Mendadi April 1972 45¢

international friendship-local public service



Hams Help:

page 14

Bob Heusser, K6TUY



Is There HOPE for the Seventies?...
We Think There Is

The sixties produced an idea as bright and promising as the name given it—HOPE. Today there is still HOPE for the seventies.

The medical teams of Project HOPE still teach and heal . . . they go to all points of the compass . . . at home and abroad . . . wherever the help of keen minds and skilled hands is needed . . . wherever there are the lame, the blind, the sick, the hopeless . . . wherever the generosity of the American people makes HOPE's next mission possible.

People are waiting. Keep HOPE alive.

HAPE

Dept. A, Washington, D.C. 20007

Your contribution Is tax deductible

What's Happening

Newsfront(3)

Interference-FCC4

Colegas y Amigos 6

Ham Radio "Jump Team" 8

Public Service 10

FM:West (11)

VHF & more (12)

Hams Help (14)

Travels with Darleen (16)

The DX Den 18

200 Meters And Down 20

IMRA(22)

Report to the Readers (24)

Harry Tummonds, W8BAH (25)

Utmost Importance (26)

The Mart (27)

Worldradio

An International Newspaper Vol. 1, No. 13 April 1972



Armond Noble, WB6AUH
Stu Churchon, W6OMK
Bill Horsley, WB6WCY
Darleen Souligny, WA6FSC
Sid Hall, WB6BNZ
Ken Welsh, WB6FKV
Dan Turk, WA6JRP
Stan Kellogg, W6KPR

WORLDRADIO is published monthly by Armond M. Noble, WB6AUH. Subscription prices: USA-Canada-Mexico-\$5.00 a year. Other countries-\$6.00 a year. IRCs, mint stamps and local currency will be accepted from overseas subscribers.

Correspondence regarding subscriptions and article contributions should be addressed to Worldradio at 2509 Donner Way, Sacramento, California 95818, U.S.A. Telephone: (916) 456-6725. Advertising inquiries are invited.

Worldradio, an independent newspaper, is not affiliated with any other organization, group or firm. Its pages are open to all. Permission is hereby automatically given to reprint from Worldradio. If there is something useful we wish to share it. Appropriate credit and a copy of the publication would be appreciated.

Worldradio is two-way communications.
Send in Amateur Radio news and information. Share your knowledge with your fellow amateur and Worldradio reader.
Photographs will be cared for properly and returned. We are most interested in your comments and suggestions. We would appreciate being placed on the mailing lists of Amateur Radio club bulletins.

Worldradio has a Swan 270 Cygnet (220 v.) transceiver, in carrying case, available for loan to medical personnel, relief agency staff, etc., going overseas on the short-term volunteer tours.

Subscriptions and advertisements, most essential to the support of this project, will be very thankfully received.

COMMUNICATIONS

NEWSFRONT



U. S. Navy LC-130 number 320, one of two planes saved in a dramatic operation in which

a Hughes ham operator played a key part, is shown at a United States base in Antarctica.

Buffeted Craft Land in New Zealand

Ham Key Link in Saving Flight

It was early, about 6:50 in the morning, and Peter Lovelock, sipping a cup of coffee, sauntered over to test his W6AJZ amateur radio station for the first time in six months.

Within moments he was involved in a dramatic rescue mission that involved two Navy aircraft in dire trouble over the ocean between Antarctica and New Zealand, and communication among stations in Antarctica, New Zealand, Santa Monica, Miami, and Washington, DC.

"I responded to an emergency call from KC4USP, National

Leader of Polar Programs Cites Lovelock's Role

Peter Lovelock's role in the recovery of two Navy aircraft in trouble between Antarctica and New Zealand was praised by the head of the National Science Foundation's Office of Polar Programs.

Joseph O. Fletcher wrote, "By working an amateur circuit with Palmer Station you were perhaps the only person in the United States in radio communication with Antarctica at that time. By relay through Palmer, and thence through you to the Office of Polar Programs, McMurdo Station was able to report this operational emergency. We were then able to telephone New Zealand authorities to verify that the situation was known to them

Science Foundation Radio, at Palmer Station in Antarctica," Peter reported. "The station said that two Navy aircraft hit by strong headwinds en route to Antarctica were returning to Christchurch, New Zealand. They were short of fuel and unlikely to make their destination. Because of abnormal radio conditions, Palmer Station was unable to contact Christchurch and I was requested to contact a CMDR. Osborne in Miami to notify him to establish commercial communication with Christchurch.

"Both aircraft, it was determined, were going to attempt landings at Dunedin in New Zealand, and it was urgently required that the airports there implement emergency conditions, including turning on all landing lights, field lights, and lights in the adjacent city to guide the troubled planes," Peter continued.

CMDR. Osborne in turn notified Washington, DC, and telephonic contact with Peter then was transferred to Capt. Price

and that the airports were ready to receive the flights...

"Your prompt and capable assistance provided a reassuring backup communication capability for which all concerned are grateful. Enclosed is a photograph of one of the aircraft which was making the flight, tail number 320. We hope it will be a continuing reminder to you of our appreciation."

(From HUGHESNEWS" de Claude Conner)

Lewis in Washington, where communications already were established with Christchurch.

For the next 45 minutes all communications between Palmer Station and Washington-Christ-church were relayed via W6AJZ.

During the relayed conversations, Palmer reported radio contact had been lost with the aircraft identified as 319, and a "May Day" status was declared. The plane's last known position was at an altitude of just 220 feet above the water.

At 7:50 a.m., with all the emergency preparations complete, Peter secured radio contact with KC4USP and landline communications with Washington and came to work as an MTS in the Phoenix Ground Support Equipment Project Office at El Segundo Site.

Later that day, Capt. Lewis phoned to confirm that both aircraft had landed safely, with a broad assist from amateur radio communications and Peter's decision to check his equipment for the first time in six months.

The East African Flying Doctor Services needs a transmitter (they have a receiver). If you can help contact Dr. H. de-Glanville, African Medical & Research Foundation, Wilson Airport, PO Box 30125, Nairobi, Kenya.

The Worldradio Staff Amateur Radio Club has been issued club license WB6QHL. Look for us on Field Day.

Help Brain Surgeon

On January 19 at 2305Z, Don Buffington, W6AJH, logged a request on 21.282 MHz from JA1MEL to locate the manufacturer of the Leybold Cryo Scalpel. A replacement part was urgently required by the father of JA1MEL (a brain surgeon in Tokyo, Japan) to perform an operation.

WCARS was contacted by W6AJH and Albert Hart, W6UBM, responded and offered to assist. After several phone calls to surgical supply houses (to no avail) Linde Air Co. of Los Angeles called their main office in San Francisco who in turn called W6UBM with the address of the manufacturer (Frigitronics of Chelton, Conn.). W6AJH called Frigitronics and had #14 stainless steel liquid nitrogen supply tube for the Leybold Cryo Scalpel shipped airmail to Tokyo with a promised ETA of 22 hours. At 2435Z W6AJH contacted JAIMEL and advised approximate ETA. Mission complete, elapsed time 1 1/2 hours.

(from WCARS Sentinal)

FCC

AMATEUR RADIO SPECIAL CALL SIGNS

The following special Amateur call signs have recently been authorized for the events and periods noted. All Amateurs and Organizations are requested to apply to the FCC at least 120 days prior to the desired date of authorization for such special calls as may be granted in accordance with Section 97.51(a) (4).

75th Anniversary of British Channel Radio Test, Highland, New Jersey. May 14-May 21, 1972, WM2GK, William Gould, Trustee.

30th Anniversary of Voice of America, Washington, D.C. Feb. 25-March 25, 1972, WS3VOA, Thomas Kelly, Trustee.

NATO AZALEA Festival, Virginia Beach, VA. April 25-April 30, 1972, WJ4AFZ, Timothy Holick, Trustee.

Navassa Island DXpedition, April 1-May 31, 1972. KC4DX, Charles Cone, Jr., Trustee.

1972 July 4 Celebration, Independence, KY. July 4, 1972, WJ4ULY, Donald Price, Trustee.

1972 Armed Forces Day, May 19-May 21, 1972, KD6USA, Frederick Hagen, Trustee.

West Virginia State Radio Convention near Weston, West Virginia, June 28-July 3, 1972, W8WVA, Delf Norona, Trustee.

The Commission, by its Safety and Special Radio Services Bureau, sent Notices of Apparent Liability for Monetary Forfeitures to the following licensees. Replies must be made within thirty days of the dates shown.

March 14 - Lynford, S. Hulin, Berkeley Heights, New Jersey, \$100, licensee of Amateur radio station W2GZZ. For repeated violation of Section 97.7 of the Rules by operating the station on a frequency not authorized by the Commission for use by such a station.

ARRL

ARRL Official Bulletin #366 March 23, 1972

In a continuing attempt to update and coordinate information on the changing repeater field, ARRL is planning to produce a third repeater directory in the coming months. The listing will show the area served, repeater call, type, input and output frequencies and modulation, access methods, output power, repeater location and elevation, and sponsor. If you can furnish such information for your system, write for a special repeater registration form. Hq. or your VHF repeater Advisory Committee member will soon have a supply of forms available. VRAC members include VE3BUI, W2ODC. W4GCE, W5VPQ, W6GDO, W6MEP, W7FHZ, W9BUB and WØCXW. All those in the current directory should do likewise if there is any change in the listing.

SFO

The 1972 Greater Bay Area Hamfest combined with the ARRL Convention is to be held on October 14 and 15 at the Royal Coach Motor Hotel in San Mateo, Calif. Under the chairmanship of Don Johnson, W6QIE, with Veiko West as Sectretary-Treasurer and working with the ARRL convention people, a wide selection of programs for all interests is planned, including varied activities for the ladies.

INTERFERENCE-FCC

On Dec. 29, 1971 WCARS officers met with Congressman John Moss (D.-Calif.) and asked for more FCC action against individuals who cause jamming on the amateur bands. Reproduced below is a letter from FCC Chairman Dean Burch.

Honorable John E. Moss House of Representatives Washington, D.C. 20515

Dear Mr. Moss:

This is in reference to your letter concerning conditions on the West Coast Amateur Radio Service (WCARS) and the problems they are experiencing with the jamming of the frequency that network normally uses in the 40 meter band.

The Commission has received an appreciable number of complaints over the last few months about operating conditions in the WCARS network. We have also received complaints concerning similar networks which operate in the Eastern United States (ECARS) and the the central part of the country (MIDCARS). ECARS and WCARS operate on 7255 kHz; MIDCARS ference may therefore result. To on 7258 kHz.

The complaints received have been both from the operators who are members of the WCARS net and other operators who have attempted to use the frequencies from time to time. The complaints from the non-members who wish to operate on the frequency used by the network have generally indicated that harassment techniques have been used by the members of the WCARS network to exclude non-members from any use of the frequency.

The Commission's rules do not designate any exclusive frequencies in the amateur bands for any network. All frequencies are shared under the rules by all amateurs. Thus, any amateur holding the proper class license may use the frequency 7255 kHz whether or not he is participating in the WCARS network operation.

