display of World War II armaments such as buzz bombs, etc.

The overseas hams also stop by to visit Jo. One recent visitor was JA3KEV who is a school teacher in Kyoto. Jo finds it most interesting to discuss cultures, customs,

arts, etc., with these eye-ball overseas friends as well as over the air with long-time radio friends.

On the home front, Jo describes herself as a "housewife, ham and Docent at the Palace of the Legion of Honor". What that means is that she gives twice monthly tours of the San Francisco Art Museum for the public on a volunteer basis. So any you characters wanna get cultured up, make arrangements with Jo for a poisonal tour. Probably too late for most a ya though.

Besides son John, Jo also has a daughter, Mary, a recent graduate of the University of California at Santa Cruz. Mary has not yet shown an interest in radio, but who knows---look how her Ma got a license.

Josephine thinks somebody ought to sponsor a DXpedition to Wyoming for the benefit of the overseas DXers. She notes that many overseas people are hunting for Wyoming and a good, big operation there during some DX contest might be one answer. She also considers that a well-announced operation from the California counties of Madera, San Benito, Inyo and Mono would help some of the overseas fellas going for California Counties. Might be some thing for NCDXC to consider some year!

One of Jo's most cherished QSL's was received from WA6VUA, station at the Trxeters Peary Junior High School of Gardena with a note from the instructor WA6TRX. The note said "this period two ham classes heard you on the air. You were in contact with WB6YRU. The boys copied you for practice. I must say you have a beautiful fist". It was signed by many members of the class.

Cap'n... we All salute you.

(from "The DXer NCDXC")

An informed amateur is a better amateur. You can help enhance someone's enjoyment of Amateur Radio. Give them a gift subscription to "The Worldradio News". We send a gift card in your name. Please see page nine.

## overseas friends visit

by Ray Meyers, W6MLZ

Many refer to Singapore as the "Crossroads of the World" but it seems that Henry Radio Store on Olympic Boulevard in Los Angeles is the Crossroads of the world for amateur radio operators.

Recently Frank Leverrier, VK2ADE, of Castlecove, Australia, stopped by for a length, first with Cy Kahn, W6PXX, manager of the store and, a few weeks later I had the pleasure of meeting Frank during the Dayton, Ohio, Ham-vention. With him at the time was Dr. Gerhard Jacoby, DL3ME, of Munchen, West Germany.

Both of these distinguished visitors had stopped by the Old Old Timers' Club information desk to meet club president Andy Shafer, W8TE. It was my first meeting with Frank, who said he had worked me from Sydney while flagship, U. S. S. Seattle, was on its historic 1925 visit to Australia. We then carried the American Radio Relay League's representative, Lt. (jg) Fred Schnell, USNR, now retired captain, in an effort to exploit the medium high frequency bands. With us on board was Frank Hall, USN, now deceased, who had charge of the transmitter room while Fred and I handled station NRRL, the special call assigned us for the trip.

Frank Leverrier plans to stop by Los Angeles again on his way home from a tour of this country and, naturally, will head for Henry Radio. He has invited me to visit him in Australia, along with my wife, Margaret, whenever we have the opportunity, adding that we could stay as long as we wished. This sounds very tempting.

Dr. Jacoby is no stranger to many Southern Californians, particularly those who may have regulars at the SAROC conventions in

Las Vegas. It was at one of those meetings that I first met Doc and, as both of us are members of the Old Old Timers' Club, it was nice seeing him again at Dayton. He will attempt to locate Dr. Harold Villinger, the German scientist who was with me on the late Sir Hubert Wilkins' trans-polar submarine Nautilus voyage back in 1925. Doc Jacoby knows many people in Baden Faden, where Villinger came from and he will try and find out whether or not he was lost in WW-II or whether the Russians captured and held him for his scientific knowledge.

Another visitor at Henry Radio whom I had the pleasure of meeting was Fernand Cavmet, FO8DO, from Papeete, Tahiti. Fernand had stopped by with Maurice Piroumian, WA6OPP, his host, while visiting this area.

A former captain in the French Signal Corps, Fernand is now a professor of education in Tahiti and an instructor for the Radio Club of Papeete (French Polynesia) who has helped many prospective amateurs from the colorful South Pacific islands to get started on the air.

He and his wife Anna, have three children, Monique, 21, Chantai, 20, and Jacques, 18, all of whom seem to enjoy living in the warm climates of Tahiti. Jacques will also become an amateur if Fernand has anything to say about it.

His host, WA6OPB, is well known in this area. Maurice tells me that while Fernand was his house guest, he told him he operates the only slow scan amateur TV equipment on Tahiti. Some of our ardent SSTV fans in this area have picked up pictures sent by FO8DO. He operates on all bands from 10 to 40 meters and, as I understand it, keeps regular schedules with WA6OPB.

(From "Los Angeles Herald-Examiner")



All amateurs are invited to participate in the Ohio Interstate QSO Party, sponsored by the Ohio Council of Amateur Radio Clubs. Rules as follows:

1. There are two 8-hour operating periods: 1900Z August 31 to 0300Z Sept. 1 and 1500Z Sept. 1 to 2300Z Sept. 1.
2. No restrictions on operating time, power, number of operators or transmitters.
3. Each station can be worked twice on each band; once on phone, once on cw.
4. Ohio stations may contact any other station for credit. Non-Ohio stations may contact only Ohio stations for credit.
5. To encourage emergency preparedness and provide contact from rare Ohio counties, portable stations operating from any Ohio county except Butler, Cuyahoga, Franklin, Hamilton, Lorain, Lucas, Mahoning, Montgomery, Stark, Summitt and Trumbull may multiply their final score by 1.5. Portable operation is defined as operation outside the county in which you are licensed and signing your call as '8. Amateurs throughout Ohio and surrounding states are invited to test their emergency and Field Day rigs by putting a rare Ohio county on the air.
6. QSO points are 1 per completed exchange on 80 through 10 meters, and 2 on 160 and all frequencies above 50 Mhz. As a bonus, a complete exchange with the Ohio State Fair special event station, with expected

call WO8HIO, are 5 QSO points on 80 through 10 meters.

7. The final score for Ohio stations, is the total number of QSO points multiplied by the number of ARRL sections worked, including Ohio. DX stations may be worked for QSO points but do not count as additional sections. For non-Ohio stations, the number of QSO points is multiplied by the number of Ohio counties worked.

8. Portable stations changing counties during the contest may repeat contacts for QSO points, but multiple contacts may not be claimed by operating on a county line. Stations outside Ohio may claim both QSO points and counties.

9. The exchange is QSO number, RST, and ARRL section or county. Example: NR204 579 Franklin. Stations operating on county lines may issue more than one multiplier but not more than one QSO number, to an individual station per band per mode. Example: NR304 589 Franklin Delaware Union.

10. Suggested frequencies are 1805, 3575, 3975, 7075, 7275, 14075, 14285, 21075, 21375, 28075, 28575, 50.15 and 145.10. Try phone each even hour GMT and CW each odd hour GMT. Try 160 at 0200Z Sept. 1.

11. Logs showing time date stations contacted, QSO exchange, band, mode, location and score must be received by Nov. 1, 1974 by: Ohio QSO Party, 6470 Penick Drive, Reynoldsburg, Ohio 43068.

12. 1st, 2nd, and 3rd place awards will be given to the highest scoring stations inside and outside Ohio, and to the winners in each ARRL section and Ohio county, providing at least 10 different stations are contacted. Separate awards to stations using frequencies above 50 Mhz exclusively.

13. Contest package of log, Ohio county & ARRL section list, and summary sheet will be sent by the Ohio QSO Party upon receipt of SASE.

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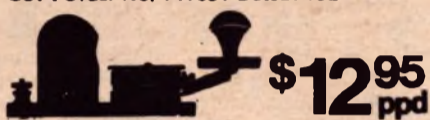
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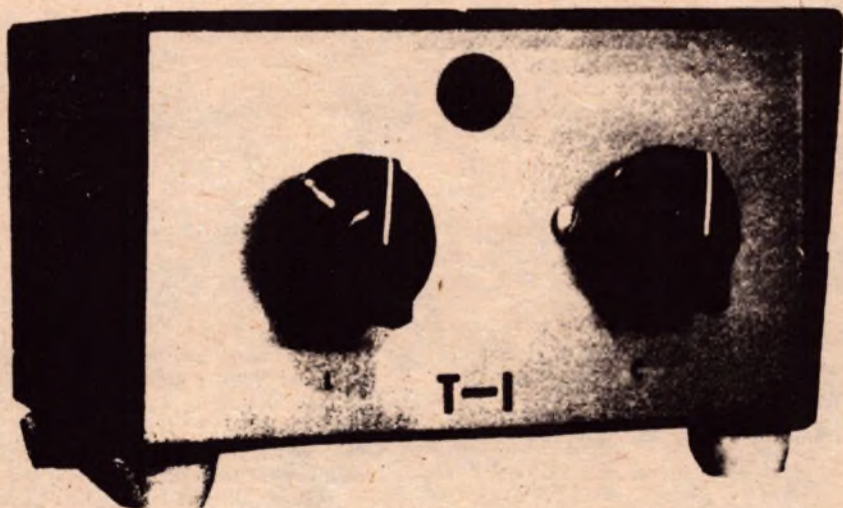
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## COLLINS ANNOUNCES NEW AMATEUR RADIO OPERATIONS GROUP

Cedar Rapids, Ia., July 9, 1974 -- Collins Radio, part of Rockwell International Corporation, has announced increased emphasis on amateur radio activities with the formation of a new amateur radio business operations group.

Appointed manager of the amateur operation is Joe H. Beler, W5WY/Ø, who has been with Collins for 14 years in various program management, systems engineering and manufacturing positions. An amateur for more than 30 years, Beler holds an Extra Class license. While serving with the U.S. Air Force, where he attained the rank of Colonel, he was responsible for introducing operational HF SSB to the Strategic Air Command.

Jerry Carter, WAØZRW, who has been involved in Collins amateur marketing activities for the past two years, will be marketing manager in the new operation. He has been an active ham for 11 years.

Also joining the new business operation is Arnold Verdow, WØLIJ, who will be in charge of product support. A longtime Collins employee, Verdow, with an Extra Class license, has been active for many years in Amateur Radio, both with his own station and in activities such as Civil Defense.

Carter is in charge of amateur equipment sales. Verdow, handles all questions of a support nature on Collins amateur equipment.

The amateur radio business operation is a part of Collins' Telecommunication Equipment Division based at Cedar Rapids, Iowa.

Collins Radio is a high technology avionics and telecommunications Group in Rockwell International Corporation. In addition to its facilities in Dallas, Tex.; Cedar Rapids, Ia.; and Newport Beach, Calif., Collins has operations in Canada, Mexico, England, France, West Germany, Italy, Australia, Hong Kong, Brazil, and Japan, and service facilities throughout the Western world.

Why We Lose Our Bands - - -  
by Robert Kuehn WØHKF

I sure am getting tired of reading those bitter tirades against CBers in all the ham radio magazines lately.

It's a waste of space that should be devoted to something more profitable and educational. Furthermore, I'll bet my SX-78 that most of the complainers weren't even hams in 1959 when the 11 meter band was taken away from us; or if they were, they didn't have any gear on the band.

The band was no good in the first place, being used on a shared basis with all sorts of diathermy and other industrial electronic gear. It was always full of raw AC buzzes wandering up and down, plus all manner of other assorted squawks and groans. Propagation characteristics were practically identical with the 28 MHz. band, so hams figured why compete with all that noise when the wide-open 10 meter band would serve just as well.

When the news came along that we were about to lose the band, various "Save 11 Meter" campaigns were begun urging hams to show occupancy. Few responded and we lost the band to the Citizen Band Service.

This same lack of use is a big factor in the present plans to take a big bite out of our 220 MHz. band to give to the CBers. How many hams reading this in their shacks can lay down this paper and reach over to switch on their 220 MHz rig? Precious few, I'm sure! We've been losing parts of our bands for many years, including the top ends of 10 and 20 meters

because everybody insisted on hanging around the low ends. Even today some manufacturers of equipment offer gear which covers only the lower parts of some bands. Magazines continue to print construction articles of gear covering only the lower half of some bands, insinuating thereby that the upper half of the band isn't worth using anyway. Hams would be wise to refuse to buy or build such gear.

Otherwise, just like in the case of 11 and 220, it's going to continue to be the same old story: "Use 'em or lose 'em"!

(From "Ground Wave" St. Paul (MN) Radio Club)

### Messages

Messages are primarily handled as a public service. Many messages cannot be promptly delivered because a telephone number is not given and can't be obtained because: (a) unlisted number, (b) phone is in someone else's name, (c) they have no phone. Then we either mail them (which is slower than if the sender had sent a letter) or we service the message and this does not get the message through in most cases. If finally delivered it's quite a delay.

Often the sending station's phone number is unavailable, causing a problem. Maybe it should also be in the preamble. Phone numbers should be obtained before messages are sent for greater public service.

by Ambrose McKenzie, W3BHE  
(Auto-Call)

### A Day for Surprises!

Sunday found the Tacoma (Wa.) Radio Club's own Rev. Roy Myers, WN7UZL, with an expanded congregation for his 11 a.m. service, as members of the Radio Club and their families (24 people in all) presented themselves in a surprise visit.

After sneaky planning and re-planning it was decided those who were able would meet at the Lakewood Terrace for breakfast at 9:30 Sunday morning (what an hour for us nightowls!) sixteen members did indeed make it. After a leisurely breakfast (strawberry waffles) the gang scrambled into some semblance of order in a line-up to follow someone who might know where they were going. We did finally make it, with 15 minutes to spare, and met a few more club members and families there for a tremendous turn-out of 24.

Being as how we were on time, the Rev. Myers was a bit late. He does have two congregations and apparently became somewhat long-winded at his first sermon.

Although he did not notice us at first, his facial expression and total reaction when he did were well worth the getting up and attending that service.

His mouth dropped open in a half-gasp. His eyes became saucers. He jumped up and slapped his knee to rush over grinning from ear-to-ear to shake hands.

Before getting into his sermon we were all requested to stand and identify ourselves. Afterwards we were warmly welcomed by those regulars in attendance that morning.

None of us left at all disappointed. Roy's sermon was a contemporary and very personalized interpretation of the Bible as applied to our lives today in an almost fire-and-brimstone delivery. The club members who were present wish to thank you, Roy, and your congregation for making us feel so welcome in your church.

(From "The Loggers Bark")

### Anchors Away!

by Larry Cotariu, WA9MZS

On the East Coast of the United States is a city known as Annapolis, Maryland. Annapolis is the site of Amateur Radio Station W3ADO, which is the club call of the U.S. Naval Academy. The club is comprised of 30 members including Mike Prah who is a Midshipman there.

A Midshipman is a student in his first year at the Academy. He gained admittance through a congressional appointment, is 19 years old and will graduate in 1977. His ambition is eventually to command a nuclear submarine and he expects that when he is around 42 years old.

Mike went to the University of Wisconsin and was president of the Lakeshore Amateur Radio Club. He was active on the precision drill team and was a radio engineer for the campus AM station. After becoming tired of just engineering he auditioned for a staff announcer job. He was assigned a three hour time slot. Mike was rated number 2 out of 35 announcers during a poll of listeners.

Midshipman Prah had received his Amateur Extra Class when he was just 16 years-old and became deeply involved in the Navy-Marine Corps MARS program.

He has been with W3ADO for seven months and gets to use four fully-equipped Collins stations, a 2-meter station and teletype along with 3 Telrex beams. Not to mention all the test equipment.

Mike describes the Naval Academy this way: "It's hard to detail the type of education the midshipmen receive here. All the courses have the latest and best of equipment for their particular field. Every type of interest is represented here at USNA from judo, sports, photo, scuba, and jumping clubs, to radio, research, and flight training."

"The Naval Academy has drastically reformed in the last 3 years since the term of Admiral Zumwalt as CNO. I'm very pleased with my choice of coming to school here. I strongly recommend USNA to any person that has a sincere desire to become a naval officer. This is one of the best colleges in the world today and with present construction of an engineering complex USNA will have the most advanced towing tank in the world for hull design and research. The computer system here is fantastic and the Navy encourages us to use it all," he said.

Mike and his fellow members can be found on the Maritime Mobile Net on 20 meters, along with the Coast Guard net and on 40 meters operating MIDCARS AND ECARS (7,255 and 7,258 kHz).

SAROC-Tenth National Convention  
January 2-5, 1975 - Hotel Sahara  
Space Center

Advance Registration, \$11.00 per person includes;

1. Advance Registration ticket.
2. Regular Registration ticket.
3. Admission ticket to Social Hour, Hosted by T. P. L. Communications and TRI-EX Tower Corp. with SAROC on Friday.
4. Admission to Exhibit Area and Technical sessions.
5. Ladies will receive an additional ticket.
6. Admission ticket to Social Hour, hosted by Ham Radio Magazine with SAROC on Saturday.
7. Hotel Sahara Safari Brunch ticket for Sunday.
8. Tax and Gratuity on all listed items.

Advance registration, with midnight show, \$21.00. Advance registration, with dinner show, \$27.42. Mail your SAROC Advance Registration check now to: SAROC, P. O. Box 945, Boulder City, Nevada 89005, before 15 December 1974.

### Results

Third Annual County Hunters SSB Contest  
12-15 April 1974

#### Fixed Station - USA

Place	Station	Final Score
1	WA6PGE	2,103,975 +
2	WF4UKA	729,176 *
3	K5LUR	685,965 *
4	WA6MAR	400,620 *
5	WB4OGW	325,050 *
6	W4OZF	244,900 *
7	K7LTV	236,643 *
8	K5VYT	220,374 *
9	WA7GOO	180,992 *
10	W7WVD	108,836 *
--	WAØUPL/8	81,732
--	WB9MSV	58,140
--	WBØFRM	51,688
--	WBØCQO	44,280
--	W6BWD	39,984
--	W8WT	39,416
--	WAØSHE	37,240
--	WB5GRI	33,012
--	WIDIT	31,900
--	WA3QJR	17,400
--	W7VSE	15,228
--	WB8QXN	15,036
--	WA2DLV	11,868
--	KØGSV	8,804
--	WA1QNF	8,379
--	K4JSI	8,208
--	K9HCK	8,052
--	WA6OJE	6,840
--	WØCDC	5,643
--	K5J7N	3,608
--	K4VHO	2,728
--	WE4DNB	1,300
--	WB2GFO	902
--	WA1ROG	900
--	W4GDG	825
--	W8IEC	680
--	WA9CUH	220
--	WA6UFY/6	154
--	W4CKW	81
--	W8KOI	24

#### Mobile Stations

Place	Station	Final Score
1	KØQIX	231,768 +
2	WØQWS	88,605 *
3	WB5DXP	56,471 *
4	WA4SVH	21,105 *
5	K6JEN	16,564 *
6	K9KKK	7,548 *
7	W1EXZ	2,607 *
8	F3VN/W	1,710 *
9	W4CKW	1,131 *
10	WIDIT	725 *
11	K4VHO	708 *

#### DX Stations

Place	Station	Final Score
1	VE4QZ	256,846 +
2	VE1RQ	61,050 *
3	UAØFGM	20,273 *
4	SK6AW	7,866 *

+ Denotes Plaque Winner

\* Denotes Certificate Winner

We feel the contest was a huge success, with activity way up over last year. The increased activity was partly due to better band conditions, but mostly due to the very good publicity we received from amateur publications. We feel the contest is well established now and will continue to grow from year to year.