Section 97.63 of the rules governing the Amateur service reads, in part: "Transmissions by an amateur station may be on any frequency within any authorized amateur band." Thus, no amateur station may properly claim the right to have sole use of any frequency authorized within an amateur band.

On the high-frequency amateur bands it may be conservativly stated that there is considerable crowding, particularly in certain segments of those bands, i.e., there is generally more than one amateur station desiring to 🚺

use a particular frequency. In this sense there is generally present considerable interference of varying degrees. Radio amateurs, aware of this condition, resolve the interference problem by use of more selective receivers, directive antennas, shifting frequency slightly to avoid a particularly strong signal, etc. Experience has shown that much interference in the amateur bands is really unavoidable and that intentional interference is unusual.

We annually receive thousands of intereference complaints in the various services. One of the most difficult intereference problems to resolve is where interference in the amateur bands is alleged. Under the Commission's rules, two amateur stations may simultaneously transmit on the same frequency. Interprove that the operator of station A is transmitting on a given frequency in order to deliberately cause interference to communications of station B requires that intent be proved and that interference actually occurred.

The Commission has not been inactive in taking action against those jamming the frequency. Monitoring from the Commission's monitoring stations has shown violative activities; the use of indecent language, telling obscene jokes, playing music, making varied sounds, and the use of unmodulated signals to apparantly jam communications on the frequency. Further, there are evidences of use of false radio calls and indications of misinformation given out by some of the operators as to their location. Radio direction-finding from our 18 monitoring stations indicates a number of general areas where the interference may be originating. The interference appears to be very intermittent and originated by a considerable number of stations. Since our direction finding monitoring network only will indicate general areas (e.g., the vicinity of San Francisco, California) where the interference may be originating, it is necessary for us to put vehicles into the area for an appreciable amount of time to wait until the violative station comes back on the air. This procedure consumes a large amount of man hours. If the waiting period stretches into several days or weeks we are unable, due to a lack of manpower, to maintain the continuous watch.

It is noted in your letter that you say, "Some of the jammers have FCC licenses and are identifiable. Complaints have been submitted to the FCC's regional office in San Francisco as well as to Washington, but to no avail." We have located and investigated two amateurs in the California Bay area who have been involved in apparent deliberate interference of 7255 kHz. We are still devoting some effort to see if we can pick up others. The complaints that we have received have not been very definitive or helpful to date, since they usually consist of (1) "we heard music", or (2) "we heard jamming at a particular time."

The Commission does not have the staff nor do we attempt to budget for a staff to operate like a local police department which could investigate each individual complaint. Instead we accumulate information in order to obtain the maximum information about the most persistent violators in an effort to lower our search time to the lowest possible figure.

WCARS may be helpful by giving

- specific written data as follows: 1. Frequency of jamming station
- 2. Over-the-air identification, if any
- 3. Location of station. This should be done by direction finding, proximity measurement of signal strength, or other means than call letters as there is an appreciable amount of pirating of calls.
- 4. Pattern of operation of the violations, giving times and any consistent characteristics of the transmissions.

Submission should only be of cases that may be documented concerning repetitive violations.

You should advise your constituents to address such information as follows:

Federal Communications Commission, File 1130 - Room 731 Washington, D.C. 20554

Within the limitations of available manpower further efforts will be made to resolve cases of deliberate interference to the WCARS network. Your interest in this matter is appreciated.

Sincerely,

Dean Burch Chairman



PAYNE RADIO

Box 525 Springfield, Tenn. 37172

(615) 384-5573

FOREIGN QSOS

LEARN SPANISH ON THE AMATEUR BANDS THROUGH QSOs EN ESPANOL

AUDIO LINGUAL TAPES AND
CASETTES GIVE THE RIGHT DIALOG
FOR AMATEUR RADIO CONTACTS IN
FOREIGN LANGUAGES. NEW SIMPLE
COURSES AVAILABLE EXCLUSIVLY
THROUGH FOREIGN LANGUAGE QSOs

The amateur bands provide an interesting language laboratory for stimulating, progressive experience in oral communication in foreign languages.

It is easy to learn greetings and how to explange signal reports. This

to exchange signal reports. This regular practice in listening and speaking enables one to advance from passable communication to lengthy pleasant chats. The manuals and tapes give you the proper technical phrases to enter this game.

The goal of international friendship and good will through amateur radio is best reached by understanding the language of other countries. Your use of his language tells him immediately that you have more than a superficial interest in his culture. With conversational use of a foreign language, travel is much more interesting, too.

Communicate

The tapes are prepared by native hams

FOREIGN LANGUAGE QSOs have complete audio-lingual courses now available in Spanish, German and Japanese. We also have English tapes for native Spanish speakers. Manuals give complete translations for QSOs, special radio jargon and radio terms.

Running times for the Spanish and Japanese tapes - 1 hour and 20 minutes. The German tape runs for 1 hour and 30 minutes.

English-Spanish Course, QSOs EN ESPANOL, on 7 inch tape \$11.95, C-90 Cassette \$10.95, 5 inch tape-\$11.95, Manual only - \$2.50

Japanese course is the same price as the Spanish course.

English-German Course, QSOs AUF DEUTSCH, on 7 inch tape -\$13.95, C-90 Cassette \$12.95, on 5 inch tape \$11.95, Manual only-\$2.50.

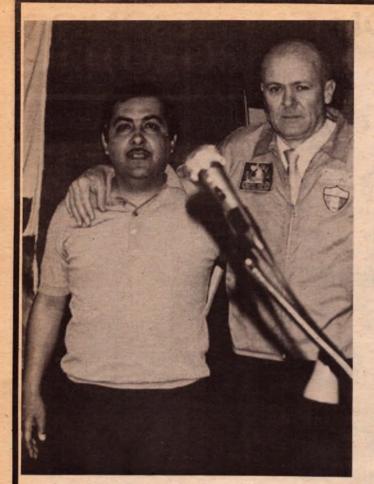
The tapes are prepared by native hams who know the right phrases actually used by foreign hams.

Orders mailed PPD 3rd Class in USA. Send checks to:

FOREIGN LANGUAGE QSOs, W1YLV Box 53, Acton, Mass. 01720



Carl Sletten, W1YLV



Enrique Garcia, XE2RH, of Ensenada and "Duke" Ellington, W6OZD

Once again the semi-annual breakfast meeting of the "Colegas y Amigos"
Radio Group proved to be a well
attended success. Approximately 200
persons came to participate in this
voluntary example of international
goodwill between hams, families and
friends in Mexico and the U.S.A.

The Ensenada Radio Club was represented by Eliseo Garcia, XE2NR; Enrique Garcia, XE2RH; Rudolfo Anasoza, XE2EBC, and their wives.

After a very substantial breakfast of ham, scrambled eggs, ranch style potatoes, etc., the informal program got underway. Al Lee, W6KQI, and Mike Gauthier, K6ICS, showed and narrated their interesting and colorful slides made in Ensenada and other parts of Baja California as far south as La Paz and Cabo San Lucas.

Other organizations represented were as follows: The ARRL by John Griggs, W6KW, Southwestern Division Director; The Flying Samaritans by Nash Williams, W6HCD; the FCC by J. Lee Smith, W6AWP, Engineer-in-Charge; the YLRL by Roxanna Griggs, W6ELO, Chairman of the International YLRL Convention being held in May; "Worldradio" by Stan Kellogg, W6KPR; and several officers of WCARS including John Stocksdale, W6ABW; Capt. Tom Eavenson, Jr., K5BZW, both Directors, and others.

Considerable time was spent discussing the LMRE National Convention coming up June 1-4 in La Paz. Eliseo, XE2NR and Enrique, XE2RH, presented this portion of the program. The Ensenada Radio Club will charter a plane (or planes if necessary) to fly



Colegas y Amigos



from Tijuana to La Paz and return for those desiring to attend the convention. The rate quoted is very low. We will charter a bus (or buses) from the Los Angeles area to Tijuana and return in order to take advantage of the flight out of Tijuana. For reservations to the LMRE Convention write to the Ensenada Radio Club, P.O. Box #69, Ensenada, Baja Cfa., Mexico. Please enclose a check in the amount of \$30 to cover your advance registration. For information regarding the charter bus trip from Los Angeles to Tijuana, please contact H.R. "Duke" Ellington, W6-OZD, 3649 Emerald St., Apt #108, Torrance, Calif. 90503.

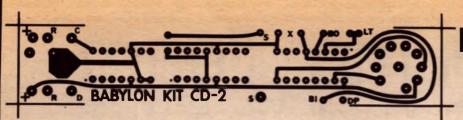
We did have first-hand information regarding reciprocal licensing between Mexico and the U.S.A. John Knight, W6YY, just returned from a lengthy visit with U.S. government officials. and also those of LMRE in Mexico

City. John stated that both Mexican and U.S. communications people are working toward the final reciprocal operating agreement between our two countries. The average U.S. ham would be astonished if he really knew how Mexican airspace is constantly being violated. Please operate legally. We will definitely have complete reciprocal licensing in the near future if the U.S hams will observe all the rules.

Our Group has become a conglomeration of dedicated hams, wives and families with their many cohesive ideas toward goodwill, generousity, material and technical assistance. No set dues, no regular meetings and no officers. We feel the voluntary aspect of assistance and helpfulness is providing a tremendous success. Try it sometime--just lend a helping hand to someone. It is very rewarding.



(



BABYLON ELECTRONICS

P.O. Box 85-Carmichael, CA. 95608

send for free catalog



TOP

BONUS SALE! NEW LOW, LOW PRICES

Free 810 operational amplifier (dual) DIP w/data for all prepaid orders of \$10 or more......\$1.25 value

Free 810 op-amp and one LM309K 5 volt 1 amp. power supply module (TO-3) with prepaid orders of \$25 or more.\$3.75 value

With prepaid orders for \$50 or more you get the \$25 bonus plus TEN percent discount on all items purchased.



TRANSISTORS

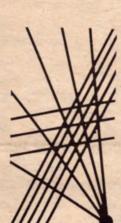
Popular numbers, all factory-marked. Guaranteed minimum of 40 pieces of TO-5 and TO-18 mixed. Untested, but sampling indicates over 85% good. Approximately 1-ounce 40 plus transistors for only \$1.89

Digital Special

Ten brand new (on carriers) dualin-line JK flip-flops -LU321 with data sheet and two pages of application notes describing hookups for - divide by three through ten, and twelve. Also self correcting ring counter hookups, etc. 10 LU321 w/data.... \$5.00

LINEAR IC's (dual-in-line)

709 operational amplifier	.50
710 voltage comparator	.75
LM100 positive voltage regulator.	.80
747 dual 741 op amp DIP	1.25
LM309K 5V-1A power supply	
module	2.50



Linear Special

ule will mount on 1" centers. kit \$12 - wired and tested \$15.