We plan to make a few minor changes in scoring and possibly shorten the contest period. We may also make two DX categories. These changes will be discussed at the July MARAC meeting, and as soon as all the rules for the Fourth Annual contest are finalized we will announce them.

by James L. Willingham, KØARS

# HELP! a fellow ham

The San Fernando Valley Radio Club  
W6SD  
P. O. Box 3151, Van Nuys, California 91407

June 14, 1974

Mr. Leonard Mendel, W2OVC  
Care: The Harmonic Hill Radio League  
P. O. Box 73  
Kotoah, New York 10536

Dear Mr. Mendel:

Our club members read about the suit brought against you by your neighbors, in June, 1974, issue of "The Worldradio News". Naturally we feel a lot of sympathy for you in such a situation. . . it's hard to believe that neighbors could be so vindictive. And yet it could happen to any of us. It is a shame any individual must go to the expense and troubles to defend himself against such a suit.

Our members donated the enclosed check for \$70.00 made out to W2OVC Defense Fund, in care of The Harmonic Hill Radio League. We hope many other readers of Armond Noble's article will help out.

We feel sure you will win the suit, and your fight is truly on behalf of all of us amateurs. Good Luck and Best Regards.

Sincerely,  
Smith Russell, Jr., WB6IPY  
Executive Vice-President

Dear Armond,

Thank you very much for the article you ran on our "problem".

A great portion of the letters and financial support mention that they are writing to us as a result of reading the article in Worldradio News. Some of the letters were very touching and came from the heart and mean a great deal to us.

All the fellows seem to feel that it is their fight and Lenny is scheduled for the main event and we hope for a "knock-out" and decision in our favor.

We will be in touch and keep you informed of the happenings.

Thank you for all your efforts in our behalf.

Sincerely,  
Norma Mendel (Mrs. W2OVC)

As President Teddy Roosevelt once said: "Every man owes some of his time to up-building the profession to which he belongs."

I won't situate Ham Radio as a profession, but I refuse to regard it as a hobby. I think Ham Radio is more than a hobby, it is a devotion, because of the deep human relations involved.

The man helping man aspect of Ham Radio is one of its most important functions, and makes this devotion stand tall with a pride every ham feels glowing forever.

Albert H. Coxa, WB4SNC  
(Florida Skip)

Reminder

Autopatch users (and those who request a fixed station to make a call for them) must be careful to remain absolutely clear of any appearance of business whatsoever. The autopatch is for club members to use for public service and personal convenience. It is not to be used for arranging business meetings or sales information. Please think! Before you begin be sure that what you are doing cannot be challenged as even remotely sounding like business.

(From-WR8ABC's-Lake Erie Amateur Radio Association)

## Teletype Equipment Available

I've just had a large number of Teletype machines released to me by Western Union. These are mostly page printers: Model 19's Model 15 KSR's, and Model 15 KSR's in floor consoles. The machines have been in storage, and some of them are still in their original factory crates, never having been put into service. Most of the remainder were given standard overhauls just prior to being placed in storage.

The Model 19's are complete with printer and keyboard, transmitter-distributor, perforator and character counter, and a heavy-duty steel desk. The heavy-duty power supplies are built into the desk.

The Model 15's are all KSR's (keyboard), are in two styles. The first style is the standard cabinet, which is normally placed on a desk or table for operation. The second type is in a sound-proofed floor console, whose shape is somewhat similar in appearance to a Model 28 KSR.

All of these machines are equipped with WRU (who are you), and answer back (Here Is) mechanisms which can be coded with up to 18 characters for automatic station identification at the touch of a single key.

All machines have synchronous motors, low paper indicators, etc.: and the cabinets, consoles, and desks are a pleasant light green color. All are in excellent condition.

In addition to the above, there are perforators and reperforators (both typing and non-typing; both with and without keyboards), plus strip printers (with keyboards) and transmitter-distributors, but no statement can be made as to the condition of these. (For example, the end-of-line indicators need repair on most of the perforators). These all have synchronous motors, incidentally, which are interchangeable with Model 14, 15, 19, etc. gear.

Finally, there is a wide variety of miscellaneous test equipment, test tables, power supplies, polar relays, end-of-message readers, duplex repeaters, Siemens dial Telex gear, etc., plus a few parts for Model 14, 15, 19, and 32.

The equipment is to be released to any interested amateurs at cost, according to the following price schedule:

Quan Avail	Item	Cost
33	Model 15 KSR	\$39. @
18	Model 15 KSR in floor console	46. @
17	Model 19 (ASR, complete)	79. @
18	Model 2-B strip printer with keyboard	5. @
16	Misc. perforators & reperforators, with and without keyboard	5. @
9	Transmitter-Distributors	9. @
	Misc. test equip. etc.	\$1. -4. @

Of course, as with most equipment distributions of this type, there is no guarantee, and you can't get your money back. But, with the exceptions noted previously, the condition of the equipment is very good to excellent, and is a genuine bargain.

Distribution will be on a first-come, first-serve basis. I cannot ship (with the exception of the few pieces that are already crated), so purchases must make their own arrangements for pick-up.

For additional information, I can be contacted at the following address:  
Bill Johnston, WB5CBC  
1808 Pomona Drive  
Las Cruces, New Mexico 88001

All inquiries must be accompanied by a self-addressed stamped envelope.

A handsome wall certificate is available to Hams who work 15 Manitoba, Canada Hams using the special VA 4 call signs during their 100th anniversary. The Mayor signs the awards. A copy of your log entries suffices and your request should be accompanied by 50 cents or two IRC's. Send to Box 352 in Winnipeg.



Top Washington Disaster Communications Official to Speak at ARRL Pacific Division Convention

by Charles Weber, WB6RPK

Joseph Rose, Deputy Manager of the National Communications System will be a featured speaker at the Pacific Division ARRL Convention and Greater Bay Area Hamfest to be held at the Royal Coach Motor Hotel in San Mateo in October, 1974. Rose will be speaking at the MARS/AREC/RACES Banquet which will be a part of the convention.

Rose is a former Ham (KP4IF) and has been a MARS director and FCC Radio Inspector,

## DIRECT LICENSING OF ALIENS SOUGHT

by Jim Weaver, WA8COA

A few years ago, Sen. Barry Goldwater, K7UGA-K3UIG, successfully guided a bill through Congress that permitted licensed radio amateurs visiting the United States to operate in this country. In addition, aliens who had taken their "first papers" for citizenship could become licensed U. S. radio hams.

Thanks to Barry's activities on behalf of his fellow amateurs, several other countries now have begun to implement reciprocal licensing not only with the United States but with several other countries as well.

As but one example, a reciprocal licensing agreement only recently was signed between Canada and Honduras.

More recently, Senate Bill 2457 has been introduced to amend sections 303 and 310 of the Communications Act. The bill primarily would permit direct rather than reciprocal licensing of aliens in various radio activities including Amateur Radio.

Excluded from SB 2457 are such radio activities as broadcasting and common carrier operations.

Possibly the greatest impact of the bill would be the apparent fact that aliens under 18 years of age would be able to become licensed. Although there are no specific provisions to this end, the basic provision that "first papers" no longer would be required for licensing as an amateur superficially would permit all aliens regardless of age to become licensed following the same regulations that apply to U. S. citizens.

so is well-qualified to speak to this group. He is keenly aware of the very important role played by radio amateurs in times of natural disasters, and stated in his letter of acceptance that "while we in the National Government are charged with the responsibility of assuring the necessary communications support in relief operations, the Radio Amateurs still provide the initial capabilities to assist in rescue efforts. Our efforts are complementary, with the single purpose of serving the community."

Radio Amateurs from the Pacific and Southwest ARRL Divisions are now working with the FDAA/GSA Region 9 Offices exploring ways to accomplish this emergency communications services.

Speaking only of amateur radio, I believe that passage of SB 2457 would be good for amateur radio . . . and for U. S. foreign relations as well.

Persons wishing to comment on SB 2457 should write their U. S. Senators at their local offices, or at the Senate Office Building, Washington D. C.

(Cincinnati Enquirer)

## HAM PROFESSOR

by Eunice Bernon, K8ONA

Hundreds of Ohioans sing the praises of their ham radio "professor," Kenneth H. Gehres, WA8SVX, of Cleveland.

Gehres, a retired foreman for the Cleveland Electric Illuminating Co., attracts entire families to his evening classes for beginners at James Ford Rhodes High School on the Southwest Side.

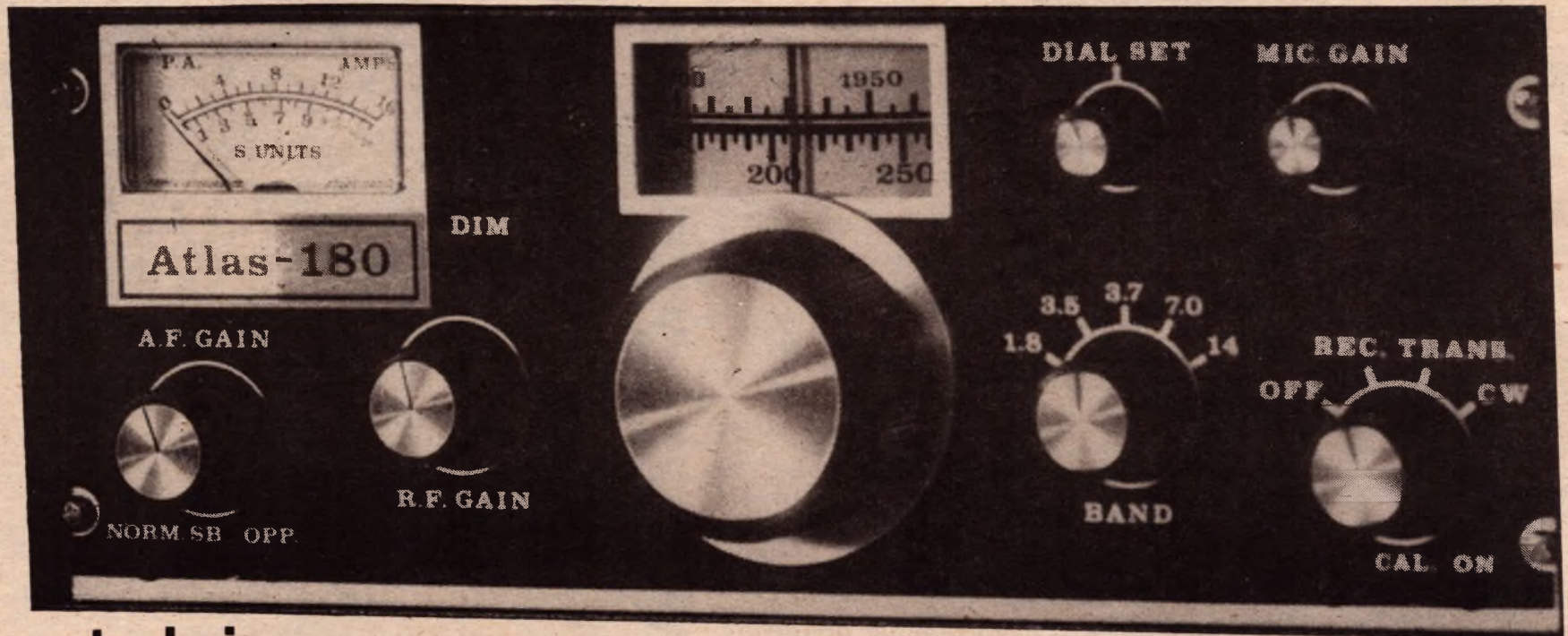
"Their ages range from 10 years to retirees," Gehres said, "They represent all walks of life, and they drive here from Solon, Akron, Hinkley, Elyria and Lorain. Our classroom supplies are "Radio Electronics Made Simple", written by Martin Schwartz; the "Radio Amateur's License Manual," an ARRL publication and a notebook."

Gehres presents one hour of Morse code (CW) lessons on a tape recorder. The second hour is devoted to study of amateur radio theory.

Gehres is a volunteer instructor.

(Please turn to page 42)

# This is IT! - - and we got 'em



actual size

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## The Sensational ATLAS 180

Performance Specifications that establish new standards in the amateur radio market. Value Engineering combined with craftsmanship produces the utmost in reliability.

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- **Circuit Design:** Single conversion, 5520 kc I.F.
- **All Solid State:** Includes 4 I.C.'s, 17 transistors, 26 diodes.
- **Modes of Operation:** SSB (selectable USB or LSB), and CW.
- **Modular Construction:** Includes plug-in circuit boards for ease of service and maintenance.
- **Plug-in Design:** Rear connectors are designed so the transceiver plugs into the Mobile Mounting Bracket, or into the AR-117 desk top power supply, making transfer or removal a simple operation. Transceiver may be secured to the Mobile Mount, if desired. All connectors are standard, so Transceiver can be installed without the plug-in mount, if desired. Rear connectors include an SO-239 antenna jack, and ¼ in. phone jacks for Mic., CW key, External speaker or headphones, and ALC input.
- **Banana plugs** are used for 12-14 volt D.C. connection.
- **Frequency Control:** Highly stable VFO, common to both Receive and Transmit modes. Tuning dial calibrated in 5 kc increments with easy interpolation to 1 kc. Tuning rate is 15 kc per revolution.
- **External Frequency Control:** Rear socket provides for plug-in of external VFO or crystal oscillator for separate control of transmit and receive frequencies, or for network and MARS operation.
- **Power Supply Requirements:** Operates directly from 12-14 volt D.C. source, negative ground (standard automotive electrical system). Draws 0.2 to 0.4 amps. in receive mode, 16 amps peak in transmit mode. (Atlas models AR-117 and AR-230 desk top power supplies are available for AC operation.)
- **Front Controls:** Tuning Dial, Dial Set, Function Switch, Band Switch, A.F. Gain, R.F. Gain, Mic. Gain, Sideband Selector, Calibrator Switch, Dial Light Dimmer.
- **Finish:** Vinyl Covered Steel. Durable and scratch resistant. Black.
- **Dimensions:** 9½ in. wide, 3½ in. high, 9¼ in. deep, overall.
- **Weight:** 8 lbs., net. Shipping weight: 9 lbs.

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Galaxy SC-550 ps/spkr	\$79.95
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National NCX-3 SSB xcvr	\$169
National NCX ac ps/spkr	\$69.95
SBE SB-34 SSB xcvr	\$295
Galaxy V SSB xcvr	\$219
Galaxy RV1 remote vfo	\$49
Galaxy DAC-35 deluxe console	\$69
Hammarlund HX-50A SSB xmtr	\$195
Heath IG-82 Sine/Square wave gen	\$19.95
Drake R4B rcvr	\$339
Drake T4XB xmtr	\$375
Hallicrafter SX-110 rcvr	\$109.95
Heath VF-1 vfo	\$19
Linear Systems 400 12v. mobile ps	\$79.95
Raytrack Speech Processor	\$39.95
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2KW 20 M RF amp w/2 5CX1500B	\$275
Kirk fiberglass Quad poles 20 M	\$13.25 ea
Kirk Delta Loop Spider 3 inch boom	\$14.95 ea
Kirk Quad Spider 3 inch boom	\$14.95 ea
Kirk Quad Spider 2 inch boom	\$8.59 ea

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Drake TR-22C 2M TCVR \$229.

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# reach out

A Special project of captain, friend

Vandenberg AFB - A Vandenberg officer and ham radio bug has collaborated with a blind friend to edit and write the first book ever for sightless ham radio amateurs.

Capt. Greg L. Underhill of the 4315th Combat Crew Training Squadron said it all started about two years ago when he met Roy Phelps. Phelps is a blind amateur radio operator in Vacaville who Underhill met while stationed at Travis Air Force Base.

The Air Force captain didn't know Phelps was blind until they went to his home after getting acquainted on the air.

The two discussed the fact that blind operators are at a distinct handicap since they have no manuals or books to tell them how to operate their amateur radio station on a worldwide basis.

In the operation of an amateur radio station one needs to know the bearing, distance and call signs of distant countries so that antennas can be properly directed and so that the operator can properly call the station he wishes to talk to. In the practice of long distance communications, or "DX" as the hams say, this information is indispensable.

This information has long been available to a sighted ham; but the hundreds of blind hams around the world have never had this information.

The solution to this problem was conceived by Phelps: A DX reference manual for the blind ham.

Capt. Underhill and Phelps coordinated, edited and wrote a book called "DX and the Blind Ham." It is published by the Peninsula Braille Transcribers Guild of San Mateo, which sells the book on a non-profit basis.

The book itself covers information helpful to DX operators in the Western, Central and Eastern part of the continental United States. It consists of 78 pages of Brailled information on over 300 foreign countries. This information consists of Great Circle Bearings, Call sign prefixes, distances and time differences.

Once Underhill and Phelps had compiled and edited all the information, Phelps transcribed the ham language into a system of new Braille characters in order to correctly convey all the information.

(Santa Barbara News-Press)

He's a Happy Ham

by Ann Sheldon

Richfield - For the first time in months, Monday Frank Harrison, a 69 year-old invalid, was able to talk with his friends.

"This is W8JHS," his voice rang out. "Well I'll be doggone. This sounds all right by golly."

Harrison, a retiree of the TRW in Cleveland has been a ham radio operator for the past 48 years.

However, a stroke two years ago and the recent amputation of both his legs for

diabetes have kept him bedridden and away from his basement full of radio equipment.

Monday, Bob Sharkey and Harry Paxton, two ham operators from Akron, brought Harrison a new portable radio which he can operate from his bed in his three-room house at 3207 Everett Rd.

Ham radio operators throughout northeast Ohio donated \$200 to buy the radio, which as a range of about 50 miles.

"This is really a thrill," Harrison said. "I never expected anything like this."

"He is a most deserving person," Paxton said. "There are very few ham operators in the area who don't know his melodious voice."

Paxton said for years Harrison, who moved to Richfield in 1952, served as master of ceremonies at the annual picnic of the ham operators' Akron area club.

Harrison already had a portable radio at his bedside when the new one was brought to him.

But the old radio operated on a six-meter frequency, which few operators use today, while the new one has a two-meter frequency.

"I was loaded with six-meter transmitters, but there is nothing on it now," Harrison said. "I'll really enjoy this new one, because the whole gang, everyone I know, is on two-meters now."

(from "Beacon Journal")

The Northern California DX Foundation

Dedicated to the encouragement of, and assistance to, those radio amateurs whose pioneering efforts involving new, unique or uncommon radio communications methods and procedures are in the public interest and/or of significant benefit to amateur radio.

The Northern California DX Foundation, Incorporated, is a non-profit scientific and educational society. As used herein, the term DX, an abbreviation for "Long Distance", is also intended to imply the unusual-the rare-the exotic-the out-of-the-ordinary.

Primary purposes of the Foundation: To encourage activity and growth in all phases of amateur radio.

To assist DX-peditions to rare countries, counties, VHF locations or where-ever 2-way communications may be out-of-the-ordinary or of unusual interest.

To act as a sponsor for those who can make significant contributions in their own specialized fields or areas of interest. Particular consideration will be given to projects which stress the public interest aspects of amateur radio or stimulate interest in, aid or advance the state of the art. Deserving amateurs world-wide whose qualifications meet these stipulations may be eligible for NCDXF support.

To provide financial assistance to worthy individuals in the pursuit of courses of learning that can benefit amateur radio.

Membership in NCDXF: Membership in NCDXF is open to all interested persons or groups who contribute funds or equipment or render other services to the Foundation.

Contributions: Contributions to the Foundation may be in cash or securities. The latter may be donated at fair market value without Capital Gains consequence.

Scholarships: The establishment of scholarships is another Foundation goal. Such scholarships may be funded by gifts and identified in a manner that will tend to perpetuate the name of the donor. Gifts of this type are not subject to Federal Estate Taxes.

Contributions to NCDXF are tax deductible. NCDXF is a non-profit California

corporation and conforms to every requirement of the Internal Revenue Service. All gifts to NCDXF are tax deductible.

Northern California DX Foundation Inc. P.O. Box 717, Oakland, Calif. 94604 USA

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AMATEUR GROUPS REHASH TORNADOES

by Jim Weaver - WA8COA

Radio amateurs provided outstanding communications support to several public service agencies in Hamilton, Butler and Warren Counties after this spring's tornadoes. In truly professional fashion however, the amateurs are not content with the extent and quality of the services they provided.

As the first step toward improving further the emergency communications potential usefulness of area hams, representatives of eight Southwest Ohio area amateur organizations met Wednesday evening to discuss formation of a new communications co-ordinating team.

Known as the Radio Amateur Civil Emergency System, first objective the team would be to establish liaison with the Hamilton County Disaster Committee.

The Disaster Committee is composed of representatives of medical, police, fire and rescue agencies, and the Red Cross, Salvation Army and Civil Defense. It is responsible for co-ordinating the activities of its member groups in providing efficient relief to disaster victims.

Preliminary operating plan endorsed by the amateurs at the meeting calls

for utilization of local two-meter repeaters in event of disaster and for RACES officials to visit amateur club meetings to discuss its goals and operating philosophy.

Clubs and nets which choose to co-operate with RACES will participate in developing the communications plan which will guide its future operations. Groups represented at the meeting were the Butler, Clermont-Brown and Hamilton County Divisions of the Southwest Ohio Amateur Radio Emergency Corps, the Cincinnati FM Club, the Cincinnati Repeater Association, the Evendale Amateur Radio Society, the OH-KY-IN VHF Society and the Queens City Emergency Net.

(Cincinnati "Enquirer")

## Send a friend

I thought you would be interested in seeing a copy of "Worldradio". At the publisher's suggestion, I've asked him to send you one. I hope you enjoy it.

name of guest

address

city, state, zip

my name

Clip and mail to "Worldradio", 2509 Donner Way, Sacramento, Calif. 95818. Thank You

## Resolution

COUNTY OF MARIN

Resolution Of The Board Of Supervisors Commending The Amateur Communications Society For Outstanding Service To The County Of Marin And Marin Operational Area Emergency Services Program.

WHEREAS, the Board of Supervisors has authorized a program of disaster emergency operations training exercises to be conducted semi-annually for improving the standard of emergency preparedness throughout this county in the event of disaster: and

WHEREAS, Disaster Emergency Operations Training Exercise MADAM-MORFED was conducted on May 10, 1974, involving a simulated earthquake of 7.0 magnitude, resulting in actual evacuation of persons from inundated areas below the Phoenix and Stafford Lake Dams which required communications with cities, districts, schools, field shelter/care locations, and with officials who were airborne, in boats and other surface vehicles conducting aerial and ground surveys of the earthquake damage, at the same time communicating with each other as necessary to act in concert in formulating the decision to evacuate: without use of telephones; and

WHEREAS, the Amateur Communications Society voluntarily rallied its members, deploying them with mobile radio equipment to 35 key locations throughout the county, thus providing a communications system which enabled the COMMA Emergency Organization to conduct the entire operation without use of telephones, a principal objective of the exercise; and

Whereas, the Amateur Communications Society has voluntarily become an integral unit of the COMMA Emergency Organization with the objective of automatically deploying its members to pre-assigned locations during future disaster exercises or actual emergencies, an unprecedented gesture which will contribute immeasurably to our continuing capability for protecting the lives and property of our citizens during disasters;

NOW THEREFORE BE IT RESOLVED: that Charles Bock, Chairman of the Board and Director of Emergency Operations, and Nate Blumenfeld, President, and all members of the Amateur Communications Society are hereby commended for carrying out this voluntary emergency assignment in such splendid, dedicated, and outstanding fashion.

PASSED AND ADOPTED ON THIS 21st DAY OF May, 1974, by the following vote:

AYES: SUPERVISORS Peter R. Arrigoni, Gary Giacomini, Arnold M. Baptiste, Michael Wornum

NOES:

ABSENT: SUPERVISOR Bob Roumiguere

# The Nobility Net

The Nobility Net of North America is a non-profit gathering of Shriners and members of the Masonic Order who have dedicated their services in behalf of the world's most rewarding philanthropy . . . the cost-free care and rehabilitation of crippled and seriously burned children in our 22 Shriner's Hospitals, throughout Canada, Hawaii, Mexico and the U.S.A.

Among our many aims — to make available to parents of crippled children, who are unable to afford the high cost of medical aid, knowledge of how to secure these surgical services free of charge; aid in providing transportation for patients; setting up of blood banks and creating good relationships between Shrinedom and the public who are not aware of this great philanthropy.

There is no initiation fee nor are there any dues. All that a Noble or Mason need do is check into the Nobility Net which meets each Saturday at 1700 GMT, on 14.310.

(de International Coordinator, W3FQT)

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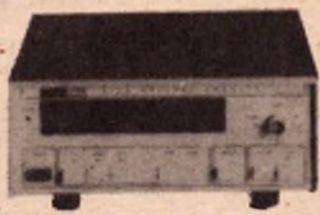
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# M A R N

## MOSAIC AMATEUR RADIO NET

The Mosaic Amateur Radio Net is an international, non-profit, non-commercial association dedicated to serving mankind and fostering international good will.

It is an association of Masonic amateur radio brethren and members of the appendant Orders. Membership in the Mosaic Amateur Radio Net — better known by its acronym MARN — is open to all members of the Masonic Order and those of the appendant Orders who possess any class of amateur radio operator license.

There are no dues and the nominal membership fee is perpetual. You are invited to write for information.



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*Deo et Fidei*



# dx digest

by Gary Stilwell, W6NJU

The saga of Kingman Reef is now history and what a story it turned out to be. DXers world-wide were on the edge of their chairs closely following each day's progress.

The story regarding the operation starts on page 10 in this issue. Due to deteriorating weather conditions the group had to leave earlier than planned, however, they worked about 5,300 stations in approximately 30 hours. That's operating. About 14,000 contact were made by the group from VR3AG, KP6PA and KP6KR which included operators Jack Wheeler, KH6CHC, Bob Ferrero, K6AHV, Jim Rafferty, WA9UCE, Pete Grabosky, WB6OOL and Rusty Epps, W6OAT. QSL's for these operations plus W6WX/mm go to the Northern California DX Foundation, Box 717, Oakland, CA 94694. ARRL Bulletin Nr 970, dated July 2, 1974 announces that Kingman Reef is being added to the ARRL countries list. DXCC credit will be made starting October 1, 1974.

Mt. Athos August 18th is still the date set for Mt. Athos operation by Aris Germanis, SV1GA and crew. Appears a 3-element beam and a Heath SB-220 linear will be used. Sure hope the sunspots cooperate.

California QSL Bureau After many years of fine work, the Northern California DX Club will be relinquishing the W6 QSL Bureau. The number of QSL's processed per year is staggering and the club is to be congrat-

ulated for an outstanding job. Effective October 1, 1974 the Bureau will be moved south under the direction of the Los Angeles Council of Radio Clubs. The mailing address will be W6LS (Lockheed Amateur Radio Club), 2814 Empire Ave, Furbank, CA 91504. DXer's in California are being asked to claim all cards now on file prior to the move south. Now is a good time to send an envelope to the Bureau.

**W9DXCC Annual DX Meeting**  
This year's affair will be held at Itasca's Holiday Inn in Itasca, Ill., on September 21st. Fred Laun, LU5HFI, will be one of the principal speakers. For further information contact Bob Locher, W9KNI, 1145 Osterman, Deerfield, IL 60015.

**DX Advisory Committee**  
The July issue carried the questionnaire being circulated by this Committee. Preliminary trends, evidenced by a vote of the Southern California DX Club, would indicate a strong majority on increasing the number of DXCC countries, changing Rule 9 and for offering separate DXCC for both CW only and phone only. Almost unanimous that DXCC awards would not continue the way we are now and that changes are necessary.

**Contest Advisory Committee**  
As the National Contest Journal put it, we were hoping for a report of the contest group meeting in Fresno last April but nothing has been received. A great deal of time was taken up in the group discussion about publicity for the Committee with the group seemingly blaming everyone but themselves. It appears the Committee is not taking advantage of the space being offered in the various publications.

**Here And There**  
Ted Raat (W6SMU) and wife Marcia (K6DLL) hosted a lovely buffet at their home in July for visiting New Zealander Russ Garlick (ZL3AAA) and wife Zeldia (ZL3AAB). After all Russ had heard about Sacramento heat

in July, he was treated of all things to a rain storm. See page eight.

F8US now handles QSL's for FR7ZL/T, FB8ZE, FB8ZC, FB8ZD, FB8WB, FB8ZZ, 5R8CO, 5R8CU, 5R8CS, 5R8SD, and 9V1PQ.

DX news up to the minute is provided weekly by the Southern California DX Club Thursdays at 0300Z on 14265. That's Wednesday nights in Daylight Time.

VQ9BP, VQ9D and VQ9DM are planning a trip to Des Roches from September 3 thru 17th. Will use own call sign/Des Roches. QSL to Bill Pomeroy, VQ9BP, Box 220, Mahe, Seychelles. T1JEZ pleased to make skeds for 40/80 meters.

VP2MHK to W0MHK  
WY6FDA to WA6WMT  
7Q7LB to I0DGB  
WW3FAF to W3DOS  
KH4FLA to W4OZF  
OX3DL to OZ8KW  
P29GG to K7UWT  
PA0TWH/S2 to SM2EKM  
VX2DX to VO2AS  
YK5CDL to OK3QQ

This column again invites your participation on Club activities, or items of general interest.

Our thanks this month for information to the Southern California DX Club Bulletin, West Coast DX Bulletin, Long Island DX Association, DX News-Sheet and QSL Managers Directory.

DXer: for cementing better international friendships and excellent (about 95%) QSL return, write in the language of the DX station worked. How? With K3CHP's DX QSL GUIDE. It contains a list of numbered radio-amateur sentences translated into 54 languages! Simply select and copy sentences in the language of your choice. \$3.95. Joe Mikuckis, 6913 Furman Pkwy., Riverdale, Maryland 20840

## BALUNS

From an Engineering Report HyGain Electronics Corp.

A balun is a matching device designed to couple an unbalanced transmission line to a balanced antenna or feedline. The name comes from the descriptive terms: balanced to unbalanced.

The half wave dipole (or driven element of a yagi array) is a balanced radiator. When a dipole is fed at the center with a balanced line, the system is balanced and the feedline radiation is nil. RF currents in each side of the feedline set up individual magnetic fields which are self-cancelling.

When a half wave dipole is fed directly with a coaxial line, RF from the balanced antenna flows down the coaxial braid. The magnetic fields caused by this current flow cannot be cancelled by the inner conductor since it is "trapped" inside the braid. Therefore, the currents on the braid radiate. This effects the unidirectional beam pattern and causes TVI. Even when line impedance matches the antenna, RF on the braid causes the coax to become part of the resonant system. Such combinations are usually sensitive to small changes in the operating frequency.

Braid can radiate. It can also receive. This results in poor front to back ratio on a beam and undue pickup of man-made interference from wiring and objects near the coaxial feedline.

The correct solution is installation of a balun. The most common balun is the quarter wave length stub or "bazooka" balun. This balun presents a high impedance to the currents trying to flow down the braid. The disadvantage of the bazooka balun is its frequency dependency. This balun is ineffective except at its designed frequency.

Don't deprive yourself of the wonderful opportunity to be found on page 9.

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■ The human voice is a "raspy" signal with high peaks and long, low valleys. If used to modulate an SSB transmitter directly, the low power of the valleys limits the average power output to 12-15% of the transmitter's PEP rating. Operating above this level, the peaks overdrive the transmitter, cause band splatter and poor quality.

■ MAGNUM SIX is the first successful RF speech clipper available. Installed in the IF strip, it "mows" the peaks and discards the clipping harmonics without distorting the voice. This allows the level of the valleys (the average power) to be raised up to 6 db. Astounding signal strength improvements - 1 to 1.5 "S" units - have been reported! Some have even reported improved voice quality!!! The ARRL handbook confirms that RF speech clipping is clearly the best way to increase SSB talk power.

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## Kingman

(Continued from page 10)  
cricket, he must have rode the coconut to get there.

"It was eerie to find out in the Pacific just a pile of seashells.

"We didn't actually know what we would find. We found more than we had hoped for. In fact, we had even built a platform which would have gone on top of 55 gallon oil drums and that would have been the operating position if necessary. But as it was we had a station on the air in about 20-30 minutes. Then we had to decide who was

going to get on the air first. So on 14.203 we all simultaneously called CQ. We drew straws for after that with each of us taking a 15 minute turn in the first hour." Rusty said, "I made up the slips of paper and put them in a paper cup. I took the last slip of paper and went on the air first." Pete says, "his was glued to the bottom of the cup." The order of going on the air was Rusty, Pete, Jim and Bob.

"The first contact on 20 was ZK1DX. At 1947Z Bob Thompson, K6SSJ, (President of the Northern California DX Club) called Bob White, W1CW, (head of the DXCC desk at the ARRL) to tell him that we were on the air from Kingman Reef.

"We went on 15 meters at 2148Z. The first contact there was K6SJJ. It was quite appropriate that Bob was first, because of all the work he had done. The contact was made with no prior set-up. Next was ZK1DY.

"While we were all predominately CW operators we knew we were two days late and we would be able to give out more contacts on phone. We wanted to make the new country available to as many as possible. So rather than work all the bands equally which would have given some a shot at the country on five bands, we concentrated on giving as many people as possible the country once. One rig stayed on 20 meters, the other moved around."

Rusty was aware that there was some criticism that the operators on Kingman Reef did not go by call areas and this created a great number of stations calling who were spread over a good portion of the band. He said he regretted that the calling stations took up so much of the band but, "We didn't go by call areas because it is too slow."

Pete said, "going by areas creates uneasiness. You get a lot of operators saying, 'why didn't you work more from this area'. Bickering starts among operators in the different call areas. Going by call areas

is something you do only as a last resort. We worked far more stations doing it this way. If we had been able to stay one more day we would have given out 10,000 contacts, and that would have been everyone who wanted Kingman. And the contacts were not predominated by 6's Look at the logs, we worked lots of 1's and 2's.

"We did stop and work Europeans only, as we knew the band would be open only a few hours a day to Europe. Our contact per hour rate slowed as then we were working the S5 - S6 watery signals over the pole from Europe and Africa rather than the 40 over 9 U.S. stations."

Rusty said "I think the way we did it was successful. In 29 hours and 43 minutes we gave out 5,535 contacts. With the calling stations spread out and not all piled on top of each other we could come back to a station and thin it out quickly. The best hour we had in a clock hour was 160 contacts on 20 SSB. Other clock hours ran 155 and 157 contacts.

"We made 3,228 contacts on 20, 1,522 on 15, 784 on 40 and 1 on 10. On SSB there were 4,333 contacts and 1,202 on CW. We worked 93 countries. The guys on 15 CW were especially good, they tailended well. Even a station running one watt made it through.

"The second day there the calm lagoon suddenly erupted into three foot waves. The wind, which had been out of the east, came up from the South and in a 15 minute period was hitting 40 knots. The boat, which was in 250 foot water, had to run both engines, facing into the wind to hold its position. We couldn't bring the boat in for fear it would go aground. Looking at the chart you can see that the water is either too deep or very shallow. The captain said we couldn't afford to run out of gas.

"He rightfully said 'It's too dangerous to stay here, get them off the reef', so we got ready to leave. In a heavy rain Bob made four trips in the dinghy to get the gear off the reef. The outboard engine broke

and it would operate only in reverse. So Bob had to make the trips with the blunt end of the dinghy facing forward. Then the engine quit. We tried oars. An oar split in half. Things were not going our way.

"We got the engine to work finally. With the lean-to demolished and it pouring down rain, our next to last contact was KNBR. Well, actually it was Carter B. Smith (A Prince trapped in the body of a DJ). He's an amateur and did an interview with us for the radio station. The last contact was Merle Parten, K6DC.

"Pete kept one station on the air as the other one was being torn down and taken to the boat." Pete - "Yea, someone on the air said 'if you can get Pete and the equipment off the reef, OK, but be sure and get the logs.'"

"We left a card table, a chair, 30 gallons of gas and a Yaesu box filled with sea shells. Then we found out the perils of travelling in a 50 year old ship.

"We had planned to go to Hawaii. One engine went completely out and the other was very erratic. We faced 930 miles straight into the wind. The fuel lines became clogged with sediment. We would get one engine working as the other died. They ping-ponged back and forth.

"The boat pitched and rocked so badly you could be asleep and you would be tossed out of your bunk. After five days of that we decided to ask if we could get permission to land at Johnston Island. We knew that is a restricted area. Boats can't land and planes can't even fly overhead, but we thought we'd try anyway. Guys on the air told us just to forget it as we would never get permission. We felt there wasn't much to lose in trying.

"Rod Deakin, WA6CVU, and Merle Parten, K6DC, found KJ6BZ, on 20 in a QSO. The operator was Steve Moore, W0OFK. He (Please turn to page 42)

# MAGNUM SIX

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# repeaters



## Emergency Preparedness

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A repeater is a great asset in the event of an emergency, but it is not the total answer.

Simplex channels will be needed to carry the load of internal community communications. It was recommended, some time ago, that certain simplex channels be used for local emergency use. The fact that these channels are recommended does not mean that they should not be used normally! In fact, they should be used to augment the number of simplex channels. The more we use them, the more individual QSO's we can have.

It has been noted that some people wait for an "Official Alert". Governmental agencies sometimes move rather slowly and are not always as coordinated as they should be. Don't wait! If you hear a storm warning on radio or TV, and it affects your area, consider yourself on alert! Check into the repeater, make the facts known to others, and stand by. This way, if an official alert is called, you are ready and organized.

What happened to the plans of the various amateur groups to have their representatives get together and discuss each other's role in case of an emergency? Wouldn't it be nice if we amateurs could get together and coordinate our efforts? What will happen if another disaster occurs? Will each group go its own way, with all the confusion that will ensue? Or, will each group send a representative to a meeting to discuss the best way each will serve? If the role of each group is well defined and their responsibility known to all, then we could operate much more efficiently than in the past. All it takes is cooperation. Why not an "Emergency Preparedness Council"? Think about it.

Individual personality problems have a way of interfering with the true goals of all local amateur organizations. This should not be the case. We all have a major amateur responsibility (FCC regulations, Part 97.1 (a)). Just how the individual serves is his own business; but when he joins an organization and expresses his desire to assist, it is his duty to see to it that his elected or appointed officials make every effort to insure cooperation with all other amateur groups desiring to serve in the public interest. Whatever group you belong to, on matter what anyone else says, make sure your voice is heard. If you feel that there is a lack of cooperation among the local amateur groups, speak your peace! (Yes, Peace!) If your organization's leaders do not respond - replace them!

("Hilltopper" Tompkins Co. NY Radio Club)

## New Repeater Directory

The new edition of the ARRL Repeater Directory, detailing close to 1000 United States and Canadian repeaters, is now ready for distribution. To receive your copy, unfolded, by first class mail, send an addressed envelope approximately 7 by 10 inches, with 30 cents US postage.

This membership service is available without charge from ARRL, 225 Main St. Newington CT 06111.

Dayton, Ohio--The Miami Valley FM Association of Amateur Radio Operators, Inc. (MVFMA) has announced it was awarded a \$7,500 grant from the Rike Family Foundation, of Dayton.

The funds will be used to modernize and expand the organization's extensive amateur radio communication network in the Montgomery-Greene county area. The MVFMA co-ordinated and supplied much of the emergency communications for the Xenia, Ohio area following the April 3 tornado.

Following the announcement of the grant, Mr. David Rike, representing the foundation commented that he was most impressed with the "ham" operators' dedication to the service of the Dayton community.