Digital Counter Module 30 MHz

Unit includes board, SN7490, SN7475 quad latch, SN7447 7-segment

driver and RCA "numitron" display tube w/decimal 1" x 4.5" mod-

TEN (10) TELEDYNE TO-5 741 operational amplifiers with a two page sheet of application notes covering the basic circuits using op-amps. \$0.75 each. Op-amp package 10-741's, data sheet and application notes-only \$7.00

OVERSEAS INQUIRIES INVITED

TTL dual-in-line

7400, 7401, 7402, 7404, 7405, 7410,	
7420, 7430, 7440, 7450, 7451, 7453	
each	.30
7441 BCD decoder driver	1.40
7442 BCD decoder	1.40
7473 dual JK flip-flop	.65
7474 dual type D FF	.50
7475 quad latch	1.40
7476 dual JK FF	.65
7480 gated full adder	.80
7483 4 bit full adder	1.60
7486 quad exclusive or gate	.65
7490 decade counter	1.40
	1.40

7492 divide by 12 counter	1.40
7493 4 bit binary counter	1.40
74154 one of 16 decoder	3.00
74192 up/down decade counter	2.25
74193 up/down binary counter	2.00
74195 univ. 4 bit SR	1.40
8220 parity gen/checker	1.00
8242 4 bit comparator	.90
8280 preset decade counter	1.40
8281 preset binary counter	1.40
8520 25 MHz divide by "N" 2 to 15-	2.00
7495 4 bit shift register	1.40
8590 8 bit shift register	2.00
8270 4 bit shift register	2.00
LED Red Emitting Lamp	.60

All IC's are new and fully tested - leads are plated with gold or solder. Orders for \$5 or more will be shipped prepaid. Add 35¢ handling and postage for smaller orders. California residents add sales tax. IC orders are shipped within two workdays of receipt of order-kits are shipped within ten days of receipt of order.

Money Back Guarantee On All Goods Sold



Ham Radio "Jump Team By Larry Lazar, WA2AAD/HK3



This has to do with Amateur Radio and the kind of massivly destructive phenomenon we witness at least once and sometimes twice a year such as the Peruvian quake and the Pakistani cyclone and tidal wave.

I've learned the hard way that a person without resources, be they personal, reputation, organizational backing, money, etc., can't alone do what might be considered a "good deed" especially if the average person thinks "it can't be done" (you know, like man flying or communicating). This I learned after my return from Peru and before I entered the Peace Corps.

I spent six months (and most of my personal savings) trying to convince people through proposal writing, personal visits, etc., of the need of a group of people who could respond within a very short period of time in an organized way to alleviate a very serious problem that always happens during these massivly destructive occurances.

I tried to coordinate my activities with several agencies and organizations (both government and private) whose names you would recognize, but such is not the purpose of this

Those who weren't particularly enlightened about communications looked at the program or proposals as "wishful thinking" and others who knew of the potential of communications looked at the proposals either as "making waves" -"trying to do something that hasn't been done before" or creating more work for themselves.

Of course those are certainly subjective and very personal observations. I'm sure that they would have fine rationalizations or explanations of their own inactivity or

a group. My feelings are, that out of the more than 400 thousand radio amateurs around the world that it should be possible at any point in time to

lack of open mindedness in really

considering the feasibility of such

have a group of ten that would eagerly make themselves available to travel with very, very short notice to some point where such a massive emergency exists. Use of palleted equipment, both for communications and survival, would facilitate a quick deployment of such a group.

Why should such a group exist? What is the problem that I spoke of earlier that arises at these times of massive emergencies? Basically, the key to quick and meaningful relief services is information. Information upon which to decide what allocations must be made and this kind of information can only be received through forms of communication, be they telephone, telegraph or radio.

The instances of Peru and Pakistan have shown that after such massive emergencies whatever communications system existed earlier was either destroyed or rendered inoperable.

As a result shipments of relief were delayed, were maldistributed, or malselected. For example, in Peru hundreds and thousands of splints, bandages and other such equipment and medicines were dispatched to the earthquake zone. However, those who were trapped in their homes, for the most part, died. And so the splints, etc. went unused and occupied space and transport facilities which otherwise could have supplied those items that were required, food, shelter and clothing.

In Pakistan, tons and tons and tons of children's clothing were sent to the cyclone/tidal wave area. However, the nature of such a disaster is that those who have the strength to hold on to the limb of a palm tree or to the roof of a house are the ones that survive. In that kind of struggle, the young

So whereas 50 to 80 percent of the adults survive, perhaps only ten percent of the children survive. They had a tremendous surplus of children's clothing and a great need for more adult clothing.

The role of such an Amateur Radio group would be to go out into the field, set up stations, and provide a source of transmission of information.

Messages would be handled for local government agencies, international relief organizations and military services. Such communications would help coordinate airlifts, relief expeditions, etc.

These people would stay out in the field for three to four weeks, long enough to provide time for the host country to establish or reestablish their own communications system. In the interim period of time those amateurs who were in the field would be able to train a host country national. There are many college students and professionals who speak English and volunteer their services at such times.

The amateurs would train the volunteers to operate communications systems such as how to formulate messages, on-air procedures, keeping equipment clean, maintaining a generator and how to basically tune the equipment. The host country nationals could then carry on with their own equipment, be it government-provided, donations from other countries or whatever the source may be.

In the center of disaster relief, usually the capital city, two amateurs well versed in communications could work with the Ministry of Communications. Their job would be to coordinate the field communications system, for example, with the emergency network that might already exist within the country but not extend into the disaster area.

This was the case in Peru, where hams are concentrated within larger urban areas such as Lima and there were none or very few within the actual earthquake area.

I do believe that an international volunteer organization could be formed. I have many ideas along these lines and have received many suggestions from other amateurs. Such an organization could be a reality and I am now more confident than ever.

Anyone wishing to comment may contact me at : Accion en Colombia, Apartado Aero 12374, Bogota, D.E., Colombia, or send your letter to "Worldradio" and they will forward the replies to me in an air mail package.

8

(The following was written by Larry Lazar, WA2AAD, and submitted to the Pakistan Mission to the United Nations in November of 1970. It was written for a layman level of communications knowledge)

Subject:

DISASTER COMMUNICATIONS

Purpose:

To obtain information relevant to decision making in the field, relief administrative & logistics centers, and home offices.

Systems:

A communications system is any set of paths providing for the flow of information. These paths may consist of interconnected wire and radio links using voice, code or teletype transmissions. To narrow down the proposal, I will concentrate on radiotelephone (Radiotelephone or voice communications referred to in the proposal specifically are those that use the most efficient equipment-"single sideband") My experience in the Peruvian earthquake disaster zone has shown that this mode of transmission is most desirable when concerned with the factors of:

- a) Rapidity of transmission
- b) Equipment availability
- c) Station erection
- d) Station operation
- e) Operator training

Communications Levels:

Three levels of communications systems may be broadly defined as follows:

LOCAL- to and from field sites and relief centers normally less than 500 miles apart. (Dacca-Islands).

REGIONAL- to and from relief centers and regional headquarters normally between 500 to 3000 miles. (Dacca-Karachi-Calcutta).

INTERNATIONAL - to and from regional headquarters and home offices normally over 3000 miles apart (Dacca-Geneva-New York).

Defining these three levels does not preclude communications which might be a combination of levels, such as direct links between the field and, say, New York.

Which level of communications system to be activiated depends upon where the weakest link lies in the existing system.

LOCAL COMMUNICATION SYSTEM

Network Definition:

A local network is a group of stations less than 500 miles apart that are able to communicate with one another efficiently to pass information. It consists of a control station to supervise the activities of the net and exercise discipline to ensure efficient transmission of messages. The subordinate stations in the net should be easily transported and erected, to ensure maximum utility in the field.

PERU- A model:

In Peru the Local Network consists of 17 stations, spread throughout an area approximately 200 x 200 miles, both in the Andes Mountains and on the Pacific Ocean coast. The net control station is in Lima, 150 miles from the closest field station and 500 miles from the furthest. The network has operated successfully since mid-June and continues to operate at the request of the Peruvian government.

WHY?:

In Peru, as in the case of many countries hit by a major catastrophe, government communications systems were and are overloaded. This prevents the transmission of important messages originated by voluntary relief agencies and even non-military government ministries. Moreover, relief agencies and government operated communications facilities are often not in the same location because of limited government resources. In such instances, official government messages are sent through the local network.

EQUIPMENT:

One of the most important lessons learned from communications operations in Peru is that tube-type, medium strength, generator powered equipment is unnecessary -- even undesirable. They are not easily portable, require frequent generator maintenance, and consume over 90 gallons of gasoline per month (12 hours daily operation).

Ideally a field station should be fully transistorized. Until recently there were no other alternatives (except military equipment with prices of \$5,000 & up per set). Now such equipment is available readily in the United States, and possibly elsewhere, for less than \$195. It is no larger than a shoebox, weighs less than four pounds, and consumes little power. The latter fact is extremely important; it eliminates dependence on generators and sources of gasoline and enables almost unlimited portability. The transistorized station will operate from the same automobile battery for approximately one month. (12 volts, 45 ampere-hour found commonly in all types of autos) Estimated cost per complete station \$220, includes antenna and microphone and battery; quantity discount available. (9

(Editor's Note: The equipment referred to is manufactured by Justin, Inc. of South El Monte, Calif. Catholic Relief Services purchased two units and installed them in 4-wheel drive jeeps to be used in disaster/emergency response.)

MY ROLE:

The volunteer services that I can offer include:

- -Designing the local network
- -Setting up the control station & other fixed locations
- -Training host country nationals or voluntary agency representatives in all aspects of station operation
- -Training personnel in erecting portable/mobile stations
- Repairing/maintaining network equipment
- -Supervising net operation
- -Administering logistic & support activities of net
- Providing liason with the Telecommunications Ministry and managers of other networks

I am willing to offer my volunteer services (without compensation except for subsistance) for up to a period of four months.

REGIONAL & INTERNATIONAL COMMUNICATIONS SYSTEMS

WHY?

Normally, existing communications are adequate unless overload has occurred because of the nature and scope of the disaster. There was an international overload type situation in Peru. Field groups such as the volunteer South African Medical Team in Carhuaz and the German Red Cross Caraz frequently had to wait weeks before receiving responses to important cables from their home offices. Project Hope also had a need for direct communication with Washington. None of the groups from other nations (e.g. U.S.S.R., France, Netherlands) had reasonably direct communications with their country.

EQUIPMENT:

It is feasible to establish a radio station capable of spanning the distances required. Such a station should consist of a multi-frequency range transceiver, power amplifier, and beam antenna to direct the radio signals in the desired directions. The purchase price of such a station would be about \$750. If not purchased, I could bring my own equipment and "borrow" from manufacturers or other radio amateurs. This was done by Project Hope for use in the local Peruvian network.

(Turn to page 19, please)

Public Service



PICON

By Pat Shreve, W8GRG

"Public Interest, Convenience, and Necessity" -- all our readers are familiar with these words which Congress established as a requirement for obtaining any radio station license.

To most amateurs, the words have come to mean primarily public service. Certainly, emergency communications in a disaster - hurricane, tornado, earthquake or flood - is in the public interest. We can make a good case for services such as MWARS, and for stations that run phone patches for the men in Viet Nam.

Any ham who assumes, however, that activities such as these are automatically going to justify continuation of Amateur Radio and amateur frequencies is mistaken. Fees for our licenses have been raised. Ohio increased its charge for call letter license plates, the commercial services and the CB'ers are pressuring the FCC for more room - and the general public couldn't care less.