Vernon "Kim" Kimball, W5ED, president of the MVFMA accepted the grant on behalf of the amateur radio operators. "This expression of confidence by the Rike Foundation in our ability to provide a worthwhile service to the Dayton area is most appreciated", said Kimball.

"Although we work closely with the Red Cross, Miami Valley Disaster Services Authority, and various police, fire and rescue agencies, we are not supported by any of these groups. Since we prefer to operate independently, fund-raising to purchase the equipment we need is becoming increasingly difficult," he added.

The 100 plus members of the MVFMA own in excess of \$70,000 worth of their own equipment in the form of stations in their homes, cars, and battery-operated hand-held portable radios.

It is the flexibility and portability of the mobile and portable two-way radios that makes the system so valuable, according to Kimball. "Relay transmitters and receivers located throughout the county receive and amplify the signals from the low-power radios and instantly retrans-



MIAMI VALLEY F.M. ASSOCIATION President Vernon "Kim" Kimball demonstrates the portable direct-dial telephone capability of the association's amateur radio emergency communications system to David L. Rike, (on left) representing the Rike Family Foundation. The demonstration followed the awarding of a \$7,500 grant from the Foundation to the radio group for the upgrading and expansion of their communications network.

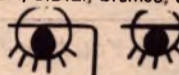
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### \* MINIATURE ENCODER

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mit the messages to any point within a thirty mile radius of Dayton," he explained.

"It is now possible for a person within this area to talk to another person equipped with a similar radio with a 70-75% reliability of getting the message through. With the funds from the Rike Foundation, we expect to get the reliability up to nearly 100%."

"In addition to communications between operators, we also have the ability to direct-dial telephone calls from our portable and mobile radios on a non-commercial basis. This capability was especially important following the Xenia tornado disaster when the town was essentially without telephone service for more than a week," Kimball noted.

The direct-dial telephone interconnection is unique to amateur radio in the Dayton area, and was designed and custom-built by members of the MVFMA.

"The changes which we have planned for our system will make it one of the most versatile and reliable radio networks in the Miami Valley, and will put it among the top amateur radio systems in the country."

Although the group works constantly to prepare for the disaster which they hope will never come, their communications services are utilized throughout the year free-of-charge by charitable groups engaged in community service and fund-raising projects. The Eastwood Park Poat Races, Holiday At Home Parade, March Of Dimes Walkathons, American Cancer Society, and the One World of Christmas committee are some of the groups who have received assistance annually.

Our funding will be used to purchase two GE MASTR repeaters and duplexers for .04-.64 (one main repeater located south of town, and one backup located north of town) a GE MASTR UHF control system (Please turn to page 40)

# All Mobile Antennas are NOT alike. Larsen Antennas with exclusive **Kūlrod**<sup>®</sup> let you **HEAR** the difference!

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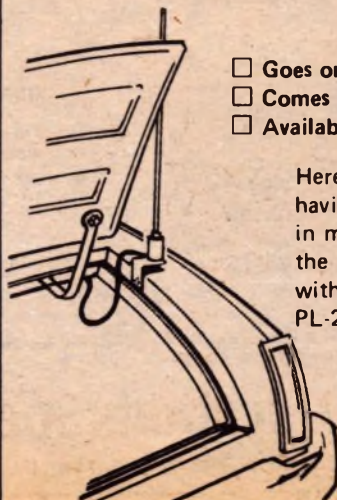
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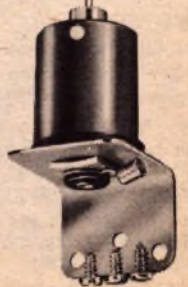
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## Getting on OSCAR 7: 432 MHz Equipment Suggestions, and Bibliography

by Joe Reymann, W6PAJ

The imminent launch of AMSAT-OSCAR-B (to be known as AMSAT-OSCAR 7 once in orbit), with its 432 to 144 MHz translator, has created a surge of interest in transmitting equipment for the 432 MHz band. For those who prefer not to design from scratch, or who lack the time to do it right, this article will serve as a reference source for enough equipment of various types to be able to assemble a 432 MHz transmit capability.

### CW Transmitters

Keep in mind that the preferred modes on OSCAR 7, as on OSCAR 6, are cw and ssb. The lower duty cycle of these modes provides more efficient utilization of the limited spacecraft rf power than does fm, am, rtty (fsk or afsk), and sstv although all such modes have been used through OSCAR 6. CW will probably be the most popular (at least in terms of number of users!). There are two inexpensive and "easy" methods of generating stable 432 MHz cw power: modification of commercial 450 MHz equipment, and building or buying a varactor-tripler from 144 MHz.

Readily available on the commercial surplus market are several varieties of 450 MHz fm transmitter strips, at \$10 and up. The author has had experience with the Motorola units (from T44, J44, etc. stations) which put out about 15-18 watts at 450 MHz. Follow the simple conversion instructions in the popular FM Schematic Digest for Motorola units, and then disable the modulator and provide a method for keying as in the September, 1971 QST article. Schematic information is also available for GE units. Almost every area of sizable ham population has someone up on the latest availability and conversion of commercial gear. A few minutes with him will answer many questions. Some commercial power amplifiers are also available; see that section below.

The varactor-multiplier has a lot going for it. It is relatively easy to build and needs no power supply. Its overall efficiency is decent. Operating at medium power levels (20-40 watts input), it does generate some strong 'auxiliary' construction, it will be a favorite for hams new to 432. Several circuits have been described in ham literature, both doublers and triplers. The tripler circuits should be more popular since 144 MHz transmitters are more numerous than 216 MHz ones. Commercially-built units are also available.

### SSB

A single-sideband (or all-mode) transmitter can be made relatively inexpensively. Any one with 28, 50, or 144 MHz cw-ssb equipment can generate 432 cw/ssb with any of several transverters described in VHF Communications. It is solid-state, works on 12 v. d. c., and works at low signal levels. This last is a matter of choice, but the author prefers to generate a low-level signal on frequency and follow that with linear signal amplification. Generating high level signals has an apparent advantage of needing fewer stages, but the unwanted products are harder to filter out. Anyway, the VHF-Communications unit costs less than \$35 for the basic components

kit and is available through Bob Eide at the address shown. It puts out 150-250 mw depending on "B+" voltage on the final transistor amplifier. Plan on needing a power amplifier, but the disadvantages of this are outweighed by the opportunity of being in the technical forefront with a 432 MHz ssb signal.

There are transverter circuits operating from 10, 6, and 2 meters. At least one unit is available commercially-made, in addition to the VHF Communications unit just mentioned. Braun in West Germany, which used to have representation in the U. S., has a unit advertised in foreign vhf publications. The transverter in general is more complex to build than the varactor-multiplier, but has the advantage that it is not mode-limited. The transverter operating on the heterodyne principle rather than on multiplication, can be used on any mode the exciter can generate. It is therefore the better long-term solution to getting on 432.

### Power Amplifiers

AMSAT estimates that 300-400 watts erp (Effective Radiated Power- rf power delivered to the antenna multiplied by antenna gain) will be needed to work through the 432-144 MHz translator. Keep in mind the FCC 97.61 (b) (7) limitations on 432-band power! Waivers of this limitation can be granted on individual application. I imagine that the AMSAT nets will have more information on this as launch time approaches.

Most users will therefore want to consider a power amplifier. Remember that the best and cheapest power amplifier will probably be a better antenna, but more on that later.

A good starting point for 432 power amplifiers is the June 1971 article from Ham Radio magazine. From there the bibliography lists several circuits of varying complexity and outputs. For those not familiar with vhf circuit construction, the best advice is; do your homework in the VHF Manuals, select one of the less complex circuits, and proceed with care. Nothing is particularly difficult, but vhf construction practices are somewhat different.

A neat solid-state three-stage amplifier has just been described in the Spring 1974 issue of VHF Communications magazine. Operating on 12 v. d. c., it is a natural companion for the transistorized transverter mentioned above.

A great source for power amplifiers is the Motorola T44 (or J44, etc.) unit mentioned earlier. The largest part (for me) of a 432 power amplifier is the plumbing or metal work. Commercial 450 MHz fm units have that already done for you. A major benefit of the Motorola T-11 or TU-204 series transmitters (used in the -44 series) is the ease of removal. Take out twelve screws, clip half a dozen or so wires, and you have a ready-to-tune two stage 2C39 amplifier (actually a 150-to-450 MHz tripler and a 450 MHz power amplifier). Both tune down to the 432 MHz region. Together with the VHF Communications solid-state upconverter from 10 meters, you'll have a pretty easy job of generating 432 ssb at a reasonable power level (10-40 watts depending on power supply voltages). With a decent antenna and little line loss, that should be enough to get you through OSCAR 7. Or, this setup makes a great exciter for a higher-power amplifier. By the way, if you do get your 2C39 power amplifier this way, save the rest of the chassis. It is a complete two-meter fm transmitter ending in a 2E26 (TU-110) or 6146 (TU-204), with little or no conversion needed.

Motorola and others make several pieces of 450 MHz commercial band equipment which operate at power output levels of 50-250 watts. While conversion information is not as readily available on a step-by-step basis, the circuits are not nearly as complex as the exciter circuitry, so conversion should be much easier. Many will tune to 432 MHz as is. A limiting factor for many will be availability of schematic diagrams, but most power amplifier conversions don't really require

access to schematics. Remember the local help available in many places from the ham-fm fraternity, or local hams involved in servicing commercial equipment.

### Antennas

As we said earlier, a good antenna is probably the cheapest way of obtaining gain. Let's digress just a bit to amplify our earlier statements on erp, for those not familiar with its application in ham circles. Your effective radiated power is the power input of your transmitter with losses considered: amplifier efficiency (100 watts input might give 65 watts output) and tank losses, loss in the coax cable (your transmission line might eat up 75% of your 432 energy!), multiplied by antenna gain. Antenna gain must be a pure number, not in dB. A 10 dB gain just happens to be a real gain of 10 times, but other dB numbers require some interpretation. A gain of 13 dB is a multiplier of 20, a gain of 6 dB is a multiplier of 4, and so on.

Several manufacturers make antennas covering the 432 MHz band. Of these, the CushCraft is one of the easiest to work with, in my opinion. CushCraft on occasion makes, but does not advertise, a twenty-element crossed-Yagi for 432 MHz. Equipped with gamma matches and set up for rear mounting, this antenna is easy to tune and mount on a straight rotator or an azimuth-elevation mount. It comes complete with pre-cut phasing lines for circular polarization, and it can of course be used with the vertical or horizontal feed separately for linear polarization.

Antennas for the 432 MHz band are very easy and inexpensive to make. A few hours with hand drill, hacksaw, and file will result in an 11-element beam described in the ARRL VHF Manual (2nd edition). With a little extra effort, a nice crossed-Yagi can be made by doing everything twice. Materials necessary: One piece of 1" by 1" lumber, a few aluminum or brass welding or brazing rods, a U-bolt for mounting, and coax connector and coax for the feed.

In choosing your antenna, remember that a power gain of 10 dB is easier and faster to obtain by switching from an omnidirectional antenna to a Yagi. Even a gain of 13-16 dB is obtained at 432 MHz in a very small antenna. Of course, you also "gain" the necessity of tracking the satellite by antenna rotation every few minutes, which is unnecessary with an omni-directional antenna. But, even vertical omnidirectionals have a cone of silence upward from the end, resulting in some periods of unusability on near-overhead passes.

For antenna tune-up, build a cheap but effective reflected power meter. I have built both the one in the ARRL VHF Manual (2nd edition) and the one from Ham Radio magazine. Both are easy and effective, but the HR unit is a breeze to assemble from the kit and is almost foolproof.

### Azimuth-Elevation Mounts

Choosing a directional antenna implies that you are going to rotate it to point in the general direction of the satellite. The ordinary rotator is designed to point the antenna in azimuth, or horizontal direction. That approach is usable for satellite work, but the more gain your antenna has, the narrower is its pattern. While most amateur antenna systems will have a pattern of at least 45°, this is narrow enough to limit your signal into the satellite on orbits whose track is closer than 500 miles from your location. It helps to mount your beam on the rotator so that it points about 15-20 degrees above the horizon. This will reduce your unworkable area to a relatively small part of the orbits very near the local vertical. However the purist complains of any compromise, and most of us have to use any antenna for many uses; who can afford to make a special purpose antenna just for satellites? So, it helps to be able to point the antenna in elevation as well as in azimuth. The resulting radar-like antenna system might seem like something out of the movie "2001" to your neighbors, but it is easy to build and operate, and the cost can be kept low. The author's installation was made from two TV rotators, and

crossed-Yagi antennas on 144 and 432 MHz. Some have even added a lightweight 10-meter beam (QST, May 1973, p. 62).

Whatever rotators you choose, pick ones with set-and-forget controls rather than the hold-down-the-bar type. Watching an azimuth or elevation indicator is not for the satellite tracker. I use two Alliance rotators: a C-225 for azimuth and a U-100 for elevation. The less expensive U-100 can be used for both functions. Make sure you pick an elevation rotator of the type where the boom goes entirely through the rotor.

### Bibliography

In the bibliography which follows, some units are described in several different places: for example, the Handbook and the VHF Manual. The plurality of references is given to facilitate location by hams who might not have access to a particular publication.

### Bibliography on 432 MHz Equipment

#### Amplifiers:

FM and Repeaters (ARRL), p. 69  
Ham Radio Magazine, Sept. 1968, p. 6  
Ham Radio Magazine, Apr. 1970, p. 40  
Ham Radio Magazine, June 1971, p. 6  
QST, April 1972, p. 49 and May 1972 p. 59  
QST, Oct. 1972, p. 31  
Radio Amateurs Handbook (ARRL), 1970 or 1971, p. 453  
Radio Amateurs Handbook (ARRL), 1973 or 1974, p. 226, 232  
RSGB VHF-UHF Manual, p. 6.50, 6.54, 6.56, 6.58 (Available from Comtec Books Greenville, New Hampshire 03048)  
VHF Communications Magazine, Nov. 1970, p. 236  
VHF Communications Magazine, Aug. 1972, p. 144  
VHF Communications Magazine, Spring 1974, p. 30

#### Antennas:

QST, Jan 1972, p. 96 and Mar. 1972, p. 101  
QST, Jan 1973, p. 21  
Radio Amateurs VHF Manual (ARRL), 2nd Ed., p. 220  
Radio Amateurs VHF Manual (ARRL), 3rd Ed., p. 211

#### Azimuth-Elevation Mounts:

CQ, Dec. 1970, p. 42  
QST, May 1973, p. 62  
QST, June 1973, p. 11

#### Catalogs:

Alliance Manufacturing Company, Alliance Ohio (rotors)  
CushCraft, 621 Hayward St., Manchester, New Hampshire 03103 (antennas)  
Carmichael Communications, P.O. Box 256, Carmichael, Calif. 95608 (transverters)  
J-Beam antennas, c/o VHF Communications Magazine  
Karl Braun, Bauvereinstrasse 40, 8500 Nurnberg, West Germany (varactor, triplers and transverters)  
Spectrum International, Box 1084, Concord Mass. 01742 (multipliers)  
VHF Communications Magazine, 53 St. Andrew, Rapid City, S. Dakota 57701 or 915 N. Main St., Jamestown, N.Y. 14701 (kits, antennas, and magazine)

#### Commercial Surplus:

FM Schematic Digest (Motorola units). \$6.50 to S. Wolf, P.O. Box 535, Lesington, Mass. 02173 (see description QST, Jan. 1971)  
QST, Sept. 1971, p. 39  
QST, Dec. 1972, p. 28 and Feb. 1973, p. 36

#### Test Equipment:

Ham Radio Magazine, Dec. 1972, p. 22  
QST, Apr. 1972, p. 21  
Radio Amateurs VHF Manual (ARRL), 2nd Ed., p. 282  
Radio Amateurs Handbook (ARRL), 1973 or 1974, p. 636

#### Transmitters:

RSGB VHF-UHF Manual, p. 679.

#### Transverters:

Ham Radio Magazine, Jan. 1970, p. 48 and June 1970, p. 79  
Ham Radio Magazine, June 1971, p. 6  
QST, Nov. 1973, p. 47 and March 1974, p. 83

(Please turn to page 47)



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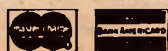
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# traffic

by  
**Paul  
Gagnon  
W6DEI**

## Public Service Honor Roll (PSHR)

The Public Service Honor Roll (PSHR) was introduced in late 1969 by the American Radio Relay League. It was established to recognize Public Service in other areas than traffic count. Checking into net, performing net control duties, performing liaison assignments are the here-to-fore un-rewarded areas of net operation that actually makes the traffic system function. After all, without the individuals like yourselves in the small cities of the country to deliver the messages at the end of the journey all the rest of the work is for naught. PSHR also hopes to encourage versatility amongst the operators. This means not only CW operators getting on phone nets (and vice-versa) but includes encouraging stations who have simply checked into nets for years to take a net control spot or a liaison function.

### PSHR Point Assignments

The following points are awarded toward PSHR each month. Points must be earned only for duties performed on a National Traffic System net or any other net listed in the current issue of the ARRL Net Directory. (free from ARRL for SASE). The Net Directory also includes many non-NTS nets.

1. For simply checking into a CW net you earn one point up to a maximum of 10 points each month.
2. For simply checking into a phone net (RTTY or ATV) you earn one point each time up to a maximum of 10 points per month.
3. For net controlling a CW net you earn 3 points; up to a maximum of 12 points per month. This is generally for NCS duty assigned by the net manager but also includes any "on-the-spot" fill in you do when a regular NCS fails to show up.
4. For net controlling a phone net (RTTY or ATV) you earn 3 points each time up to a maximum of 12 points. "Fill in" jobs count here also.
5. For performing a liaison job between nets you earn 3 points for each function up to a maximum of 12 points. The liaison must be assigned by the net manager on a regular basis or by the net control station on the net if the regular liaison misses. If you take it upon yourself to carry traffic to other nets you cannot count it. Often, if you have a heavy load of traffic, the NCS will assign you as an extra liaison station. You can count this type of liaison. Also, in heavy traffic periods, more than one liaison station is needed and both stations can count the liaison duty.
6. For conducting legal phone patches you earn one point each patch. The maximum per month is 20 points. ("Legal" means patches to countries that permit third party communications and/or that don't violate FCC rule 97.114.
7. For making the Brass Pounders League for the month you earn 3 points. To qualify

for EPL your point total comprised of your number of originations, receptions, relays and deliveries must total over 500 points or your total originations plus deliveries must be over 100, and you must report the number to your SCM.

8. For handling priority or emergency messages directly with a disaster area you earn one point per message with no maximum number limit.

9. Serving as a net manager for the entire month earns you 5 points.

### PSHR Changes

Since its beginning the PSHR has undergone several changes in the scoring and format. Originally the minimum number to qualify you for PSHR was 25 points. Now you must have 40 points to qualify.

At first the CW functions were good for more points than phone. The phone operators argued that just as much work was involved on phone so the point totals were made the same in 1971. The maximum number of points has steadily increased until the space for listing in QST overflowed. Therefore, the maximum number of points required was increased several times to its present requirements.

Arguments through the years have included that it "should be tougher to attain"; "It's too simple to make"; "Mode versatility is stressed but anyone can make it with one mode operation"; "Make it a challenge to attain and something to be proud of when earned".

### Proposed Changes

Bill Heitritter, WB6AKR of Hemet, California has drawn on extensive experience in traffic handling to propose changes to the present PSHR. Bill has operated in all net levels in the central area as W6SQE and all levels in the Pacific area as WB6AKR. He is RM, ORS, OPS, and has qualified for PPL on several occasions. He is presently assistant manager of the Pacific Area Net.

The following changes and reasons for them are those suggested by WB6AKR. His intent is to point out some inconsistencies in the present PSHR system and to create some comments and additional suggestions from traffickers nation-wide so that modifications can be made to the present system that will result in an increased interest in traffic handling and make PSHR something to seek after and be proud to attain.

The PSHR as outlined in December 1973 QST describes the intent as:

1. Recognize non-traffic count functions such as reporting into nets, NCSing, performing liaison assignments, etc.
2. Encourage versatility
3. Supplement the BPL with a listing of similar stature.

Item 1) Recognition: The duties performed by net controls and liaison stations would not be possible without the traffic originations and deliveries on the small section level nets by the individual operators who check into the nets day after day from the small cities in the country. The station who simply checks into these nets gets one point per check-in but is allowed a maximum of ten points per month. This station is actually the basis of the whole traffic system. He is ever-present to deliver messages to the unheard of towns night after night. He helps relay messages when conditions are bad. This individual will never make PSHR doing his thing since he can receive only 10 points maximum. Everyone agrees that "There should be recognition for those who handle only a few messages per month but who do it month after month for years". (William Wageman, K5MAT, TCC Pacific Director in the CD Bulletin of January 1974). The 10 point maximum in the present system is not true recognition of these individuals' efforts.

Item 2) Encourage versatility: A SSB net operator can achieve PSHR on SSB only. A CW net operator can achieve PSHR easily (with several types of duties) on CW only. CW operators can attain PSHR much easier than the phone operators since most CW operators possess SSB equipment and can speak while few SSB operators are as ambidextrous or they would be CW operators

in the first place. (Remember - WB6AKR comments). The SSB operator can qualify with extensive phone patching since there are 20 PSHR points allowed each month. Since a certificate is not awarded for PSHR and the only recognition is a QST listing, the average SSE operator will not struggle to regain lost CW operating ability.

Bill Mann, WA1FCM, in December 1973 QST mentioned making BPL (to achieve PSHR points) as versatility. The 3 points earned for making BPL requires many more hours of operation and are inconsistent (time wise) with any of the 10 or 12 point categories.

Item 3) Supplement BPL with a listing of similar stature: Bill fails to see any similarity in the existing systems. First, there is no award for PSHR as there is for BPL. Secondly, the PSHR can be achieved in many fewer hours of operation. In Bill's case he qualifies for PSHR in 22 (maximum) hours. (Other stations I know take much less time.) On the other hand, a BPL qualification total of 500 points takes many more hours of operation including extra liaison function duties. The 3 point total allowed for BPL in the PSHR requires more time than all of the other PSHR categories combined. The PSHR is not similar to BPL.

### Recommendations

Over the years Bill has noted a decline in the volume of traffic and the number of participants in the NTS circuits. Since ARRL has not promoted NTS extensively, concerned amateurs have taken it upon themselves to promote it. Examples are George Fisher, WB6MKV and his traffic kit (see below) and the various awards people have made available, (Brotherhood of Amateur Traffickers, BRAT: Southern California Amateur Traffickers Society, SCATS) etc. Traffic volume decline has been attributed to several factors: Sun spot cycle (bad band conditions), lack of traffic to a war zone, and the emergence of phone nets. George Hart, W1NJM, on page 5 of CD Bulletin Spring Edition (no. 110) under "Annual Report Time" heading says; "This year's report, for example, will show a continued downtrend in appointments, especially those in the Public Service field, and a decrease in traffic handling". Therefore, the following suggestions were submitted by WB6AKR to provide food for thought and discussion toward proper modification of the PSHR.

### Revised PSHR

1. Eliminate the maximum totals per category and the existing monthly listing in QST.
2. Change category 7 (three points for making BPL) to a true traffic count total as reported to the SCM.
3. Delete the use of category multipliers. A certificate would be issued by ARRL when an accumulated month by month total reached a certain number of PSHR points. For example, 1,000 points. The reports of totals would be sent to the SCM and filed with his monthly report to ARRL. Stickers such as those used for ARRL certificates for the code proficiency award would be issued for higher total increments such as 2,000, 3,000 etc. QST listing would then be at the time of initial certificate and subsequent endorsements.

This type of award would hopefully achieve the type of success the WAS, WAC, DXCC, and BPL certificate award and BPL medalion award programs have experienced. To summarize his comments Bill says:

"I feel the suggestions made would not only provide true recognition of the lower level net individuals who represent the foundation of NTS in the fact he will realize the accumulated monthly totals will afford him the certificate regardless if it will take many months; but this technique might encourage his participation in more nets... his origination of more messages... his overall reaction to NTS system techniques will show improvement. Hopefully, the above will also increase the number of operators skilled in NTS operation to the point of maintaining NCS and liaison assignments."

These suggestions contain one man's views and do not claim to be the ultimate

solution to the problems. The above information has been forwarded to several individuals with much traffic experience in the Pacific area who represent various positions of the NTS, in order to stimulate discussion and develop a worthwhile change.

### Preliminary Comments

Bill has already received comments from several of these people. Bill Wageman, K5MAT, Director of the Pacific Area Transcontinental Corps, responded with an alternate proposal of his own. K5MAT doesn't feel the PSHR is biased toward the CW operator as WB6AKR does. He feels the phone patches and liaison and NCS duties due to the growth of the Daytime NTS (SSB) weigh it towards the SSB operator, if it is biased. K5MAT feels that the three points for BPL is sufficient since PSHR should recognize non-traffic count functions. He also feels the inclusion of actual traffic count in the totals would weigh things too heavily towards the "old pro" CW operator. K5MAT agrees that the required point total is so low that it can be achieved without rendering much public service. He also feels that more points should be awarded to the operator being available on the local nets who is available daily than the net control or liaison function performed only 4 times a month. The proposed rules for K5MAT's "ARRL Award for Extended Public Service" are as follows:

Purpose: To recognize those amateur radio stations that contribute to public service by their participation in the National Traffic System over extended periods of time.

Reporting: Each station shall report his point totals for the first four categories to his SCM monthly. Net managers are responsible for awarding points for the last category.

Awards: A total of 500 points earned over any period of time will qualify the station for the award (a card similar to BPL) issued by the SCM. After ten basic awards have been earned ARRL headquarters will issue an appropriate certificate. The calls of the recipients of all awards shall be published in QST.

### Points Are Earned As Follows:

1. One point for each checkin to an NTS net, with a maximum of 30 points per month.
2. One point extra for serving as NCS of an NTS net, with a maximum of 5 points per month.
3. One point extra for serving as a liaison between NTS nets, with a maximum of 5 points per month.
4. One point for each message received on an NTS net and delivered by telephone, or by mail when there is no regular phone outlet available, with a maximum of 10 points per month.
5. Ten points for service to a local or section NTS net during a time when that net is directly involved in emergency communications at the request of local authorities.

The author (K5MAT) mentions that this would take a year or so to earn and that consideration should also be given to non NTS nets that handle traffic.

Don Stansifer, W6LRU, RN6 Manager, agrees fully with WB6AKR that the regular checkin man is the back bone of the NTS and where we need to provide an incentive to newcomers. He agrees that the three points for BPL is grossly underrated in the PSHR totals. He also agrees that PSHR is too easy to attain.

Ted Sharp, W6UYK, Assistant manager of the Southern California Net thoroughly agrees with the comments by WB6AKR. Ted returned to traffic handling after many years with a goal to attain BPL award. He does this regularly now by originating much needed traffic. Hopefully the PSHR would be a desirable goal to cause others to return to traffic handling. Ted feels that the present scoring rules do not reflect equity for those who participate and mentions that the 5 points given for being net manager is over-rewarding. He suggests a point scoring system as follows:

1. Each origination 2 points
- (Please turn to page 47)

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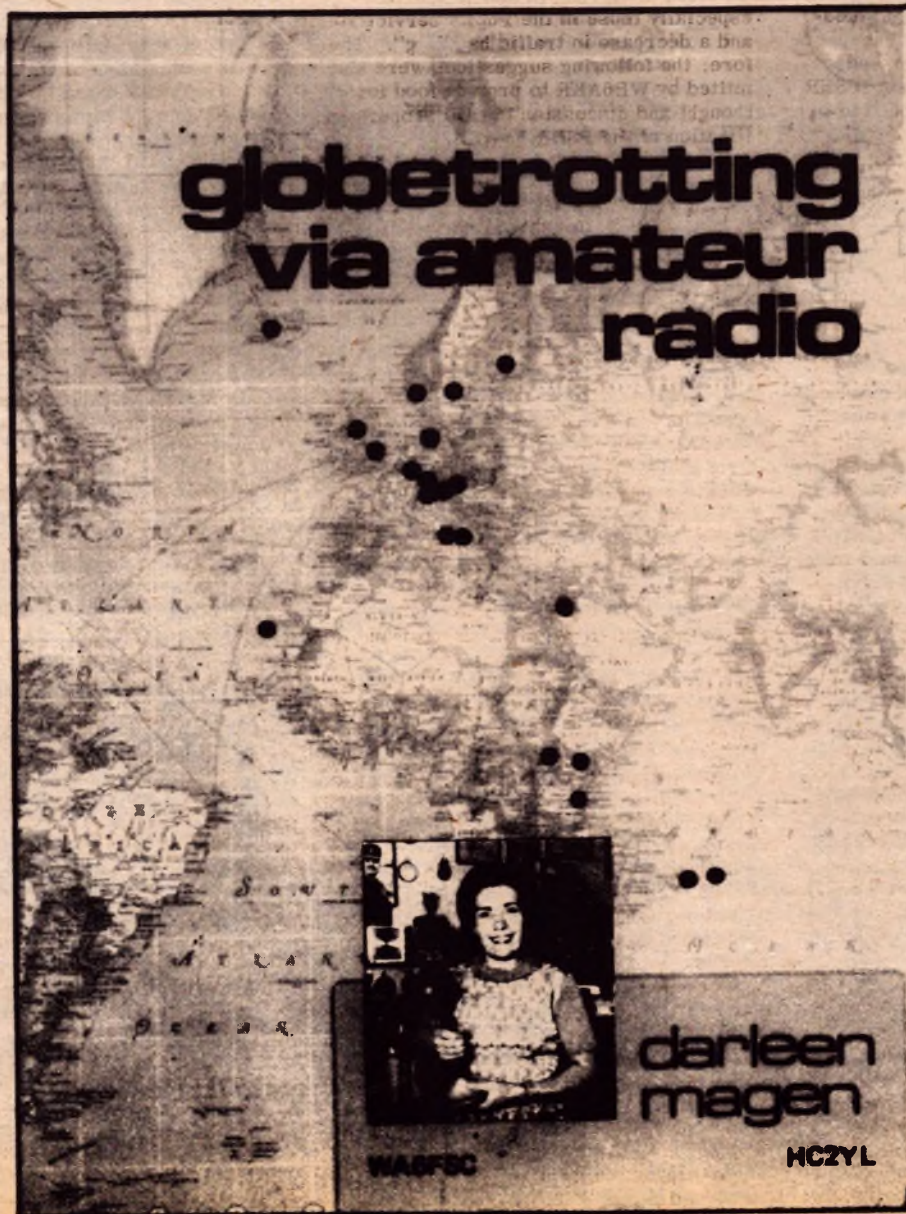
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by Nick Hauck, K6QPE

The weather satellite photo, shown here, is from NOAA-3, showing a large area of the Pacific Ocean, Alaska, Canada and half of the USA. This picture is a good example of just one of the many satellites that are emitting WX reports everyday, on a predictable time-table. If you look carefully at the top of the photo, you will see all the information NOAA-3 transmits during its orbiting. Included with the name of the satellite is the number of the pass, date and time. This particular photo was a night infrared shot. The various satellites transmit different "grids" to help identify land masses for orientation purposes. This photo was received and recorded by Dr. Dale Hauck, W6YFT/7.

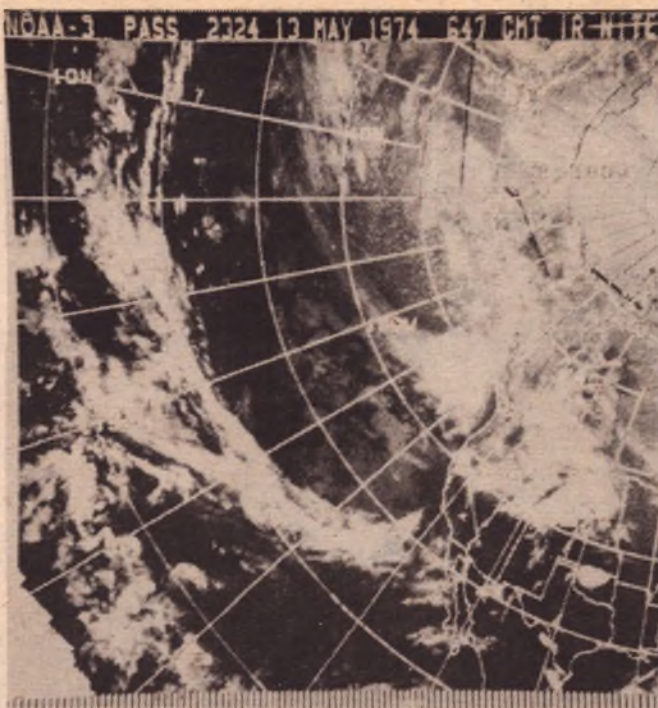
My thanks to Bob Schloeman, WA7MOV, for sending the WX Satellite Station block diagram. He has been most helpful and along with Bob Pophan, are studying the feasibility of WEFAX (weather facsimile) from SMS-GOES A, sometime this fall. Slow-Scanners are being asked by the ARRL how we could or would share our SSTV frequencies with FAX users. How do you feel about it?

Remember the first time you ever saw a short wave amateur station or experienced the deftness of the operator as he threw many switches to "put-it-on-the-air"? Or the sleepless nights sitting up listening and calling CQ then tuning the entire 10 meter band for an answer?

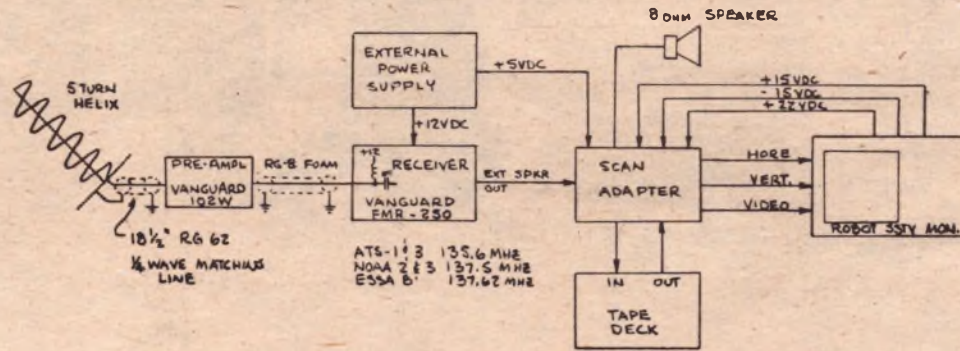
Well, I remember all of these and it is fun to reminisce these past events with my brothers who have been "hams" much longer than I. My eldest brother, Dr. Dale Hauck, W6YFT, has been an operator since 1937. Wherever he goes, he has his SSTV gear to keep the family informed with news. Dale's wife, Elie, W6YFF, is licensed as is my other brother Hillis, K6DQA and his XYL Connie, K6EXQ. Others in the family involved with radio are Fred, WB6WHJ, my wife's brother, who is in the Navy in San Diego. Dr. Paul Woodruff, K6RRK, a cousin, and most famous of all the clan and really the one most responsible for starting all the QRM is another cousin, Ray Hodges, W6AQP. Ray is the co-inventor of the Swantenna and other communications ideas.

I will save you the trouble of counting them all--a total of 8 currently licensed and holding General Class or Advanced. You begin to see how interesting SSTV could become for so many in one family tree. At the present time, only Dale, W6YFT, and myself are using this mode.

For some time now, Dale has been into SSTV and more recently, WX satellite SSTV. Along with other friends, every year he flies back to Dayton to get the latest news in this field. I would like to say that keeping informed of such a technical and continuously changing hobby as ours, requires constant reading and study



Dale Hauck, W6YFT



WX SATELLITE RECEIVING STATION BLOCK DIAGRAM.

BOB SCHLOEMAN WA7MOV  
1 JAN 74

just to stay current. A large percentage of amateurs do not subscribe to our official organ-QST, or other sources. Just this past week a ham who is currently active in amateur radio, asked me to tell him about 2 meters.

In 1970, I was one of the first Americans to return from Japan with solid-state 2 meter FM portable gear. It seems impossible for me to understand how any active ham could miss seeing or reading about present day 2 meter activity.

Sorry to stray from the main theme, but I will comment later about modern man and his overload of communication assimilation.

When Dale, W6YFT, was an intern at the Los Angeles County Hospital, he continued his radio hobby and as many AMers will remember, used a BC 610. Big and heavy, but dependable. He was one of the early 25 pioneers in Los Angeles to build his own TV receiver. No Heathkits then. Remember this is the year 1947-48. Recently we were talking about those early TV days, and the many humorous happenings. He said, the early TV stations would send out postcards to those on the secret mailing lists, telling the day and time that they would broadcast that coming week. Many times, these listeners would telephone each other up and compare notes on reception or

laugh at TV's early effort. Many of the early technicians also were hams, and they used FCC amateur type calls.

Getting back to modern communications, in the span of about 20-30 years, the transmission of video has not ceased to grow technically. Perhaps it was this early taste of broadcasting video that remained with Dale. He still owns a working 1948 RCA 7" TV table model, not for sale. As you can see in the pictures with this article, he has a neat functional station. He is also a "2 meter nut" as is my other brother Hillis, K6DQA. His plane is also 2 meter equipped. Since he has auto pilot, perhaps he can attempt the first airborne SSTV contact. Another Robot monitor is used for the weather reception part of the station. Well, that's about it for a very active amateur radio operator. If you hear or see the family net, please break-in and say hello.

Dave Ingram, K4TWS, has written me of his great concern, that "we" who are using slow scan, are perhaps being negligent in telling others of our great hobby. Stop and think for a moment, if you will, when using only SSB or CW, what do you "look" at?... Crazy, Nick, you say. Do you look at the mike or the speaker on the table? That's right, you're making only an audio QSO contact, but could be using video for a complete QSO... as Dave points out, it's old fashioned and on the way out. When you turn that monitor on, put your picture on the air, you're in a different class, a different world of communication. We must "spread the gospel" according to SSTV. We must invite our fellow amateur over for an evening of SSTV. His wife will enjoy this part, I am sure. It will grow in spite of your efforts, but you may help it get there faster!

The mystery is solved... you know, the one about who put the high voltage on the moon, first. David Cohen, WA2RWS, Program Manager, Slo-Scan, for Venus Scientific, has informed me that as a sub-

contractor for Westinghouse, Venus designed and built the high voltage power supply used for Apollo 11 Lunar landing mission in July, 1969. Five years ago, their Venus 111, only 3.9 inches in size, put out 8000 volts @ 10 ua for 8 VDC input. He also pointed out since Venus is a technology oriented company, they are interested in other areas. They make Low Light Level TV cameras used by military and industrial clients. They have a camera capable of "seeing" starlit scenes, even when there is no visible moon. My thanks to David for the information I requested and I look forward to a video contact with the new Venus. They also make available their monitor in kit form. Model SS2K. As far as I know, theirs is the first slow scan kit on the market. (Latest CQ magazine shows an advertisement on their kit.) Look out Heathkit.