What will happen if the recent interpretations of the rules that would bar amateurs from operations such as Eye-Bank Net, and service to civic organizations such as the Red Cross, is upheld and enforced? Certainly our competition will argue that it makes us less "in the public interest." Also, too many hams who use amateur Radio to serve the Red Cross, Civil Defense, and other worthy causes, subordinate their "ham identity" to the group being served.

So, let's get busy on our public relations. Amateur Radio itself IS IN THE PUBLIC INTEREST - as any ham knows who has delivered a message from a soldier to his "Mom", or helped a novice build his first piece of home-brew gear, or listened to a kid talk to his family about his first real DX, or his new friend in Europe, Mexico or South America.

Two things we must do:

- 1. Take every opportunity to interest non-amateurs in our activities; talk about them and -
- 2. Whenever amateurs perform a public service, make sure Amateur Radio gets the credit.

(from "Off Resonance" Texas Southmost Amateur Radio Club - via "Florida Skip" - "Ham Hum" and was originally in "Collector and Emitter" FAA Aeronautical Center Amateur Radio Club.)

WHY VHF-FM: ROTHER? The New Frontier

By Jim Pfeiffer, WA5CKJ

At their Oct. 12 meeting, the SlideIl (La.) City Council accepted the Ozone Amateur Radio Club's bid of \$500 on a piece of property located at Third and Cousin Streets. It has been a long, uphill fight extending over more than a year. What strings will be attached to the purchase and how much it will cost the club to even make the land usable are yet to be determined.

Despite the difficulty encountered, acquisition of the land is only a tiny start toward final realization of the club's projected goal.

When one considers that the final goal -- a community communications complex -- is not primarily for the benefit of the club but is a public service, the question arises "Why bother?" Don't think that those involved in the project have not asked themselves that very question many times during the past year. Why bother, indeed? The club already has a meeting place that, while perhaps not optimum, most certainly is adequate. And let's face it, meeting at Cleco certainly has advantages. Lights heat, air conditioning, all are furnished at no cost. There's no janitorial work involved, to speak of. There's a stove, a soft-drink dispenser, tables and chairs.

In its own facility, the club itself will have to provide all those things. Constant scrabbling around for money for maintenance, utilities and equipment will be required, even after the money has been raised for a building. It will be quite a change from the present setup, under which practicaly the only expenses the club has are mailing meeting notices and printing this paper.

Why change all this to provide a facility that the community actually doesn't even know it needs, let alone want? Why bother? A good question, and here are a few more:

Why would an amateur spend nearly 20 years of his life running a net nightly, seven days a week, 365 days a year, just as a public service to handle messages for other people? With high precision, highly reliable, static-free channelized VHF-FM radio now the fastest growing segment of Amateur Radio (and the mode best suited to handling countywide mobile emergency and public

By George Hinds, WB8JYR

wide mobile emergency and public service communications) it is time to act to formulate and implement plans for emergency communications to fully utilize amateur FM capability.

For example, with literally hundreds of area hams monitoring .94, where else could so many capable amateurs be found at any moment to pass along severe weather warnings, provide reliable emergency communications for police and fire departments and do all this and more from both mobile and base units? With emergency power in every auto!

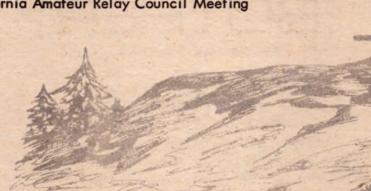
If you agree the above proposal is both practical and good for Amateur Radio, then why not go one step further: Establish a system that will permit the AREC and RACES officers responsible for getting word of an emergency to us to key all area repeaters simultaneously for priority messages; i.e., severe storms, local emergencies, etc. If we are going to retain our frequency space, then we are going to have to demonstrate that we deserve that special privilege by the special service we provide.

Think of the county-wide coverage from 146.94 plus the several area repeaters! If we do the job, publicizing our efforts, ham radio and the public will benefit from this breakthrough in communications! If not the intensifying attack upon our ham frequencies by others will be more likely to succeed! If you don't believe the public relations effect of demonstrated "public service" on Washington lawmakers and ultimately the FCC, you have not been reading the mail"! (from "The Radiops Log" of Westpark(Ohio) Radiops.

Why would hundreds of amateurs schedule much of their lives around such a net just so they could check in on the off chance that someone, somewhere, would want to get a message into or out of their community?

(Turn to page 26, please)

WESTERN AMATEUR FM CONFERENCE AND California Amateur Relay Council Meeting



TENTATIVE PROGRAM Friday, June 2

4 PM

Registration

6-7 PM

Champagne party \$1.00 per person

Saturday, June 3

9 AM

Registration

10 AM

Commercial Exhibits open all day

10 AM

Ladies coffee hour

10 AM

Swap shop open to all registered participants

10 AM

Technical talks and exhibits

1-5 PM

CARC Meeting

Ladies Program

2 PM

Attitude adjustment period

6:30 PM 7 PM

Banquet

Program- Speaker Wayne Green, W2NSD/1, Editor, 73 Magazine

Drawing of door prises.

The Associates 146.12-147.71 51.725-51.125 51.3 simplex.

Individual repeater movies or talks.

Motel accommodations to be handled direct to Tropicana Lodge, 4061 N. Blackstone, Fresno, 93726; 209-222-5641. Be sure to specify you are attending FM WEST and include your call. Singles, \$14., Doubles and Twins, \$18.00. Reservations must be made by May 20. Reservations will not be held after 6 PM, without a deposit in advance. Repeater Associates is not responsible for motel accommodations or lost tickets. If you have problems or questions feel free to write. Talk in Friday and Saturday, WB6 HYL 146.34-146.94, 52.525 simplex.

ADVANCE REGISTRATION

Western Amateur FM Conference and California Amateur Relay Council Meeting FM WEST

Pre-registration deadline- May 26, 1972 (postmark) Tickets purchased later will be \$9.00.

Please reserve Tickets for me at \$8.00 each.

Name of XYL or guest ______Call____

City and state Zip

I will attend the champagne party Friday night YES NO

Mail to Repeater Associates c/o Tom Hayward, WB6GVQ 3122 Swift Circle Clovis, Ca. 93612

Checks or money orders should be payable to Repeater Associates. No confirmation will be sent. Tickets will be available at registration desk.

Worldradio

tuned the rig. You experimented with all the antennas, and you finally have yours tuned as sharp as a gnat's toothpick. You can hear 50 dB below the noise. What's next?

Who was that person who gave you the 5 by 9 in Brazil with your new skyhook? Who was that fellow who gave you that "first VK9" or that fiftieth VU2? Was he a doctor? A n

Worldradio is a new amateur newspaper, DEVOID OF POLITICS, believing strongly that amateur radio is only partially reaching its potential to build bridges between people - around the world or just on the other side of the local repeater.

We're all interested in the technical aspects of our hobby, but WORLDRADIO is trying to complete the picture with insight into the people who are making our hobby the unique and fascinating international service which it is today.

VHF & more

A PORT

By George Hart, W1NJM

In today's rapidly-moving technology, operating habits in Amateur Radio must keep pace with technical developments. The two are tied closely together, especially on the vhfs and above, where many aspects of propagation are still in the exploratory stages, and amateur space communications are practically a new field to be exploited through ARRL-sponsored groups such as OSCAR, AMSAT and the Talcott Mountain Science Center.

Amateurs are not just playing with already-developed techniques in these fields; we are delving deeply into the subject with the remnants of theat youthful enthusiasm which was responsible for amateur contributions to the art of radio communication in the first place -- the kind of enthusiasm that doesn't know that something is impossible until after it has been achieved.

It isn't dead, the kind of spirit which engendered our "hobby" and made it a valuable national asset. Perhaps it is somewhat obscured by hordes of those interested only in their own shallow entertainment, but it's still there and still working for us, and you'd better believe it.

Meanwhile, the potential for public service in an operating sense on the vhfs becomes ever greater. There are those who say repeaters are a passing phase, that only a handful of amateurs, comparatively speaking, are really involved; and this may be true. But the same thing was said about cw when spark was "king," about operating in the "useless" regions below 200 meters, about sideband, about RTTY, about amateur satellites. There are always skeptics.

You and I know, if we stop to think about it, that repeaters hold the greatest potential for public service of any kind of amateur technique that has come down the pike in many a decade -- if only we can channel it in that direction, and if only FCC will permit us to develop it on all of all our vhf bands to its full potential, rather than bowing to demands for further artificially inflating the national economy.

Here is a field in which OVS appointees can take the lead. This is a message you might take to your vhf cronies who are not yet "in the fold." If we give the impression of using our vhfs for our own pleasure and amusement, we stand a good chance of losing them.

If we can prove that we are using

them to provide further technical development and public services through operating, nobody can take them away from us. It's up to us-not to FCC, not to ARRL, but to us, -- all of us.

(From "OVS Bulletin" of the ARRL. George Hart, WlNJM, is Communications Manager of the League.)



If this copy of WORLDRADIO came to you in the mail and you are not a subscriber, it is a complimentary sample copy. We wish to chronicle the achievments and accomplishments of the ham radio operators. Such an effort depends, of course, on your support in the form of subscriptions. Fight procrastination! Fill out blank on page 28! Today!

Old Time 16mm Sound TV FILMS



Denson Electronics Corp. PO Box 85, Rockville, Conn. 06066-W1BYX

Only the very best is good enough for you



Regency, Galaxy, SBE,
Hy-Gain, Hallicrafters,
Hammarlund, Simpson,
Raytrack, Ross-White,
Gonset, Ameco, CAI,
Rohn, Sonar, Standard,
Barker-Williamson,
Gladding, Dycomm,
Scientific Radio
Systems.

Special Sale: TR-3 \$279; 75S-1 \$250; HA-460 \$49;

Com. III \$69; DX60B \$59.

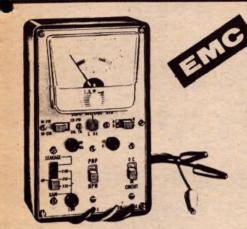
Steven Kullmer, Evergreen Inc. Dysart, Iowa 52224

VALLUES

by mail since 1954

Fast Shipments

OUR NORMAL SHIPMENT SPEED IS same or next shipment day on material in our stock at the time of receipt of your order (USA only on this)



\$14.95

Model 212 K TRANSISTOR ANALYZER **ALL THESE FEATURES**

1. Checks DC current gain (BETA) in 3 ranges to 200. 2. Checks leakage on 3 colored scale. 3. Checks all transistors—high or low power for gain and leakage. 4. Checks all transistors as AC current amplifiers. (OSCILLATOR CHECK). 5. Checks all transistors in circuit without removing them, 6. Can be used to signal trace AF, IF or RF circuits, 7. Measure Battery Voltage on 0-12 volt scale, 8. Measures DC current drain on 0-80 milliampere scale. 9. Checks condition of diodes. 10. Supplied with 3 external leads as well as a socket for checking transistors. 11. Comes complete with instruction manual and transistor listing.

Size: 3%" × 6%" × 2". Weight 1½ lbs.