Something to take with you... At the recent communications seminar held at Stanford University here in California, Dr. Wilbur Schramm, informed media analysts and journalists, that modern man has more information given him than he can assimilate. Computer ability to transmit information has done its job too well. Man with his computers have not kept pace with each other. The machine has created so much information, so fast, that "man" because, after all he is human, simply cannot digest it all. Libraries with microfilm, periodicals, books, and other recorded sources provide more than enough information, but despite all available data, "The ability to command, direct and sort out information may become a source of power comparable to natural technological and economic resources," Schramm said. He feels the computer will be the great communication machine in the years to come. It could aid us in taking charge of information--rather than information of us. Shades of 2001... it is closer than you think.



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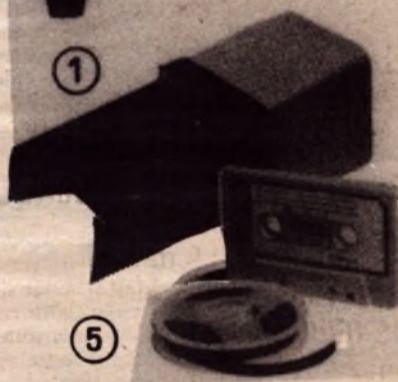


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All solid state except cathode ray tube.

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### ② MODEL 80A SSTV CAMERA

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### ③ MODEL 61 VIEWFINDER

Displays Model 80A or 80 Camera's fast-scan video on six inch (diagonal) display to simplify setting camera focus and field of view before and during transmission. All solid state except cathode ray tube; cabling to camera fast-scan output included.

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B	25	1.9	24	\$ 29
E	25	1.4	6	\$ 65
F	50	1.9	42	\$ 55
G	150	3.2	96	\$ 89
H	20-80	2.5	60	\$220

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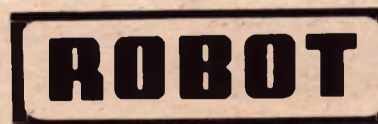
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# maritime mobile

by Bill Yost, WA6PIU

TO SEA OR NOT TO SEA  
(with ham gear)  
THAT IS THE QUESTION?

At least this was the question asked by William Cooney, W8LM, in our last issue. Apparently he hasn't been able to get operating permission when dealing through the shipping agents of various cruise ships.

My advice at the time was to check with the radio officer. By understanding amateur operation, he would probably be the best one to clear things with the captain, etc.

Subsequent to this inquiry I have had several letters from radio officers. I made the statement that there was no reason why an amateur shouldn't be able to operate aboard ships. I meant this in the technical, practical sense. Unfortunately our function as hams is plagued with the pettiness of administrative and world politics.

While it was an amateur effort and spirit that brought radio to man, we must now be tolerant of the occasional immaterial decisions which are levied in spite of our civil approach.

I certainly don't mean to discourage attempts at shipboard operation. By all means pursue it with every channel available. Just be prepared for a possible hassle.

Where to start? According to Ted Esbrook, W5YMX, a retired commercial radio officer, "The proper procedure for obtaining permission to operate on board ships is to obtain written permission from the Master of the ship only, the owners have nothing to say about it.

"If you plan to operate on board a foreign ship, the ship must be registered in a country that has an agreement with the USA for amateur radio operation. Otherwise, the captain cannot lawfully give permission to a citizen of another country."

On the other hand, we have Otto Lotz, W5HCO, also a retired radio officer, who now claims the SS Rocking Chair as his vessel. Otto is believed to be the first SSB Maritime Mobile operator aboard the SS Gulf Shipper back in 1958.

"There are numerous reasons why a Ham cannot operate Maritime Mobile aboard ship. Especially if he is a passenger!

"These cruise ships he (W8LM) is referring to. If they are not of United States registry, forget it! Very few countries even allow their own nationals to operate Maritime Mobile. Secondly, could you drive to Mexico and operate portable XE without first getting clearance from the proper authorities? Or any country for that matter. Same goes for ships. You are always refused permission by their head office. The agent of the company has no authority to grant amateur operation to anyone. That authority comes direct from the government of registry. You may receive authority from the country, then must receive permission from the captain of the ship. He may turn you down. So if you sail on a foreign flag ship forget amateur operation.

"If you sail on a U.S. flag ship, you must first get permission from the head office

of the owners or operators of the ship. If that is granted, then you must also get permission from the Master of the vessel. Even with company approval, the Master has the prerogative of refusal.

Your advice to go to the radio officer was a bum steer also. He has no authority, except through the Master of the ship. Another real bomb was the long wire bit (I suggested the possibility of using the ship's antenna system). When the operator is not on watch, the main (longwire) antenna is connected to the auto alarm. A horn signal (rig) connected to this antenna would put the A.A. out of commission as long as it is connected. It would effectively short out the main antenna even through a tuning network."

At this point I'm not sure the question is resolved. I think it all depends on what ship, what country, and what captain. I called several shipping agents on the west coast and got the same variety of answers. So, start early and good luck. Perhaps we can get some feedback from stations who have actually operated as passengers. In the meantime, many thanks for the letters.

These countries will permit the holder of a U.S. Amateur License to operate within their borders.

Argentina	Ireland
Australia	Israel
Austria	Kuwait
Barbados	Luxembourg
Belgium	Monaco
Bolivia	Netherlands
Chile	New Zealand
Columbia	Denmark
Costa Rica	Nicaragua
Dominican Republic	Norway
Ecuador	Panama
El Salvador	Paraguay
Fiji	Peru
Finland	Portugal
Brazil	Sierra Leone
France	Sweden
Germany-West	Switzerland
Guatemala	Trinidad
Guyana	Tobago
Honduras	United Kingdom
India	Uruguay
Indonesia	Venezuela

Apply to the licensing agency in the country as far in advance as possible. Write to ARRL for full information.

(Copy and use this form. Thanks to Ted Cohen, W4UMF)

## REPORT OF INTERFERENCE (Please Print or Type)

Set Manufacturer: \_\_\_\_\_  
Type Device:  Television  Radio  Hi-Fi  Tape Recorder  
 Phonograph  Electronic Organ  Intercom  
 Other (Specify) \_\_\_\_\_

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

Source of Interference:  Business Radio (e.g., Taxicab)  
 Citizens Radio Service  
 Amateur Radio Service  
 Government Radio (Local, State or Federal)  
 Unknown

Station callsign or other identification (code name) \_\_\_\_\_  
Distance from station causing interference (if known) \_\_\_\_\_  
Type of interference:  Picture  Sound  Both

TV channels affected: \_\_\_\_\_  
For sound interference:  Sound understandable  
 Sound unintelligible

I understand that FCC experience shows 90% of all television interference cases require treatment of the receiver rather than of the transmitting equipment (Statement to television receiver owner, FCC). Further, I understand that the only cure for audio interference is treatment of the audio device experiencing the interference (Bulletin, FCC, 25 November 1970). It would be appreciated if you would bring this matter to the attention of the manufacturer's Service Manager.


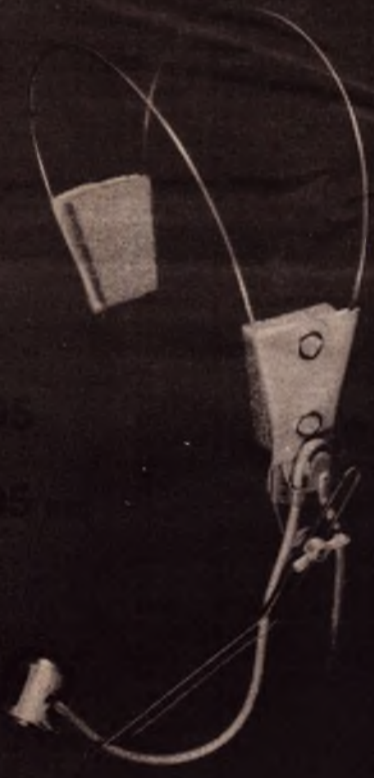
Thank you.

Consumer's Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

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**73 Herb Johnson W6QKI**



# clubs

## SUNDAY MARATHON

On Sunday morning at 0730, a group of hardy hams gathered at the Paul Masson Winery near San Jose, CA, to provide communications for the second annual Knights of Columbus Marathon.

A morning nip was in the air (not in the winery because it was still closed), but the day dawned bright and clear. We had gathered for the publicity picture to be taken by a news photographer, who decided to sleep in.

The crowd was small when we first arrived, but grew rapidly. Both runners and spectators were anxious to get the race started.

The group helped to get the base station set up on 2 and 80 meters. Ralph Michelson, WA6RXB, would have the responsibility of keeping the traffic flowing smoothly. The club generator worked perfectly, thanks to Ron Reuter, WN6WEQ. Orve Dalton, K6UEY, provided his van to complete the set-up.

Just before the race started, we dispersed to our check-points to try out our rigs. Our job would be to report the time of each runner passing our check points, which were spaced at five mile intervals. The information would be put into a computer to calculate time for each five miles. AAU officials were on hand to provide us with accurate times.

At 0903, 219 enthusiastic runners of all ages left the winery on the marked route which would circle through the hills of Saratoga and Cupertino, and end 26 miles later at the winery.

At the five mile point, Jerry Skinner, WB6 OOP and Gary Mason, WB6AHC, operating on 2 and 80 meters, spotted the runners and were waiting for lists of times and numbers from the officials. The officials were not writing! They were talking into a tape recorder! Oh well, guess there has to be at least one foul up at every function. After the runners had gone by, Jerry quickly played the tape back, copied the information and passed it to WA6RXB. Problem solved!

At the ten mile point, Paul Rhoads, WB6TUT, operating on 2 meters spotted the runners. All information was passed to WA6RXB with no problems.

At the 15 mile point at Steven's Creek in Canyon Park, Dave Rogers, WN6WCO, and I were enjoying the stream, the trees and the sunshine while waiting for the runners. Our communication check on 80 had been weak but readable, even with the sheer cliff to the east, toward the winery. As the runners started passing, we found that our communications link with WA6RXB had deteriorated and some of our times had to be relayed through other stations, but everything went smoothly.

At the 20 mile point, Pat Silva, WB6SCG and Frank Glass, K6RQ, had no problems getting the times from the officials or passing them on.

Meanwhile, back at the winery, the guys were doing a fine job of copying times and delivering them to the race official for entry into the computer.

Winner of the race was John Loeschorn of West Valley Track Club. John completed

the 26 miles in 2 hours, 32 minutes and 51 seconds.

At the awards banquet held after the race, many comments were made by both officials and runners about the best and most organized marathon in the country.

Steve, WA6WEI

The 1977 ARRL National Convention will be held June 3 - 5 in Toronto, Canada.

## cooperation

Those of us living in high-population-density areas may have to fight traffic (the automobile and truck kind), air pollution and airwave pollution of the ham bands, but we do also realize a few advantages. One of these is the availability of many different local radio clubs within a relatively small radius.

In such an area, there may be an all-encompassing metropolitan area club, a DX club, several repeater groups, high school or college clubs, clubs connected with a local manufacturer or industry, and who knows-what-all. There could even be competition among them in recruiting area amateurs, but usually there are plenty to choose from, and most of them gravitate naturally toward the group closest to them, either in distance or inclination or both. One thing is for sure -- there is plenty of specialization!

Specialization is the way of the world, these days. No use fighting it. But all too often, when clubs in a densely populated area specialize, they also isolate themselves and although located in the same city might as well be at the opposite ends of the globe for all the contact among them.

In some areas, the desire for communication among clubs in pursuit of some overall common objective results in the formation

of federations, club councils, or foundations. This is fine, and is an excellent vehicle for getting clubs together. All too often, however, amateur clubs in an area are stand-offish from each other. The super-active clubs look with disdain on the semi-actives, DX clubs abhor the technician-ridden repeater outfits, school clubs feel they don't "belong" to the amateur radio club community. We are rapidly getting away from the old fraternal amateur spirit when any two licensed amateurs had so much in common that they could go from total strangers to fast friends after an acquaintance of five minutes.

Hadn't we ought to try to get back to some semblance of those days? Inter-club coordination and cooperation is a good way to do it. For example, on a regular basis, clubs could send "representatives" to each others' meetings. The big, general-interest club will be interested in "scouting" the specialist groups for possible speakers on specialized subjects, and the specialist groups will be interested in spreading the gospel of their specialty. Everybody would benefit by broadening his knowledge, if not the scope of his operating activity.

There are many other ways of improving communication between and among clubs, but the above is basic. Joint auctions, banquets, joint sponsorship of hamfests and/or conventions, even Field Day are others. "Sticking together" is an important fact of amateur radio which the local club can promote. In terms of sheer quantity (not quality!) we are a poor second to the CBers, and having disjointed local groups who hardly speak to each other seriously hampers our ability to present a united front. The many-factness of amateur radio is one of its strongest points, but we all filled out the same form and received the same type of license. You may not love that other group across town, but you can learn to live with them and share each other's wealth of knowledge and strength of numbers.

by George Hart, W1NJM, ARRL Communications Manager ("CD Bulletin")

## YLISSB

THE PURPOSE OF YL INT'L SSB'ERS, INC.

When we are asked, "What is the purpose of SSB'ers Organization" we outline here a segment of our by-laws outlining our major objectives.

The by-laws of YL Int'l SSB'ers, Inc. sets forth a worldwide service program through creation of Amateur Radio communication facilities, 7 days a week, and for the purpose of:

- A: Handling national and international emergency traffic.
- B: Effecting delivery of urgently needed life-saving medication to individuals world-wide.
- C: Actively promoting international goodwill through mass person-to-person contacts both on the air and subsequent correspondence and exchanges.
- D: Effectively promoting incentive for a higher degree of operating proficiency and associated technical competence.
- E: Promoting effective world-wide public relations through additional media of Realistic awards programs and annual QSO parties.
- F: Bringing to the attention of the general public the tremendous contributions through which Amateur Radio serves the public interest, the national interest, peace and good-will amongst all the peoples of the earth.

These, then, are the basic purposes of YL Int'l SSB'ers, Inc.

EMERGENCIES SERVED - over the past years of SSB'ers existence, emergencies successfully concluded have been countless!

Each emergency brought to SSB'ers Systems have received full and immediate attention, justifying its existence in thousands of ways and thousands of times.

Many people are alive today, many others able to see, who without the services our systems rendered, would have been doomed to darkness and despair. It is SSB'ers pleasure and privilege to be of service to mankind, wherever they may be.

1600 GMT - 14.333 MHz

## ATTN: Club Officers

"Worldradio" would appreciate being on the mailing list to receive your club bulletin. Please send it to "Clubs", The Worldradio News, 2509 Donner Way, Sacramento, CA 95818.

We would also like to print stories of what your club has done. Such articles would help to inspire activities for other clubs.

Also, you are invited to inquire about the special price on "Worldradio" subscriptions if purchased through your club. Here is a chance to fatten the treasury. We also have something of interest for you if you wish to use subscriptions as a door prize.

REPEATERS... from page 30

for repeater and duplexer, a GE satellite receiver voting system for four receivers, and a portable remote package. This will undoubtedly give us the finest, most reliable radio system in this area.

The Miami Valley FM Association repeaters operate under the calls WR8ACV, and WR8ADI, on 146.04-.64, and .16-.76.

(de Jim Hagedon K8YQH)

There wasn't much news we could put in a little space like this. So, we'd like to mention that a subscription to "Worldradio" makes a nice gift. They'll think of you 12 times a year.

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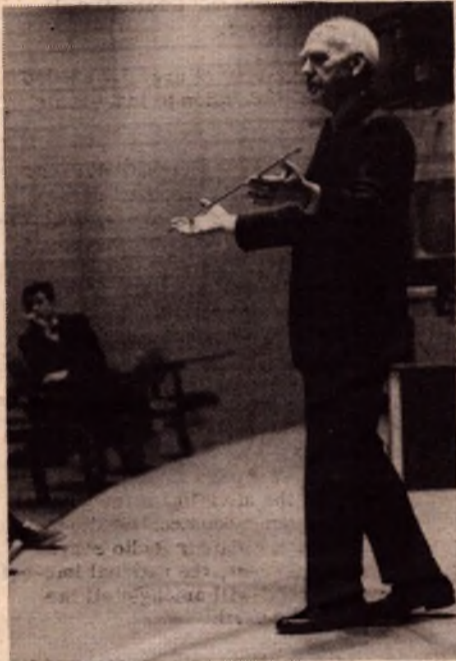
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# imra international mission radio association

by  
Sister Mary, WA5VBM



Professor E. R. Pinkston, K3DVY, U.S. Naval Academy, gives a virtuoso performance on "the singing rod", a 6-ft piece of aluminum which can be set into deafening vibration with light hand stroking.

## VOICES OF IMRA

Earl Roland (Pinky) Pinkston, K3CVY, was born in Parrott, Georgia in 1910. He attended Parrott High School and Georgia Institute of Technology. He then went to Auburn University and the United States Naval Academy from which he graduated in 1932. Pinky did not receive a commission to the navy because of his poor

eyesight. He continued his education at the Catholic University of America in Washington, D.C., receiving his Masters Degree in Physics. In 1933, Pinky became Instructor of English and Physics at the Bullis School in Washington D.C. He went to work for the National Bureau of Standards as Materials Engineer in 1938. Pinky's work at the National Bureau involved establishment of specifications for safety and fire protection and prevention. The Bureau also sets and maintains the official standards in all the technical fields. This includes WWV time standards.

Pinky went back to the Naval Academy at Annapolis, MD, as an instructor in Physics in 1942 and became Head of the Physics Department in 1959, remaining in that position for 8 years. Professor Pinkston's specialty is demonstration experiments in the classroom, teaching physics to navy midshipmen. Demonstrations demand extra work on the part of the professor. He must devote time, skill, and patience in putting things together to make sure that no vital matter has been overlooked. Demonstration experiments show "how things really go."

The Pinkstons, Pinky and his XYL, Jerry, have been married for 39 years. They have two children; a son who is 30 years old and a daughter who is 28. Pinky is 5 feet 8-1/2 inches tall, has blue eyes and his sandy hair has turned white. He is not sure about his national extraction, but thinks he is probably descended from original English colonists in Georgia.

Pinky was looking for a suitable hobby for his son, when he went into Amateur Radio. The boy was interested in "sound" and Pinky first thought about hi-fi as a hobby, but then decided that radio would be better. Pinky passed the General class exam in 1957, but he could not interest his son in radio... his son became a hi-fi enthusiast.

K3CVY's station is set up with a Heathkit 301 and 401, receiver-transmitter. His antenna for 80 meters is an inverted Vee, he uses his 14 AVQ vertical for 40 meters, and he has a TA-33 on a 50 ft. tower for 20, 15, 10 meters.

Pinky's most interesting experience in radio was on 40 meters while he was Service Control on East Coast Amateur Radio Service (ECARS). A mobile station reported that a blue sedan was chasing a

brown Cadillac down Route 40 in Delaware. Pinky called the Maryland State Police because he knew they had to come over the Maryland state line very soon. Later in the morning the State Police called Pinky to thank him. They had overtaken the blue car and arrested the driver. He was wanted for murder and was trying to kill the woman in the brown Cadillac.

Professor Pinkston just stumbled onto the IMRA in 1970, but he was glad when he found it. He enjoys working nets on the amateur frequencies and he and his XYL had agreed that since he had spent a good deal on the tower and equipment, they would try to put it to the Lord's service. The International Mission Radio Association is an excellent outlet for Pinky's ambitions. At the present time Professor Pinkston is thinking of terms of retirement from the Academy in 1975 and that will give more time for IMRA.

## IMRA NEWSNOTES

WA3VIK, Fr. Jim Coffey, Washington D.C. began his studies last year under the tutelage of Tex Barbarite, W3RUS. On June 20, Father passed the General exam and will be joining us as soon as he gets a rig and his paper-work from Gettysburg.

W8GYR has been put to rest. I mean the call sign, Brother Robert Kreutzer is no longer W8GYR/9, but has W9NJA for the East Chicago, Indiana, QTH. Brother Robert will attend the MARCO Convention in Chicago as a special guest.

W9LII, Tom Barbour, will also attend the MARCO Convention in Chicago, the last week in June. Tom will be presented with the MARCO AWARD of APPRECIATION for his work as Net Manager of IMRA. Congratulations, Tom!

WB4OBZ, Father Charles Clark, Mepkin Abbey, South Carolina, has a new article in the latest QST Magazine. It is his second article about grid-dipping.

SILENT KEY: The whole IMRA was stunned and shocked at the death of Elmer Lunt, W4SFD, Pampano Beach, Fla. He was stricken suddenly with a fatal heart attack at his home on Saturday morning, May 11, 1974. May he rest in peace!

Father Joe Kowalczyk, who has been operating the station K2ESE at Maryknoll, NY, will re-activate his station OA7CF as soon

as he reaches his mission in Juli, Peru. Father Joe went to Cochabamba, Bolivia, to attend the language school for a refresher course before returning to Peru. He took a little vest-pocket QRP rig, Ten-Tec's Argonaut and linear amplifier. He is going to field test it. Hi! Be on the look-out for his signal from Juli, Peru.

OA4SS, Father Ed Schmidt, made a business trip back to the States in June. While he visited his home in Hamilton, Ohio (near Cincinnati), he had the opportunity to meet Walt Huelsebusch, K8HBH, and Cy Harrell, WB8DHW. Sort of a mini-convention.

OA4CYC, Marie Sutter, will be attending the International Grail Meeting in Toronto. She is planning to make several stops in the U.S. on her way to and from the Convention.

WB9JQF, Father Tom Delaney, left Chicago for his new assignment in California on June 13. He will be at Loyola University in Los Angeles and will try to check in "Portable 6".

W4DAV, Jim Wilson, Jacksonville, Fla., took a trip to Alajuela, Costa Rica. While there, he got to meet Father Stan who operates TI5BE. Jim planned to meet several other IMRA members as he passed through Miami.

IMRA Net Report - May

Check-ins	Traffic	Sessions	Time
1576	577	50	69 hrs

IMRA-MARCO PROJECT. A group of IMRA and MARCO members are working on a project to get an X-ray machine moved from Illinois to Honduras. Walt Shriner, W9CBG, and John Schindler, W4RFA, are working on procurement. Tom Barbour, W9LII, is going to accompany the machine and Ruth Paz, HR2RP, will be on the receiving end in San Pedro Sula, Honduras. Eventual destination will be the Mission of Ocotepeque. Many others are assisting in logistics.

KP4CB, Paul Girard (who is most often heard as Net Control on the Intercontinental Net) celebrated his 70th birthday in May. Paul first got into Amateur Radio as a Boy Scout when he received his Wireless Merit Badge. He seldom gets to check into the IMRA Nets because he has to baby-sit with his grand-harmonics.

WBØARU, Pat Click, is now living in Linn, Missouri. He is head of the Air-Conditioning and Refrigeration Department of Linn Technical College. He may be checking into the Net from the College Club station WBØJOR.

Hill Air Force Base - TSgt. Charles L. Word, TV equipment technician with the Hill AFB TV Center, helped in the rescue of two amateur sailors on a voyage from Hawaii to California.

The sailors were almost swamped by high seas in their 36-foot trimaran about 400 miles west of Los Angeles. The sails were ripped to shreds by high winds and the boat's sea-grogue was torn away. To make matters worse, the emergency engine wouldn't start either.

TSgt. Word, an amateur radio operator at his home at 537 Miller, Layton, was on the air when he heard the emergency talk on the 40-meter band. He heard and relayed conversations among an amateur radio station in San Diego, a Coast Guard station at San Francisco and the sailors in trouble at sea.

Word kept on the air most of the night and the next morning assuring that the sailors were in contact with potential rescuers.

Meanwhile, the boat developed a leak in one of the outriggers. Through the efforts of TSgt. Word and his amateur radio colleagues, a Navy C130 was dispatched from the San Francisco Coast Guard Station.

The C130 located the disabled vessel and dropped two gasoline-operated pumps to help the sailors pump out the rising water in the boat.

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This is Pete Grabosky, WB6OOL. His story is on page 10.

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# Kingman

(Continued from page 29)

ran a phone-patch for us to the U. S. Coast Guard Rescue Service in Honolulu.

"Within an hour we had the OK to land.

"The next days were just spent bouncing, it was horrible. Eight to ten foot seas. We just constantly bounced. The ballast for the boat was the fuel and the water and we had little of either. We would get banged by a wave and the boat would fly.

"An Air Micronesia plane leaves Johnston every Friday night at 10:45. If we could catch that flight to Honolulu, we would be in San Francisco on Sunday and be back to work on Monday.

"We missed that flight because we couldn't find the island. It's two miles long by half a mile wide and has a 600 foot lighted Loran tower. But with again overcast skies we couldn't get any fixes and were in bad shape. We didn't know where we were and if we did we weren't sure the engines could have gotten us there. We would talk to Freeman Lang, KH6AX, on 15 meters and he would go up on 20 and tell what was happening.

"Ham Radio saved the day. We depended on signal strength readings. We transmitted and Steve, on Johnston, checked the received strengths at different beam headings. Then Steve transmitted at different beam headings and we watched the received strengths. With his 3-element beam Steve figured out we were Northwest of Johnston. Steve sat at the rig all day

guiding us in. Then we got so close that we were getting false indications. We still couldn't see the island, and we were baffled.

"Then they had a fire drill on the island. It was to see how fast they could put out an oil fire. We saw a black column of smoke on the horizon.

"Johnston Island has a population of about 500. They are mostly military who are there for one year and civilians who are there for six months at a time. No families are allowed. It's pretty boring out there.

"We were the big excitement. Our story was put on the island's 50 watt FM radio station, guys were up on the towers with binoculars looking for us, and people lined up at the dock to welcome us. You would have thought we were the USO show. It was indeed a royal welcome. We had a warm hospitable time. The base commander, a colonel, was just marvelous. We had thick, thick steaks and strawberry shortcake.

"We gave out five or six hundred KJ6 contacts on phone and CW and caught the plane out on Monday night. A fuel pump was flown in and the technicians on the island helped repair the boat. We just can't say enough about the guys on Johnston Island. They were terrific.

"At one o'clock in the morning we landed in Honolulu. We were met by Gary Belcher, KH6GMP; Pat Corrigan, KH6GQW; Joe Locascio, KH6IGJ; and Bob Ferraro's wife and two children."

Rusty and Pete were asked what impressions they were left with, what stands out the most to them now. They answered, "Never want to go on a small boat again. The next DXpedition will be one that you can fly or drive to.

"We were amazed how well you could get out with low power and a vertical. What made the DXpedition a success was that a lot of people felt a part of it. They knew about it in advance, followed it, and shared with us the frustration as we rolled and rocked, wondering if we would ever find Kingman and then Johnston. People knew what was going on and people followed it. Different than many DXpeditions that just come up on the air, with this one people knew when and where it would be. They felt they knew the people who were on it. They listened to our phone-patches back home. There was some identification with the group on the trip. It was much more personal than usual.

"It was certainly an interesting experience. Although there were some second thoughts along the way as we thought about being out on a light vessel like that on the ocean. But you get over them. Another surprising thing was, considering the ordeal, how very well four guys got along together.

"We had elected Bob, K6AHV, as leader, he was just great at planning ahead and organizing. Others instrumental were Bob Thompson, K6SSJ, who did a lion's share of the planning; Bill Hanson, W6PTS, who was our contact back in the States for schedules; Merle Parten, K6DC, who was liaison with the Northern California DX Foundation; and Jack Troster, W6ISQ, who organized the QRP test. We were amazed



how many took an active interest in the experiment. The individual letters and numerals copied should be sent to the Foundation at PO Box 717, Oakland, CA 94604."

For the group Rusty summed it up, "It was a super experience and we were honored to be selected to be the ones to go."

## Visit your local RADIO STORE

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Annandale, VA 22003

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Hallandale, FL 33009

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6213 13th Avenue, South  
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852 Commerce Avenue  
Longview, WA 98632

## Benvenuti Willkommen Bienvenida Welkom Welcome!

The following Amateur licensees were recently granted permits to operate their stations in the United States.

CALL	LICENSEE
F6ANO	Michel Amiard
ZP5NZ	Oscar Anibal Ayala
G3AOS	John Geoffrey Barnes
PY5CLA	Luis Batschauer
DJ8WL	Peter W Bobek
HP1HU	Alfredo Vasconcelos Borges
DJ4GL	Joachim Breucha
CE3AIC	Enrique A. Cornejo
HI8CCA	Carmen Chabebe De Alvarez
HK3DCM	Auro Cortezar De Duenas
LU2DZ	Carlos L. DeFelipe
OA8BH	Carolina De Mendez
YV5DYM	Ana Margarita De Montilla
HK1CNX	Norma M. De Murphy
HK3AMF	Elvira Daza De Schlesinger
ON5NF	Michel J. Decercq
VP5JD	John Benjamin Dellis
DK4AP	Rudolf Dvorak
G3PPE	Michael J. Eccles
HP1CF	Carlow Eduardo Escoffery
LU3EAU	Oscar Manuel Espino
LU6AFV	Adolfo L. Fernandez
CP6FQS	Maria Eugenia Fernandez
G3LOV	Michael J. Francis
HK7BPC	Armando Garcia
HK7BEI	Alberto Gavassa
HK3DAJ	Jaime Gomez
HK3QK	Hernan Baldomero Gonzalez
VP9GI	Francis Alfred Greenslade
G3AAQ	Stanford Leon Jacobs
VU2EA	N. S. V. Jaggarao
VU2HC	Nayan Harshkumar Kapadia
4X4ME	Menachem Kaufman
DJ9PK	Karl Theodor Koch
YV5EIG	Guillermo A. Lara O. Senior
VP2DAA	Gene Anthony Leger
OA4WQ	Isaac Lemor
VK4IL	Laurence John McIliree
VK5CE	Alfred Roy McRitchie
EI4AG	John Maher
HI3FMM	Felipe A. Mateo A.
OH3SA	Sisatto Seppo Matias
OA8I	Raul Mendez
OA8AB	Raul Mendez

HK1ABY	Juan B. Millon
LU1BAR	Patricia Margarita Morton
ZP5LN	Luis A. Nogues
HK3DEW	Carlos M. Pabon
HI8AAP	Augusto A. Penson Paulus
OA4AFO	Luis Alberto Reinoso
LU8BAP	Ernesto Rodriguez
HK3DBC	Jose A. Rodriguez
TI2JES	Jorge E. Salgado
CE3AB	Manuel Urrutia Scappini
HK3AXH	Eduardo Schlesinger
OH1XO	Risto Sikarla
DK3KB	Carl Ruprecht Steinmann
F3VN	Pierre P. Turillon
HK4CQE	Joaquin Mario Uribe
OH2TK	Osmo A. Wilo
CE2RO	John Lewin Wood
CP1IV	Alfredo S. Yarur
VK2BRF	Raymond George Gill

HAM PROFESSOR... from page 23  
"My job is a labor of love," he said. "This is my public service effort as a ham radio operator."

Gehres invites students to his ham shack at home, where they enjoy weekly on-the-air contacts with members of the Apricot Net on 51.0 MHz (six meters). He treasures a large collection of letters from grateful licensed graduates.

Gehres taught basic electricity in 1963. The following year friends asked him to instruct Novice Class code and theory, a task to which he has remained dedicated.

Gehres is affiliated with ARRL, Apricot Net, Parma Radio Club, Retirees Net, Trestleboard Net and TVI Clinic Net. When not preoccupied with ham radio, Gehres spends long hours tape recording for the blind as a Sight Center volunteer.

My chest swells when I hear my graduates on the air, using their own station call letters," Gehres said.

John Burke, night school principal at Rhodes, said, "Gehres and other ham radio instructors perform a fine service. In many instances, this makes a total family experience. Graduates contribute back to the community by providing emergency communications."

"The human individual lives usually far within his limits, he possesses powers of various sorts which he habitually fails to use. He energizes below his maximum and behaves below his optimum".  
-William James

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I have a couple of questions pertaining to Amateur Radio which it may be time to broach now. Would like to see some criticism- answers from readers.

#1. What is the reason, or reasons the "Amateur Service" is the only "service" in communications not having specific emergency spots in our many bands?

#2. Most "contests" such as DX or SS, or FD use all parts of our bands. In the interest of schedules, and most importantly, emergencies, such practice is self-defeating. Why is this practice encouraged?

As past president of WESCARS, and anchor station for many Trans-Pac and other yacht races, these questions keep surfacing... Dave Atkins, W6VX

Congratulations on your Third Anniversary! Your unique paper is perhaps the brightest spot in Amateur Radio today. Without a doubt it has the potential to advance our hobby. May you continue to grow and get even better... Dick Ehrhorn, W4ETO

You are doing a lot to make ham radio appear as a meaningful and worthwhile hobby to the "man in the street" and take it out of the "kids stuff" category. It is without doubt the best publication of its kind ever to be written, and you are to be congratulated... George Clark, W2JBL

Your newspaper is excellent and fills a void previously unoccupied in Amateur Radio... Joyce Goebel, K7RRS

You have a very interesting and worthwhile radio news pertaining to amateurs... Padre Bible, WA6BDW

I always look forward to receiving my copy each month and getting news about all sorts of events taking place in Ham radio... Frank Leverrier, VK2ADE

It is a very nicely got up magazine full of information and news; I read it with great interest... Dady S. Major, VU2MD

I have watched Worldradio grow and I enjoy it very much... Glenn Lay, W7ADS

It's a pleasure to support your outstanding publication... Ken Miller, K6IR

You have a great publication... Jay Carr, W6FAY

Just love Worldradio News!... Kay C. Anderson, W8DUV

We'd like to hear from you. Please write us a letter -- a letter of intelligence, sobriety, wisdom, humor, or anger as you'd like. We want letters that speak specifically about what the paper is good for, and suggestions on how it could be better. Debate our writers. Tell us what we should have covered... but didn't.

We depend on the feedback from you. Tell us what you are thinking -- about opinions expressed in the articles, your experiences, observations, or anything you feel like soap-boxing about. Through the pages of Worldradio, you can carry on a conversation with other concerned and involved amateurs.

It is our goal to be a clearing house for that precious commodity -- information. With your participation, we can produce meaningful content.

We believe your article will inspire others into a greater utilization of the vast potential of Amateur Radio. We hope to hear from you.

Armond, WB6AUH, Editor, Worldradio



## Communicators

Worldradio Subscriber Roll furnished to further your acquaintance with others of mutual interests.

(continued from last month's issue)

Edward Galliers, WB4VRD, Boynton Bch, FL  
Don Meadows, Yuba City CA  
Don Buffington, W6AJH, Coleville, CA  
Michael Fiehl, W2GZQ, Vestal, NY  
F. A. Bartlett, W6OWP, Paradise, CA  
Robert E. Lee, WA8IHZ, Vandenberg AFB, CA  
Maurice Powell, WA6SCL, Sacramento, CA  
J. Wm. Anderson, W6QV, Sunland, CA  
Robert L. Heitger, WA6KZN, Carlsbad, CA  
Thomas Braidwood, W5BW, Biloxi, MS  
John Waltner, WB9CRE, Freeman, SD  
Frank Gunther, W6QLL, Guerneville, CA  
Saad Ali, VU2ST, Bombay, India  
George Buchanan, WB2FUX, Pt. Chester, NY  
Mary Jane Robine, WN2GVP, White Plns, NY  
Glen Peterson, WB6BOD, Poway, CA  
Chas. Roe, W6FT, Glendale, CA  
John Dittmer, W0IZV, Lakewood, CO  
John G. Crider, WN2MRR, Liverpool, NY  
Manuel Blumkin, K5JEB, Las Cruces NM  
Alan Venning, VE7LL, Burnaby, BC Canada  
Myron Baustian, WA0KQQ, Lansing KS  
A. C. Smith, WB6VRT, Los Angeles, CA  
John L. Pugh, W8GKI, Bellefontaine, OH  
Lawrence Gerould, W6CZ, Los Gatos, CA  
Robert Simon, W6ISC, El Toro, CA  
Kevin R. Crouch, WA6BAB, Malibu, CA  
Scott Bidstrup, WA7UZC, Salt Lake City, UT  
Marvin Bartz, W9MYG, Sheboygan, WI  
Gary Black, K8PNZ, Berkley, MI  
John Hitt, K0KFF, Fowler, CO  
Ivan Loucks, W3GD, Ladylake, FL  
D. McKenzie, WA4ZRX, St. Petersburg, FL  
John Christensen, WA7UJY, Sumner, WA  
Frank Thompson, W0OD, Baudette, MINN  
John Caruthers, WB6ASI, Van Nuys, CA  
Dr Donald Moore, WB5ACE, Plainview, TEX  
Robt. Hill, WN6AYJ, Hollywood, CA  
Irwin Johnson, W6CDN, Los Osos, CA  
Armin Greene, Marysville, CA  
Ray Berkey, Dallas, ORE  
Earl Chubbuck, K4GPF, APO San Fran, CA  
A. Reynolds, WN0KIP, St. Paul, MINN  
Clara Stables, WB4NXR, W. Palm Beach, FL  
Dennis Hanley, WB6CMQ, Van Nuys, CA  
James Dawson, WA2MGS, Bayshore, NY  
Edwin Renfro, W4ATM, Jacksonville, FLA  
W. Border, K7WTC, Portland, ORE  
Lillian Dailey, Bolivar, TENN  
Dick Headrick, WA7QCC, Beavercreek, ORE  
Fred Thiede, W2EC, Setauket, NY  
Roland Marshall, WA6DKY, Santa Maria, CA  
C. Campbell, W6BLC, Crescent City, CA  
H. Harp, WA4SVH, Lake Park, FLA  
M. Lassanske, WN9MFG, Hales Corners, WS  
Roger Williams, W6WGF, Aptos, CA  
Ross Hayes, W8CL, Massillon, OHIO  
Joseph Latway, W1MYF, Fall River, MASS  
Walter Fiscus, WA4JCS, Oxford, NC  
Dick Stisko, WA8WMT, Northville, MICH  
Joe Valentino, WB2GMI, Stanhope, NJ  
James Ziese, K9KZW, Wood Dale, ILL  
Guy Speck, Jr., Horn Lake, MISS  
A. Bible, WA6BDW, San Diego, CA  
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Richard Birbeck, K6CID, Riverside, CA  
James Beckett, WA2KIJ, Millport, NY  
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J. Moore, W3LPP, Beaver Falls, PA  
Lyman Treaster, W6IFC, Visalia, CA  
Jack Hutchins, WB5DZN, Brookshire, TEX  
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Geo. Leber, W6MDQ, Hawthorne, CA  
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Linda Sumida, WB6QMD, Visalia, CA  
Bob Edwards, WB6GTI, Visalia, CA  
Guy Rowney, W3RYL, Baltimore, MD  
(continued in next month's issue)

## The Worldradio News



an international newspaper

Fourth Year

The Worldradio News is published monthly by Worldradio Associates.