DOLLAR Assortments

Take your pick on these fine unused parts assortments: Only \$1.00 per assortment. (order by number)

30 different values of 1/2 watt ±10% resistors. #DA-1

50 tiny paper condensers. (low voltage units) #DA-3

25 assorted mica trimmer condensers::::::::: #DA-4

40 assorted terminal lug strips::: 1-6 lugs::::: #DA-7

#DA-9 40 hole plug buttons for those unwanted holes.

#DA-11 25 slug tuned coils (Many are in cans).

#DA-14 32 bumper feet as used on equipment & cases.

200 solder terminal lugs in a plastic box. #DA-17

2 pounds of electronic nuts and screws. #DA-18

Assortment of small springs in a box. #DA-19

#DA-20 20 assorted small mounting brackets.

Test lead wire (10 ft red & 10 ft black) #DA-21

#DA-27 1/2 pound of assorted plated brass spacers.

2 pounds of electronic hardware (many types) #DA - 29

60 assorted brass, plastic & ceramic spacers. #DA-35

#DA-36 10 assorted American made low voltage molded aluminum capacitors. (Elect)

10 NPN transistors (TO-5 case) scope #DA-37 tested for leakage, shorts & opens:::::::

#DA-38 8 PNP transistors (TO-5 case) scope tested for leakage, shorts & opens:::::::

#DA-39 1 pound small electronic hardware in box.

#DA-40 Imported 3 transistor assembly (with diagram) AM radio, Transmitter, C.P.O. UNUSED:..... Less speaker, battery, microphone & key......

Resistors: 1/2 WATT ±10% Color coded types:

Any value on regular 10% chart from 1 ohm to 22 Meg ohms:

UP TO 99 Pcs: 6¢ assorted

100 or more assorted

ea.



216 NEW 1/2 WATT ±10% RESISTORS:: Carbon composition type with 3 of each value between 1 ohm and 820K ohms:::: Packaged in a plastic box:::::::

Catalog # KT-5 only \$6.95 per assortment

1 Watt Zener Diodes

FACTORY FRESH SCHAUER ±10% 1 watt ZENER DIODES:: 49¢ each:: Available only in the following voltages:::

> 2.4 3.3 4.3 5.6 7.5 10.0 13.0 4.7 15.0 2.7 3.6 6.2 8.2 11.0 3.0 3.9 5.1 6.8 12.0 16.0 9.1

METER PROTECTION DIODE (150-300 Mv) #V-64 45¢ ea

Integrated Circuits 59¢ 709

99¢ 710

99¢

B-E

Charge Sure

Delivery charges for the USA & possessions:

Order amount	Zones 2 & 3	Zones 4 - 5 - 6	Zones 7 & 8
\$1.00 - \$4.99	\$.75	\$1.00	\$1.35
5.00 - 7.49	1.00	1.25	1.60
7.50 - 9.99	1.25	1.50	1.85
10.00 - 14.99	1.50	1.75	2.10
\$15.00 -\$24.99	\$1.75	\$ 2.00	\$2.35

Add 25¢ for each additional \$25.00

Delivery of our choice: Mostly by UPS unless you specify P-P only (areas covered by UPS) Other countries F.O.B. Bluffton, Ohio

SATISFACTION IS GUARANTEED ON ALL MATERIAL

TERMS:: Check or money order (in US dollars) with order. Add Sure Charge for delivery in US & postage for other countries.

FREE FLYERS AVAILABLE::::: Large catalog\$1.00 deposit:

BIGELOW ELECTRONICS P.O. BOX 71 BLUFFTON, OHIO 45817

Hams Help: Baja California



Nash Williams, W6HCD, who recently organized the "Foothill Chapter" of Flying Samaritans.



Thrift Shop operated by Senora Enriqueta McFarland for Institution Agricola Industrial de San Vicente.

Scores of La Canadans (California) are devoting their expertise, time and money to aid the building of a trade and agricultural high school in the Mexican town of San Vicente, about 135 miles south of Tijuana.

They have been recruited, for the most part by A. Nash Williams, (W6HCD) of 910 Chehalem Rd. He spends hours at his ham radio transmitting messages for the Flying Samaritans and Liga International which started the school. These organizations include dentists and physicians who provide medical and educational assistance in underdeveloped areas in Mexico.

La Canadans H. Steve Sander, Robert Heusser, (K6TUY), Tom Sauder, Dean Slaughter, Jim Roberts, Mrs. Ernest Heusser and Bob Peterson are all involved in the school project.

In addition, Ken Kalina, youth minister at La Canada Presbyterian Church, made plans to take 30 members of its high school group and 15 adult volunteers down to work on the school during the Easter vacation.

The Clippers Club at the La Canada Presbyterian Church has contributed funds to the project.

Architect Sander of 2055 Los
Amigos St. designed the buildings
and developed the master plan for the
school. It will eventually accommodate
300 or more boarding students.

The Instituto Technico Agricola
Industrial, as it is known, is planned
to become self-supporting eventually.
Light industry will be developed to
provide labor for the students as well
as income for the school, and some
of the food raised on the model farm
will be sold.

It opened last fall, two years after work began, with 30 students and four teachers. In various stages of completion now are a main building with three classrooms, laboratory, shop, kitchen and multi-purpose room; two bathroom buildings; a radio station; airfield and sports grounds.

Williams (W6HCD) handles communications so that workers and planners here can keep up with the progress of the construction, learn what supplies are needed and send directions. An engineer at the Jet Propulsion Laboratory, Williams is also directing the construction of power generators at the school.

Huesser, (K6TUY), a teacher who lives at 4603 Encinas Drive, is also spending time at his radio to help with communications. Slaughter of 463 Paulette Place, an electrical engineer, has worked on the site in San Vicente installing the generator now in operation. Three more are planned.

Sauer, an electrical engineer and former La Canadan who now lives in Ventura, has been at work on the lighting and power installation. Jim Roberts, a mechanical engineer, has taken care of the water well and distribution system which are not completed. All of the school's water is now trucked to the site. Roberts lives at 4603 Orange Knoll. Ave.

Since there are only a limited number of accommodations at one San Vicente home, most of the volunteers working on the school camp out in the desert-type environment. The campers must bring all of their own supplies, including water.

The Presbyterian youth group is planning on taking 350 gallons of

water for the six days it will be there. The youth in the church have raised \$300 for building materials and supplies for the trip.

Besides Mr. Kalina, La Canadans Mr. and Mrs. Bill Anderson, Mr. and Mrs. John Ruben, Mrs. Francis McIver, Mrs. Pat Myers and three college students-Jeff Sink, Doug Edwards and Tom Preston-will be accompanying the youths. A Spanish-speaking couple from Silver Lake will also be going.

The school buildings are constructed of adobe brick with a concrete frame and wood roof. The bricks are made at the site. Sanders says he changes the specifications from time to time to make use of donated materials. For example, La Crescenta contractor Scott McDonald has donated some angle iron and corrugated metal which became the roof of the generator building.

FOOT

Sander says that support from the San Vicente populace has been "good by Mexican standards." Supporters donate "days of labor" by their employees.

"The idea of the project is to help our southern neighbors to help themselves," explained Sander, noting that San Vicente's delegado (spokesman for the town) wants the completed school to be self-sufficient.

Without this school, the community could handle only 75 children in its existing system. Sander reports that the students are very happy to be in school after their long wait. They don't mind the lack of running water and a floor in some of the rooms because these hardships are common in Mexico.

(From "La Canada Valley Sun")





(above) Alejandro (1.) and Pocho (r.) at Queta McFarland's home in San Vicente. Alejandro is the youngest and smartest boy in the Flying Samaritan school in San Vicente. Employees of JPL, Pasadena, purchased a new bicycle for Alejandro so he could ride to the school.

(left) Nash Williams, W6HCD, (l.) and Pat Patterson, W6RYX, (r.) convincing English teacher Evelyn Ammundson that she should fly in Pat's airplane. Nash and Pat had flown down to repair the 5 kw generator. (below) The Instituto Tecnico Agricola Industrial de San Vicente.

Flying Samaritans Inc.

ILL CHAPTER

P. O. BOX 813 . LA CAÑADA, CALIFORNIA 91011

COVER PICTURE:

Bob Heusser, K6TUY, (shown with his son Matt) an elementary school teacher in Montrose, Calif., is very active in the project to assist the school in Mexico.

In addition, each year he takes his radio equipment to his class and a teacher at the San Vicente school tells Heusser's class about life at the school and in the village.

The Christmas time project has his young students unable to believe their ears. It's all a totally new experience to them, they hear from a foreign country-a town with no TV, no banks, no ice and electric power only from noon to midnight. The youngsters are enchanted by being able to ask questions directly by ham radio.



(15)



(L.) Darleen Souligny, WA6FSC, and Nellie Lazard, XE1CI, Mexico City.

(Over the past year Darleen Souligny, WA6FSC, has travelled, operated and met people on every continent.)

January 27, 1972

Hurrah--today's the day. Things really worked down to the last minute as my tourist card for Mexico and my international vaccination certificate which were mailed from Sacramento on the 19th did not arrive until yesterday. Also, my camera which broke when I was in Portland, Oregon enroute home from Canada arrived at 5 p.m. the day before my departure. Left Fresno at 9:20 p.m. for Los Angeles and left Los Angeles at about noon arriving in Mexico City at 5:00 p.m. Mexico City time.

I had not made arrangements for Nellie Lazard, XE1CI, to identify me so I wore my call sign and she and her three lovely daughters were on hand to meet me and immediately drove me to their beautiful home.

My terrible reputation had caught up with me and the ham shack was my bedroom! Got on the air soon after arrival and my first contact was Harry Mason, K6MOO, whom I had just seen at the Fresno DX Conference and he was kind enough to run a phone patch to my folks letting them know of my safe arrival.

About 8:30 p.m. we attended the Radio League meeting and I met a number of hams, some of whom I had worked on the air from my various operating locations during the past year. Then after the meeting we adjourned to a local restaurant and I had enchiladas which were delicious. After returning to Nellie and Marcos Lazard's QTH (Nellie's OM is also a ham and holds the call XEITX, we adjourned to the shack and checked in with Pete Bissonnette, KH6HIF, in Honolulu whom I had not talked to in a long time and got two new countries for Nellie -- Johnston Island and New Caledonia. Went to bed at 12:30 after a very full and delightful day.

Travels with Darleen

Friday, January 28th

Got up at 8 a.m. and got on the air talking to my very good friend Phil Ashcraft, WB5BFZ, who also attended the Fresno DX Conference.

Nellie then took me to the Museum of Anthropology. Lunch that day was a very special occasion and we journeyed to the factory (textiles) which her family runs and in honor of her brother's birthday the workers staged what I would call a Mexican luau.

They prepared two large ovens, above ground, and topped with banana leaves, etc., in which they had cooked for a number of hours roast kid. The aroma was absolutely tremendous and it tasted even better than it looked. We also had home-made corn tortillas in which we wrapped the roast kid like a sandwich and also had spanish rice and a very rich soup with onions. During our lunch we were entertained by a mariachi band. After lunch we went sightseeing in the city and went to the university which has a very lovely campus. Then we went out to eat and met a few more hams who happened to be eating at the same restaurant as we were. Retired about midnight since tomorrow, Saturday, would be a very long and eventful day.



Marcos, XE1TX, and Nellie, XE1CI, Lazard.

Saturday, January 29th

After making a few contacts on the air and talking to Henry Folkerts, 7Z3AB, whom I had not talked to in months, and assisting Nellie and Marcos in getting another new country (YK1AA) we left by car and journeyed to the ancient pyramids of the Sun and Moon at Teotihuacon where recent restoration work has restored the splendor of this cere-

monial area, dating back to 200 B.C. The famous Sun pyramid is even larger that the largest pyramid in Egypt. With the able encouragement of Nellie and Marcos' three daughters, I finally made it up to the top, a little short of breath but it was certainly worthwhile. I am told there are 472 steps to the top, but I was too tired to count.

We also toured the interesting museum near the pyramids and then stopped for lunch. We ate in a beautiful Italian restaurant- had Fettucini - delicious. After lunch we returned to Nellie's QTH and Miguel Chinarro, XE1FP, came by and wanted to take us to the new QTH which he is building on top of a very high mountain near Mexico City -- what a magnificent view and site for a ham!

Then we drove over to the QTH of Bill Menache, XEIWA, and met him and his charming XYL, Roslyn. After a most enjoyable visit, we returned to Nellie's and Marcos' QTH and went to an Arab restaurant for dinner. We had the typical flat thin Arab bread with a type of sausage which was cooked like shishkebab. It was fortunate that Nellie lent me a coat because it was very cold in the evening although the daytime highs were in the 70's. The altitude is about 7,500 feet and that makes a lot of difference. We retired about midnight after a few more contacts on "Pandora's Net", Pete, KH6HIF, is M.C. of this net which meets nightly at 14.277 at 0400 GMT.

Sunday, January 30th

Got on the air but the Sunday QRM was pretty bad; then had a liesurely breakfast and Miguel, XE1FP, came by and took me for a drive and to visit his QTH. He has done quite a bit of oil painting and I was astounded at the beauty of his work. We also did a bit of sightseeing in beautiful Mexico City and then went back to Nellie's QTH for a luncheon party in my honor. When I returned, the garden had beautiful round tables with colorful umbrellas, long banquet table and flowers everywhere. Soon the guests arrived and we had a total of about 40 including Bill, XEIWA, his XYL Roslyn; Luis, XEIWN; Paul, XE1WV; Georgio, XE1FFC; Javier, XE1JJW; Arturo, XE1KV; Tony Pita, XE1CCP; Albert XE1SR and his XYL, Sheila, XEIE-brother and sister -in-law of Nellie (Sheila was the first YL to operate in the Vatican); Albert, XE1IIT; Miguel, XE1FP; Jose, XE1HD; Marcos,

XEITX, and his XYL Nellie, XEI-CI, who gave the party and Javier, XEIB, President of the Olympic Villa.

We feasted on a banquet all prepared by Nellie, who is an excellent cook. The food consisted of spinach cake and chicken made out of a special dough (very flaky); meat covered with cabbage rolls; spanish rice; cakes of tortillas, green pepper, white chicken, creamed cheese and topped with other types of cheese such as Swiss cheese and parmesan, etc; baked ham topped with pineapple; lettuce salad with cucumbers; mousse of strawberry, coffee ice cream and chocolate mousse cake. Certainly not a good place to lose weight with all those delicious calories!

After all the guests had left, the airport called to let us know that my flight had been delayed by one-and-a-half hours so would not leave until 1:30 a.m.

We went out to eat dinner after watching a little television (the Sapporo Olympics of 1971, in Spanish). Miguel, XE1FP, came by and drove us to the airport and also joined us for dinner. Finally my flight was called and soon I boarded the CP Airlines plane for my direct nonstop five-hour flight to Lima, Peru. We had a snack shortly after take-off and then I settled down and slept for part of the trip.



1-r: Al Saltiel, XE1SR; Jose Chiquillo, XE1HD; Bill Menache, XE1WA; Luis German, XE1WN



l-r: Tony Pita, XE1CCP; Arturo Epstein, XE1KV; Paul, XE1WV



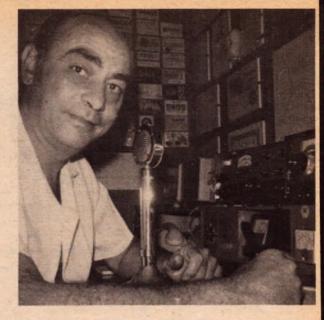
1-r: Sheila Saltiel, XE1E, and Roslyn Menache, XYL of XE1WA

Monday, January 31st

Arrived in Lima, Peru at about 8:00 a.m. and Natan Sterental, OA4 OS, was on hand to greet me and take me through customs formalities. We then drove to his lovely home and I met his charming XYL, Becky, who also has her own call sign of OA4AJ. Since I was so exhausted I took a siesta and instead of sleeping for an hour slept nearly three hours. Then I met Lillian, one of the daughters and then his other daughter Esther, OA4NCS, who is hoping to be a pediatrician and is studying for university entrance now. Their only son is Benny, OA4SO, who just recently graduated from Penn State (see WORLDRADIO, 15 Nov. 1971, page 17) and is continuing his studies at Penn State towards his masters degree. We had a lovely lunch on the patio and it is so nice to eat in a leisurely fashion while I think of my friends back in Sacramento in the cold fog. I had fresh peaches, fresh plums, fresh apples, and grapes and tried cactus fruit for the very first time. It is green in color on the outside but is very juicy and sweet and has lots of little seeds which you eat along with the fruit. It is extremely refreshing on a hot day. Got on the air with my new license using the call of WA6FSC/OA4 and contacted Virge Neilly, W3LNW, (see WORLD-RADIO, 19 July 1971, page 8) a very good friend of Natan's. He ran a phone patch to my parents in Fresno, Calif., and of course they were happy to hear I had arrived safely in Lima.

Tuesday, February 1st

Was taken on a tour of a private gold museum and rifle and pistol collection. You could spend many hours at that location. It is one of the most interesting museums I have seen thus far. Many interesting places were pointed out enroute back to the home. Lima is a very lovely city and although it has a population of about three million, it gives you a small town feeling and everyone seems very happy and friendly.



Natan Sterental, OA4 OS



Becky Sterental, OA4AJ



Esther Sterental, OA4NCS

After a delicious dinner, we enjoyed coffee on the patio and also had as guests Klaus Wieghardt, OA4LM, and his XYL. We then adjourned to the ham shack and I stayed on the air until 2:15 a.m. Wednesday -- renewed many old acquaintances, particularly from New Zealand and Australia. Was just like a family reunion.

(Continued next issue.)



by Dennis Scannell, WB6IXC



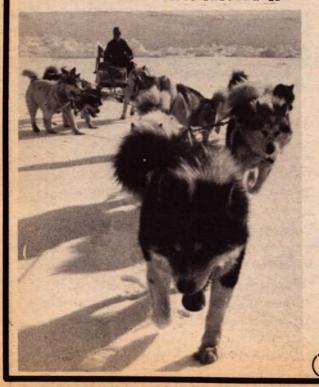
have changed since then, Jay has become pretty well seasoned, and Gary and he are running a smooth, smooth operation.

So who is this Jay character--any way what is he doing on Signe? Here you see his picture. Hiding behind the

So what's a VP8ME??--That would be the usual response from your bunkies, cell mates, secretary, wife or whatever, as you bound out of your shack and announce to the world that you have just contacted VP8ME. Tell them it's a rock 800 miles southeast of the tip of Chile and about 1600 miles north of the South Pole in the South Orkney group that goes by the name of Signe, lat. 60.35 S, long. 45.30 W. "So what?" they will say. Well, poohpooh on them--what do they know anyway?

But to a DXer--now that's something else. To a DXer you might well be the hero of the year, or hero of the day--or at least untill he works him. VP8ME is also number 53 on the "most wanted DX list" according to Geoff Watts' DX News Sheet--and that's what makes him pretty special. But how do you explain that to your bunkie? Don't bother--just log it and sit back and wait for that confirmation to come.

If you did work VP8ME, whose name is Jay, chances are you also have become acquainted with Gary Pannell, WA5FWC, his QSL manager and friend. Gary and Jay became acquainted some time ago when Jay was stationed at Halley Bay operating under the same call sign, the only difference being that he was in the DXCC territory classified as the Antarctic instead of



the much more sought after South Orkneys (did you know there is an Orkney group off the coast of Scotland? That's how come these are the South Orkneys--figures?).

Anyway, Gary (being a dyed-inthe -wool DXer in the worked 300 range) says to Jay, "I sure would like to QSL with you", to which Jay replies, "Oh really? Well, I guess that would be all right, but what's a QSL?" Gary's reflexes are honed to the sharpness of a 100 Hz Collins mechanical filter as a result of many skirmishes in the DX dog-piles, so he immediately countered with, "Well, ol' buddy why don't you let me take care of that messy little chore for you and you won't even have to worry about what a QSL is?"-"Done!" So that's how it all happened -- have faith and perseverance -- it could happen to you.

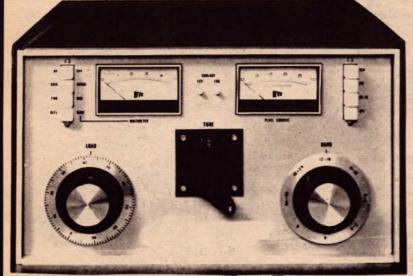
Jay is a radio/radar technician and operator now on Signe Island for the British Antarctic Survey Group, an environmental scientific organization financed by the British government. He was first licensed to operate when he landed at Halley Bay back in February of last year, but his baptism under fire did not really take place until he opened up on Signe Island last month. This operator heard him for the first time the second night that he was on -- and it was chaotic! He did start working by call areas finally: 1, 3, 2, 5, 4, 7, 3, 2, 5, --every place but 6! Finally he called the 6's and P*O*W* -- I mean, he was knocking the plaster off of the walls all over California -- you could almost hear him without a receiver! He couldn't copy anybody so he broke them down into W's, K's, WA's, worked a couple of each and then he called the WB's--K*A*B*O*O*M*!! So you know what he did? He said, "Sorry, too many WB6's -- can't copy anybody--are there any more 5's? Well, you could hear the WB's dropping off the walls they had climbed, from San Ysidro to Siskiyou. It has been truly said, "The life of a DXer, especially a WB6, is fraught with (18) frustrations". Thankfully, things



hair is Jay Rushby, hailing from Suffolk, England. The beard and hair is just a gag--the sort of thing that all newcomers go through when they first arrive, and I understand that is gone by now. Jay has renewed his contract with his employers and will be at the station for another year. The equipment he uses is Racco, which is made in Finland. The output of his exciter is 100 milliwatts and this is fed to three 4-250's and --wait a minute--what was that? 100 milliwatts? Yep, that's right-there is another amplifier between the exciter and the final, however. His antenna is a caged dipole(you have to be an oldtimer to know what that is -- or at least to have ever seen one).