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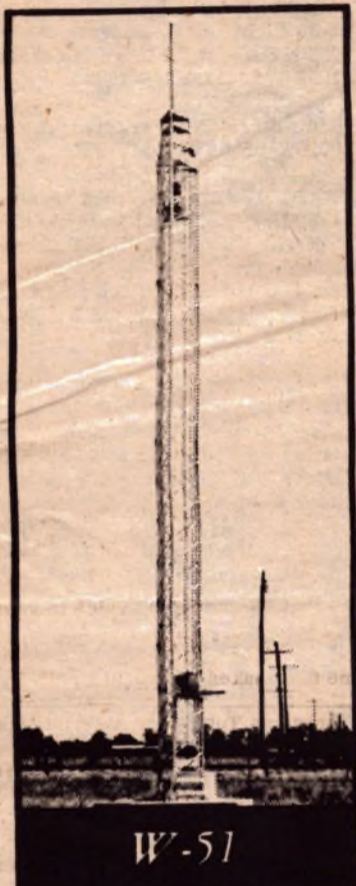
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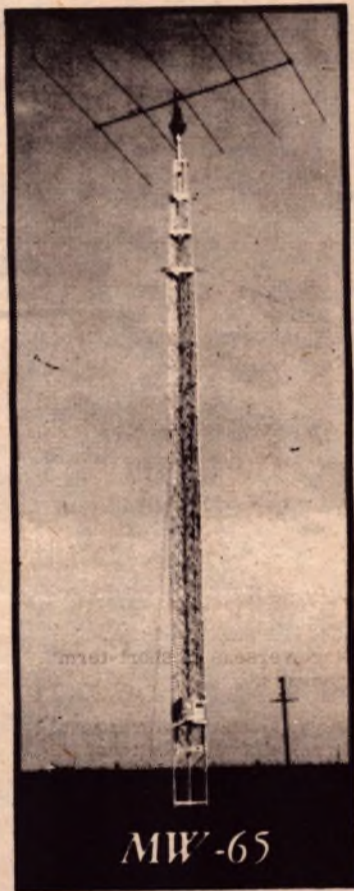
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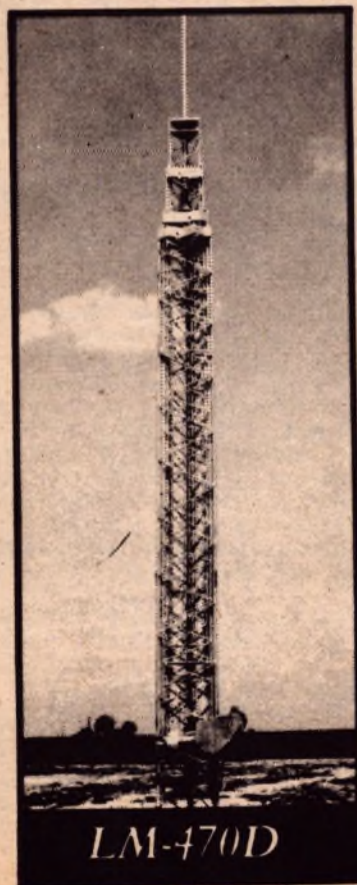
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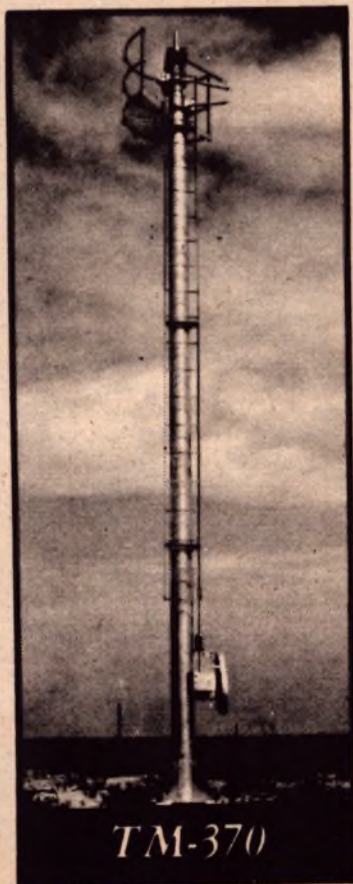
W-51



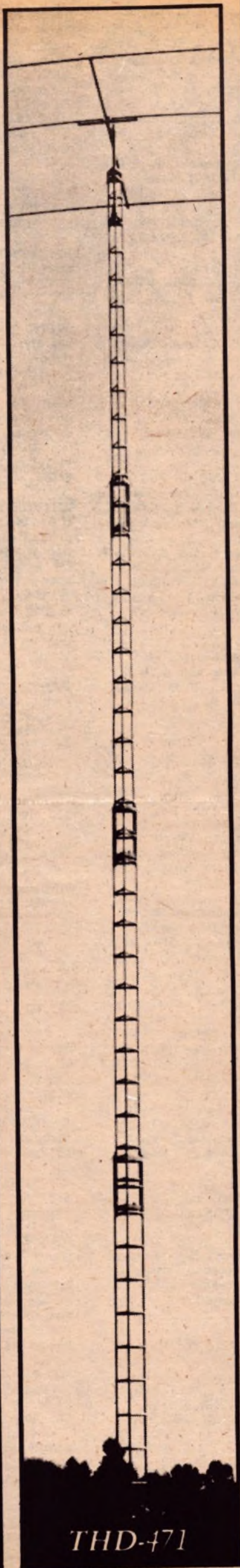
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SELL: 6 meter A. M. Transceiver, Knight Model TR-106, Mint Condx. \$50. Ron Trostel, WB6AKE, 2113 Havemeter Lane, Redondo Beach, CA 90278

RECEIVER, Autotune, 220-400 MHz, Motorola R-1500/URC-67, 120 vac 60 hz, \$195.00. Signal Generator, SG-47/URM-16, 10-440 MHz w/book accy 0.002% FM-AM-PM modulation, 3 xtal calibrators \$375.00. Stewart Electronics, 3723 Fruitvale, Oakland CA 94602

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DXer: for cementing better international friendships and excellent (about 95%) QSL return, write in the language of the DX station worked. How? with K3CHP's DX QSL GUIDE. It contains a list of numbered radio-amateur sentences translated into 54 languages! Simply select and copy sentences in the language of your choice. \$3.95. Joe Mikuckis, 6913 Furman Pkwy., Riverdale, Maryland 20840

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HAM'S MART -- CLASSIFIED Private individuals, 5 cents a word Business firms, 9 cents a word

## page 34 - traffic

2. Each delivery	2
3. Message received or transmitted	1
4. Reporting into any official ARRL net (per the Net Directory)	1
5. Any legal phone patch	1
6. Emergency traffic from disaster area	3
7. NCS of any net	10
8. Liaison station to any net	3
9. Transferring message from non-NTS to NTS net	1
10. Recruiting new net members provided they QNI four times in month	25
11. publishing net bulletin or directory	50
12. Special recognition	100-500

Ted concludes by saying that recognition by one's peers is the most rewarding incentive to greater achievement. Certificates to be awarded over an unspecified period of time as suggested by WB6AKR.

Bill Weise, W6CPB, SCM of the Orange section agrees that WB6AKR has a valid argument for restructuring and would like to try a new system for a year or so trial period.

Jerry Ver Duft, W5TLK, past SCM of the Orange section and present member of the Pacific Area Staff expresses doubt that the system is weighted for the CW operator since the SSE station can get 20 points for patches. He feels that the patches are over weighted in comparison to some CW functions. He is in favor of dropping the DPL points altogether since the BPL listing is enough recognition for the every day traffic handler. Jerry feels the ARRL has supported the NTS but the section level officials who represent the ARRL (SCM, RM, PAM) have fallen way down in supporting it. He feels that the Board of Directors of the ARRL should have more to say on the Communications Department matters since they represent the true membership desires and hopes that the channel thru the Directors of the divisions can have some bearing in this matter.

Gene Dotson, W6IPW, long time traffic handler of all levels and present member of the Pacific Area Staff agrees with the comments by WB6AKR. He notes that in the past various certificates such as BRAT have been used to good advantage to generate interest but that they were so easy to attain everyone had a flock of them. Gene feels the PSHR is phone-oriented and he personally does not participate.

Hal Spaulding, K6GMI, Manager of the Daytime NTS Region Six net agrees that some changes are necessary and that ARRL should put suggested changes to the membership for consideration. Hal is proud of his certificates and agrees with a certificate for PSHR.

### Summary by WA6DEI

Everyone agrees that a change is in order for the PSHR as it now stands in order to make the various functions comparable in weight, make the rewards attractive, and to provide a means to recognize the op at the local levels who check into nets and handle small (but very necessary) amounts of traffic day after day since they are the back-bone of the whole system. Hopefully it would cause a renewed interest in public service and attract those who haven't participated before.

Several ideas mentioned are simply beginnings in the discussion. Many questions have to be answered. Should the PSHR be attainable to everyone over a long period of time? Should the limits on categories be eliminated? How should traffic count appear in the PSHR? How hard must it be to attain to be a sought after award?

The ARRL has indicated in the past that enough space is already utilized in QST on

NTS matters and that as a general rule a new certificate would not be added unless an existing one is dropped. In addition, the already heavy work load would go up further for tabulations. For these reasons the award should be issued by the SCM's and the totals filed with their monthly reports to headquarters for listing in QST. The award should be similar to the existing BPL award. It should be based on an entirely new point criteria to balance the functions but the overall limit should be a challenge to attain. The running totals versus the monthly totals is a matter for discussion.

Many ideas and comments have been presented here for one purpose; to stimulate your thoughts, comments and discussion on the subject of the Public Service Honor Roll. These ideas are those of a few individuals with experience in traffic in the West. What are your opinions? What would it take to make you participate in public service operating? What type of reward do you expect for the many hours of operating you do?

Bill, WB6AKR, is compiling all comments and presenting them directly as received to Southwestern Division Director John Griggs for presentation at the next ARRL Board Meeting. Send your comments to Bill with a copy to your Division Director in hopes he will support the idea. Bill hopes to receive ideas from public service oriented operators nation wide in order to develop a good working system of PSHR. Send your ideas as soon as possible to: Bill Heitritter, WB6AKR P.O. Box 521 Hemet, California 92343

### Correspondence

The Hit and Bounce Slow Net HBSN net manger has a new address: Send all your reports to Kurt Meyers, W8BX, 3997 E. 186th St., Cleveland, Ohio 44122. HBSN meets Fri, Sat, Sun, Mon on 7140 at 1200 GMT.

The Northern Calif Net (0200Z 3630 kHz daily) Bulletin edited by net secretary Dan Drath, W6QNB, indicates they have information available for traffickers including a description of NCN, information for stations performing liaison duties to the Region Six net, and information on the Brotherhood of Radio Amateur Traffickers Award (BRAT). Send W6QNB an SASE for a copy.

George Fisher, WB6MKV, P.O. Box 1658, San Pedro, California 90733, with the help of his SCM in the LS Section Richard Morris, W6INH, has made available a beginners traffic kit which is available to you for a self addressed stamped envelope. The kit consists of a numbered sheet to keep track of your message originations, a list of the ARL numbered radiograms, a reporting card to report your totals to the SCM each month for the QST listing and the ARRL public service records, a sample ARRL radiogram message form, operating aid 9B which gives the net "Q" signals, International "Q" signals, CW abbreviations, handling instructions, procedures, and a sample message. Also included is a list of message handling tips. This is a lot of information compiled for you to help you get started in traffic handling. Take advantage of this and send an SASE to WB6MKV.

Mike Jogoleff, WA6MBZ, has started the Fiesta City Net (FCN) in the Santa Barbara area. The net meets Tuesdays at 1930 PDT on 21.150 MHz. It is designated as slow speed and training.

### Monthly Reporting

It is very important that you report (your traffic totals) each month to your SCM (address page 6 QST). It does not matter how much traffic you handle. The amount of traffic and the number of different stations handling message traffic are equally important. So even if you have only one message for the month, please report it. Simply send your SCM a message or ask him for the reporting card. Traffic

totals and number of stations handling traffic are used often in reporting Amateur Radio public service to the FCC and is important to justifying our existence as a public service.

## page 18 - Caribbean

who was operating four miles away in Philipsburg as PJ8DX/PJ7. The first Saturday of the October DX Contest we handed out about 500 double--country sequential QSOs on 10 meters. Our QSO rate dropped to about 70% of normal so that the following day we went our separate ways and bands. Ken helped me in many ways and is a more experienced DXpeditioner. He recently operated from Statia and Anguilla; the latter country is plainly visible from the Hotel La Pirate, only seven miles away to the north. It is also quite a rare country and may continue to be so inasmuch as a "one-shot" license cost \$25.

One of my most satisfying QSOs was the South Dakota ham who was QRP with a 420 milliwatt output. Such QSOs are almost impossible if the usual DX-station technique is used--continually skimming the top strongest signals of the pileup. I mostly worked by call areas and worked each area down to the weakest whispers. It sometimes took more than an hour to go all the way around. This technique could be just a bit slower as it is assuredly more difficult at the very weakest signal levels--further, it required complete cooperation from those who were "ravenously" awaiting my next shift in call area.

I got such cooperation and have never really run into a more gentlemanly bunch than the U S. hams who kept silent for long minutes at a time, although their fingers must have been fairly itching to hit the mike button. This technique must, and does, irk some lads who must await their turn to get their QSO--from a country they usually don't need anyhow. But most hams don't have all (or any) of the "works"--good locations, linears, and high multi-element beams--and I have a box full of cards of thanks for my making it possible for them to snag a rare country for the first time.

Propagation conditions on 10, 15 and 20 meters are going to continue to be generally very poor for the next 2 - 4 years; some of the most recent DX Contests have been poorish affairs indeed.

But propagation conditions from the Caribbean have generally held up well, especially on 40 and 80 meters, where multi-element beams normally do not exist and 5-Band DXCC is desired by thousands.

These coming years should accentuate the importance of these beautiful Caribbean islands, where station activity is all too often nearly non-existent. So who's for Dominica or Martinique, or for one of half a dozen saints or a couple of virgins?

Go there. You will find it great fun, a most interesting experience--and you'll make thousands of people happy! Put don't forget to take along lots of aspirin, an alarm clock and some lightweight headphones. A beam in a box would also help.

## page 32 - Oscar

Radio Amateurs VHF Manual (ARRL), 2nd Ed., p. 246  
Radio Amateurs VHF Manual (ARRL), 3rd Ed., p. 290  
VHF Communications Magazine, May 1971, p. 99

Varactor-Multipliers:  
FM and Repeaters (ARRL), p. 68  
Ham Radio Magazine, Oct. 1969, p. 38

Radio Amateurs Handbook (ARRL), 1970, p. 444 or 1971, p. 443  
Radio Amateurs Handbook (ARRL), 1973, or 1974, p. 217  
Radio Amateurs VHF Manual (ARRL), 2nd Ed., p. 243  
Radio Amateurs VHF Manual (ARRL), 3rd Ed., p. 288, 289  
RSGB VHF-UHF Manual, p. 6.16

(From "AMSAT Newsletter")

## QSO Party-4

1974 FOUR-LAND QSO PARTY

STARTS: - 1800 GMT, Saturday, September 7th.  
ENDS: - 0200 GMT, Monday, September 9th.  
FIFTH ANNUAL QSO PARTY: - Sponsored by the Fourth Call District Amateur Radio Association of the I. A. R. S., Inc., to make the many counties in the eight 4th District states available to the contestants.

The same station may be worked again on each band and/or mode fixed, and repeated again if operated portable or mobile, and from each different county. Fourth call district stations may work other stations within the 4th call district.

EXCHANGES: - QSO NR, RS(T), county and state for 4th call district: state province or country for others.

SCORING: - Fourth call district stations one (1) point for W/VE QSOs, three (3) points for DX contacts (includes KH6 and KL7). Final score is total points times states and provinces. States and Provinces count ONCE only.

ALL OTHERS: - Two (2) points for each QSO times fourth call district states, plus fourth call district counties. Count each state and each county ONCE only.

FREQUENCIES - CW: - 3575, 7060, 14070, 21090, 28090 (plus or minus 10 kHz).

PHONE: - 3940, 7260, 14343, 21360, 28600.  
NOVICES: - 3710, 7110, 21110, 28110, (plus or minus 10 kHz).

AWARDS: = Certificates to top scorers in each State, VE Province and Country. Second and third place awards when scores warrant. HHTA (High Honor Trophy Award) certificate to high scorer in four-land: high W/K out of four-land; VE and DX country. Also county awards to fourth call district states and special awards to the Novices, SWLs and B/H.

MAILING DEADLINE: - Contestants must mail logs with score within thirty (30) days of end of party to 4th Call District A. R. A., Attn. Bob Knapp, W4ONW, R#7, Box 167, Greenville, NC 27834. Send S.A.S.E. for results.

### Rare Collectors' Items Discovered!

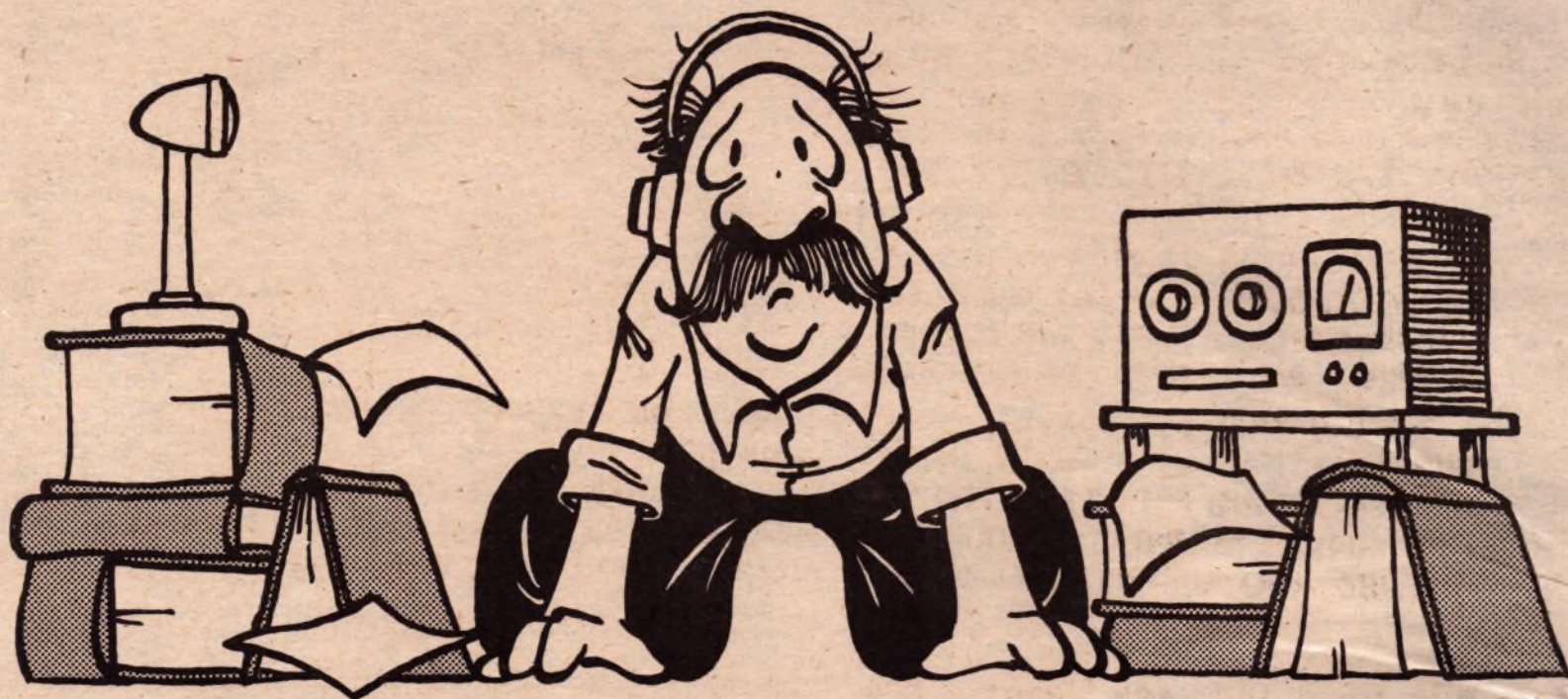
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