Jay's first experience with Amateur Radio was when he arrived at Halley Bay, having not been licensed at home in Suffolk. I asked him how he liked DXing, he said, "Well, I like it all right, but sometimes it gets to be an awful lot like hard work." Well, probably so--

THE ALPHA SEVENTY IS SIGNAL CX-7A



NEW Alpha Seventy now by CMI

*New 8877 final * Vacuum relays and capacitor * Cool and easy max. legal power -SSB, CW, RTTY or SSTV through commercial ratings * Six second band change * Electronic bias control-plate dissipation zero until RF drive signal is actually present * THE linear for THE CX-7A

YOU will never know how little it costs to own THE incomparable CX-7A or Alpha Seventy until YOU write or phone us and let us know the trade in deal YOU WANT. * We usually say yes! NO ONE ANY-WHERE BEATS OUR DEAL*



*160 Meters * 300 Watts *

*Transceive or split frequency with two built in VFOs * CW keyer built in*

*IF shift - new patented QRM remover *

*IF noise blanker * digital nixie frequency readout * superb computer grade construction by CMI

*AFSK keyer * adjustable output power* broadband tuning * output wattmeter and reflected power meter * \$2195

AMATEUR-WHOLESALE ELECTRONICS

8817 S.W. 129 Terrace-Miami, FL 33156

Telephone-days (305) 233-3631 -nights and weekends call (305)661-7576Use your Master Charge card

HOHOSCOPE By Jeane DXon



ARIES-Your ability to sift through to obtain the call signs will make you solid gains.

TAURUS-Plenty of activity is indicated, including trips and replies to messages.

GEMINI-Areas that have been

cancelled are made available. CANCER- Excess use of electrical power may bring call from government agent. LEO-Invest in IRCs VIRGO-Domestic routine could interrupt DXing, be alert. LIBRA-Longstanding unanswered QSL cards will reap violence. SCORPIO-Lie low, listen, observe and learn. SAGITTARIUS-Strive to make your

export orders

specialty

own call heard. Tail-ending now would not be beneficial. Unusual countries may be heard. Be willing to experiment; if inventive QSL cards may result. CAPRICORN-Your attempts to dominate the frequency have an ulterior motive. AQUARIUS-Unusual contact will bring unusual QSL card. PISCES-Some friends confide preposterous signal reports.

Ham Radio "Jump Team

(Continued from page 8)

A SYSTEM:

International communications would require a station in the recipient country. I already have a list of stations in the United States who have volunteered to act as communicators on behalf of voluntary agencies (at least one each in Washington & New York). These amateurs have extremely sophisticated equipment and antenna systems capable of reliable long-range communications. If for some reason direct communi-

cations are not possible, round-theclock communications would still be possible through the technique of international relay. For example when long-range Westward transmission is poor because of atmospheric sonditions, messages could be sent a shorter distance to Europe, or Eastward for relay through Japan or Australia.

MY ROLE:

My volunteer services in this system would include:

- -Gathering all required equipment (if not purchased)
- -Preparing volunteers in the U.S. and elsewhere for participation in the net.
- -Erecting station in East Pakistan.
- Operating and repairing station in East Pakistan

- Providing liais on with Telecommunications Ministry and managers of other networks.
- -Training personnel should station operation be desired beyond the emergency period.

(Editor's Note: Larry never received a reply to his offer. A story in the New York Times datelined Dacca, Pakistan, Nov. 24., titled "Rescue Team Sits Idle in Sea of Pakistani Red Tape" By Sydney H. Schanberg, quoted the Governor of East Pakistan saying that after nearly two weeks, the Government still had no program to coordinate the relief activities of either its own host of government agencies or of the many foreign nations that have moved in to help and who are doing most of the rescue work.)

TWO HUNDRED METERS AND DOWN The Story of Amateur Radio-By Clinton B. DeSoto-Courtesy of ARRL

(First published in 1936, "Two Hundred Meters and Down" is reprinted here so we may have a better knowledge of the vast and great history of Amateur Radio. This presentation is in honor of those who went before us and, through determination and hard work, gave us what we have today.)

To the memory of Hiram Percy Maxim -father, founder, saviour and evangalist of amateur radio, first president of the American Radio Relay League and of the International Amateur Radio Union, scientist, engineer, author, cultured gentleman, revered by hundreds, well-beloved of thousands, known to millions, -this work; is respectfully dedicated.

Dedicatory Preface

I well remember the battle in which Hiram Percy Maxim joined with me as Secretary of Commerce in setting apart definitely and for all time certain segments in the radio range and dedicating them for the perpetual use of the amateurs. The commercial value of these wavelengths was well recognized at the time and great pressures were brought to bear to allot them to commercial use. Mr. Maxim's sturdy mobilization of the thousands of amateurs contributed greatly to saving this field, which has now extended into world-wide use.

The amateurs have performed many signal acts of public service not alone in the field of experiment and research but in the actual transmission of vital messages. Their art has added to the joy of life to literally hundreds of thousands of men, women, boys and girls over the whole nation. Their international communications have a value in bringing a better spirit into the world.

I consider it an honor to join in any tribute to the memory of Hiram Percy Maxim.

Herbert Hoover

Palo Alto, Calif. September 17, 1936

Publishers' Note Seven years ago Mr. DeSoto, then a radio amateur and a student of journalism residing in Wisconsin, started in to do what no one had ever done for amateur radio-to write its full history for the benefit of the amateur generations to come. Subsequently his journalistic ability brought him to the attention of the American

on its secretarial staff, by which time the first draft of his amateur history had been largely completed.

From his new vantage point, with more complete records of amateur radio and more direct contacts available, he kept at work on his history, revising and correcting it, filling in factual gaps, adding to it as new events occured. Forced to put it aside for several years because of a heavy load of duties at League headquarters, he took it up about two years ago with the determination to complete it. It was then, as it had always been, a private venture of his own, having no connection with his work on the League's staff and being written entirely on his own time and at his own expense.

The publishers for whom the book was originally intended had in the meantime been merged into another firm, catering to a more general field. They read the manuscript and liked it but eventually decided that it was too highly specialized to be a business success: they doubted their ability to find a market for it. It was at this point that the work came actively to the attention of officials of the League and the 'script was read by Mr. Maxim, by the treasurer and communications manager and general counsel of the League, and by our then New England division director, our present vice-president -and by me. We were unanimous in the feeling that this work must not be permitted to come to naught. For my own part, I knew the great amount of research that had gone into its preparation and I was impressed by the fact that our movement had never before had an adequate historian. I considered the manuscript precious beyond price. From my standpoint, from the League standpoint, I would much rather it had found a private publisher, for effect's sake if nothing more. But since it did not, and since it became available to the League, I determined, with the approval of the League's Board of Directors, to give it the light of day by the League's press, simply to prevent its loss, for I consider it an invaluable record. Thus it happens that it is what it is, pointing out the League's shortcomings when that was the author's view, praising its part when he thought praise was deserved.

It will be gathered that I like the book. I do, assuredly. I prize its value as an impartial record. Most of today's amateurs have no more than fragmentary knowledge of the beginnings of their art. If I knew how to Radio Relay League and to a position (20) arrange the financing of the publication of this book as I think it deserves, it would be a masterpiece of the bookmaker's craftsmanship - and expensive. Instead it is in the familiar dimensions of other League publications, so that those who "pound" may also read. I hope that many radio amateurs may read it and learn thereby the fascinating tale of our earlier days.

> K.B. Warner Managing Secretary

West Hartford, September, 1936

Acknowledgement

Historians are, these days, a most maligned lot. The criticism levelled at them is not ordinarily so much that of censorship or suppression of fact's: it is directed against the entirely necessary process of selection which must inevitably be followed in any condensed recital of history. Each writer has a different conception of that which is important; so has each reader. The conclusion is that neither impartial observation nor accurate evaluation nor unbiased reporting is possible within the limitations of human nature.

The history of amateur radio, popularly and sparsely rendered, must inevitably be subject to certain criticism. Some events and some individuals have been mentioned that might not have been; some have not that might have been. The underlying aim, however, has been to be as truly impartial an observer, as accurate a reporter, and as truthful a raconteur as human briefness of vision permits. Honesty in the evaluation and assimilation of the multitudinous details of amateur radio's history, accumulated and sorted over a period of seven years, has been the major objective.

If that objective has in any sense been realized, the credit is due to the invaluable inspiration, assistance, criticism and/or encouragment exhibited by my associates on the headquarters staff of the American Radio Relay League, and by L.S. Hillegas-Baird, Paul M. Segal, Donald McNicol, W.D. Terrell, Fred H. Schnell, the late Clair Foster, and to Dr. Raymond V. Bowers; to all of whom my thanks.

Clinton B. DeSoto Hartford, July 1, 1936

("Two Hundred Meters and Down" starts in the next issue of WORLD-RADIO and will be continued in each issue until completed.)





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 to check into the Nobility Net which meets each Saturday at 1700 GMT, on 14.310 MHz.

(de International Coordinator W3FQT)

(adv.

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 Netbetter 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 an amateur radio operator's license. There are no dues and the nominal membership fee is perpetual. Write for information.

MARN

11049 Avenue E Chicago, Illinois 60617 U.S.A. People Helping People

IMA CA Sister Mary, WASVBM





Ted Barron, W1NN, has been honored by Boston radio station WEZE with its "Community Service Award". Nominated by Sylvester Connolly, W1MD, Ted was selected on the merits of his work as a "ham" radio operator who has aided persons in all sections of the western hemisphere without any gain, save personal satisfaction.

Retired from the U.S. Army in 1959, Ted is a victim of glaucoma, an eye disease, and is now without sight. Ted calls Amateur Radio "a wonderful thing for me, it keeps me active and that is something many blind people have difficulty in accomplishing."

Because of his loss of sight, Ted has been restricted to his home in recent years and devotes much time to his traffic handling. "I go on the air around 8 a.m. and stay with it until about 2 in the afternoon. "he says.

The range of traffic he handles includes South America, Cuba, Canada, Virgin Islands, Mexico and the South Pole. Most of the connections are of the phone-patch nature.

"It has its sad moments" Ted recalls. "Like the time a woman from South America came up to the New England Baptist Hospital and talked to her family back home in Bogota, Colombia. She had cancer and would not be returning home."

Then there are the happy moments. The time a mother and father came to his door to thank Ted and his XYL personally for running a patch to their son. "They presented us with a lovely present and a home-made cake".

14.280 MHz

Just recently Ted made contact with the Coast Guard Cutter Duane in the Bahamas and was able to "patch" several crew members to their families stateside and in the past he has conveyed messages from small South American villages to local hospitals for information and emergency treatment. The list goes on and on.

Ted Barron did not develop his love for Amateur Radio overnight. First licensed in 1927 he says he has no intention of hanging it up. Despite his loss of sight, he is most active, extremely pleasant to talk to and has an immense interest in ham radio. For these qualities He was presented the beautiful "Community Service Award" certificate. Congratulations from all on the IMRA Net go o W-one-Nancy-Nancy.

Ray LaFollette, K8RHF, Cincinnati, Ohio is now a Silent Key. His last year was spent in great activity and he spread happiness wherever he went. In 1971 Ray logged in more than 100 phone-patches for the missionaries. He was Net Control for the IMRA every Thursday. Ray knew his equipment and was an excellent operator...always remembering a schedule, even when it was for 2 a.m.

During the summer of 1971, Ray got a group of hams together to put up a new tower at Grailville in Loveland, Ohio, at the WA8LEI club station. It was quite an undertaking and it was a sight to behold...that six element beam up 50 feet.

Then in August, Ray took an active part in the IMRA 8-land Convention, taking several other hams with him to the Canton, Ohio event.

For his 69th birthday, Ray got a new Hustler antenna for his mobile rig and took an extensive trip through Canada, working portable/VE2 and /VE3. He really gave everyone on the IMRA net a thrill checking into the net everyday. Then in November, for his 49th wedding anniversary, Ray got a brand new SB-200 amplifier which really put the icing on his station.

The last thing Ray did for the IMRA Net was to get a local amateur to bring his TR-3 out to WA8LEI during the Christmas vacation so that Marie Sutter could take part in the net operation.

Ray had a bad case of the flu in January and couldn't seem to throw it off. He was finally hospitalized for tests during the first week in February. Blood tests indicated the presence of a malignancy and X-rays revealed a spot on the lung. Exploratory surgery was performed on February 28th and a large inoperable tumor was disclosed. Ray lived just a little more than a week after the surgery. He died in his sleep with no suffering at 10 p.m. on March 7, 1972. May he rest in peace.

Relatives and friends attended Mass of the Resurrection in St. Margaret Mary Catholic Church on March 10. Ray is survived by his wife, Mildred, five daughters, thirty one grand-children and eight great grandchildren. He was 69 years old. The family requests that any rememberances be sent to the American Cancer Society.

(Turn to page 26, please)

The Worldradio Foundation

ten percent of your subscription fee is divided among:

Airmen's Memorial School

Located on the island of New Britain, off the coast of New Guinea, the school was the first education for the children of Ewasse Village. It is a non-profit foundation project of Fred Hargesheimer, WØEBG, of White Bear Lake, Minnesota. The area's natives nursed Fred through illnesses and protected him for eight months during 1943 after his P-38 crashed. Fred, an electrical engineer, is currently on a one year leave of absence from UNIVAC and is teaching math at the school. He is operating as VK9FH.

S.S. HOPE

Amateur radio has always been a part of the journeys of the HOPE as she covered the world treating the ill and serving as a teaching hospital. The HOPE also maintains permanent medical facilities in Peru, Ecuador, Nicaragua, Colombia, Ceylon, and

Amigos de las Americas

Working in Guatamala, Honduras, Nicaragua and Colombia, the nondenominational group administers immunizations, teaches hygiene and reading and helps in many ways. The volunteers go down for three week tours, paying a large share of their own expenses. Many amateurs are involved in the project.

International Mission Radio Association

The organization furnishes communication for those in remote areas of the world such as missionaries and Peace Corps workers. Funds are used to purchase radio equipment for missionaries of all faiths.

Colegas y Amigos

The Southern California and Mexico Amateur Radio Mobile Group has as its primary aim the promotion of international good will. They assist an Old Folk's Home and a Girl's Orphanage in Ensenada, Mexico. The group also works with the Flying Samaritans - the pilot-doctors who fly into remote areas of Mexico to give medical as-

Handi - Hams

A group in the Midwest (W \emptyset) who teach the blind, handicapped and bedridden persons to become amateurs. The organization also, through donations, gives radio equipment to the handicapped.

Radio Amateur Invalid and Bedfast Club

The club, based in London, helps blind and disabled amateurs in Britain, Australia, New Zealand, Canada, South Africa, Finland and the U.S.A. Equipment is repaired, antennas are erected for the disabled, and amateur radio literature is distributed to the handicapped.

Minh - Quy Hospital

Located at Kontum in the central highlands of Viet Nam, the hospital is staffed by an American woman doctor from Seattle, Dr. Pat Smith, and two nurses. The facility, which attends to the illnesses and injuries suffered by civilians, also receives help from a Swiss medical team. Assisting the hospital is a continuing project of Sgt. Steve Olson, W6EQM, who was stationed near the hospital with the Special Forces. He is now in Fresno, California.

Hadley School for the Blind

The school, located in Winnetka, Illinois, operates an amateur radio correspondence course, given without charge to the blind. The course has over 150 blind students (and a waiting list). Students are located in the United States, Australia, New Zealand, India, Hong Kong, Scotland and other countries. Volunteer chairman of the program is Byron Sharpe, W9BE.

Heserve

A reserve to be used for emergencies, grants, purchase of equipment to be loaned to hams engaged in humanitarian projects and to implement suggestions from readers of Worldradio.

All expenses and clerical time necessary to operate the Foundation will be donated by the publication and its staff. On a quarterly basis, a record of disbursments will be reported in Worldradio.

B. J. Broughton, G3XBR, Hi-Beams, ENGLAND

"I believe in the family of mankind"... Mark Twain

participants Worldradio subscribers

This listing is provided to facilitate your acquaintance with those of similar interests. (Continued from last issue)

Don Wallace, W6AM, Palos Verdes Pen., California Lloyd & Iris Colvin, W6KG-W6DOD, Richmond, California Rubin Hughes, WA6AHF, San Lorenzo, California Max Meyer, WB6KOL, Panorama City, California Leo Elm, WØMX, St. Paul, Minnesota

Lloyd Poore, WB6OAO, Bakersfield, California Guy Dennis, W6CR/W6DI, Santa Monica, California Diana Green, ZS6GH, Johannesburgh, SOUTH AFRICA Raj Cauthers, K7NZO, Tahuya, Washington John & Mary Stockdale, WB6ABW-WA6LUC, Lomita, CA

Sel Rachles, WA2CFA, Clifton, New Jersey Lou Huber, W7UU, Seattle, Washington U.S. Senate ARC, W3USS, Washington, D.C.

Ted Kelso, W6POQ, Escondido, California Win Wagener, W6VQD, Los Altos Hills, California Bob Parlin, WOSFU, Minneapolis, Minnesota

Larry Shima, WOPAN, Bloomington, Minnesota

Rudy Mihalick, W3CXX, Ambridge, Pennsylvania Natl. Inst. of Health ARC, K3 YGG, Bethesda, Maryland

Rev. Leo Brand, WØJCO, Linton, North Dakota

Roy & Mildred Maxson, W6DEY-W6PJU, Vista, Calif. John Pirtle, W3CDL, Oxon Hill, Maryland

Dr. Peter Baldelli, IICTE, Florence, ITALY Jack Whitley, W4CZS, Treasure Island, Florida Disaster Communications, San Bernardino, California

Jack Daugherty, 9V1QJ, SINGAPORE Eunice Bernon, K8ONA, Cleveland Hts, Ohio Leon Stanley, W7DKB, Salt Lake City, Utah

Dr. John Banzer, W2KDI, Rockville Centre, New York

William Wynne, K4RU, Pompano Beach, Florida Dr. T.R. Shoupe, WASTXG, Findlay, Ohio

Dr. Donald Needham, -, Indio, California Leo Djokov, YU3TXT, Idrija, YUGOSLAVIA Dr. Ernst Dobner, DL1DU, Hoxter/Wester, GERMANY Thomas Fras, OE8TF, Voelkermarkt, AUSTRIA Tony Martorano, W9HZC/W4MOS, Sarasota, Florida George Kirby, WA6RNQ, Lodi, California Joe Gizzi, W9HLA, Lake Bluff, Illinois Harry Priester, W9FBO, Hinsdale, Illinois John McDonnell, WINWP, Stoughton, Massachusetts Bill Mitchell, XW8AX, Vientiane, LAOS John Lloyd, Jr., WA7GWU, Salt Lake City, Utah Harold Hiner, W6WMO, Cupertino, California Dr. David Degregori, W6KOE, Los Banos, California Stuart Edmonds, WØGW, Denver, Colorado Dayton Amateur Radio Assn. W8BI, Dayton, Ohio C.F. Rockey, W9SCH, Deerfield, Illinois Sam Moles, -, Wynantskill, New York David Oliver, WB6VKH, Orangevale, California Amigos de las Americas, -, Houston, Texas Elmo Griffith, W6NWU, Auburn, California Murray Link, W6 OHU, Garden Valley, California Samuel Horwitz, K2JJK, Binghampton, New York Jack Schermund, W8VSY, West Milton, Ohio Ted Sharp, K6 UYK, North Hollywood, California Rev. Celestine Bauman, WA7HRV, St. Michaels, AZ George Henderson, K8KBF, Sandusky, Ohio Bob Farmer, -, Plainview, Texas W.S. Dawson, -, Syracuse, New York Robert Heineman, W7LLO, Tucson, Arizona Anthony Zydycrn, WA6DSV, Shingletown, Calif.

(Continued next issue)

REPORT TO THE READERS

You may have noticed that this issue of "Worldradio" was a little late. The reason follows:

Effective with this issue we will publish every month instead of the every three week schedule we have practiced over the past eight months. Those who subscribed under our 17 issues per year arrangement will receive the 17 issues. Those joining us from now on will receive 12 issues per year and they will be better issues. Eventually we shall return to the every three-week schedule and the long-range planning looks forward to "Worldradio" being published every two weeks.

The reason for the present cutback is partly financial, but the most pressing reason was that even with ye olde editor working an all day and all night schedule, seven days a week, all the necessary work was not getting done. We found that photographs were not being returned promptly to those who had sent them in for publication, requests for back issues were going unheeded, correspondence was just piling up, even answers to potential advertisers were put off to another day and the many other details that are needed to put together a polished publication were being ignored. The rush was a lemming-like one to get the next issue put together and that was finished but scant hours before it went to the printer. It became obvious that such could not continue.

When the idea of "Worldradio" was first mentioned to other hams in the Sacramento, Calif., area, promises of help came in. When the day for the assistance came, as often happens, they dissapeared into the woodwork. It was hoped that Sacramento hams would take pride in the fact that a publication that stood for the best in Amateur Radio, and people, was coming from their city. Just a little more help, for example-with the mailing, a few hours every three weeks would have made a big difference. The pleas fell on mostly deaf ears. The only way we have a paper like this at all is due to the work of the hardy group of volunteers that drop over to the house. You have Stu, Sid, Ken and Dan to thank for the paper. Recently, Al Maston, W6JYQ, added his driving enthusiasm to the project. We are also graced with the presence of 12-year old George Fong, WN6DTZ, a young man with maturity far beyond his few years. But the work load is increasing at a galloping rate.

Two weeks ago we asked a friend if he could give us a hand. The answer was "No", and he gave the following reasons: The paper wasn't important, the readers didn't take it seriously and he didn't think the paper was going to "make it".

Let's turn to our diversity receiver and pull in some signals 180 degrees out of phase with that of our local oracle. As to importance, Ernie Berlucchi, W2GHB, said, "I really hope you succeed-it's important!" As to taking it seriously, just the other day we heard from Samuel Horwitz, K2JJK, who said, "It's the best idea I've seen, read or heard about for the betterment of our hobby." And as for "making it", on the very same day that our future was being so lightly dismissed, we received from Phil Pector, W9LDX, (now residing in Germany) a list of gift subscriptions that required a \$100 check to cover. Our eternal gratitude goes to Phil.

What is the difference between those who are so negative and those who are so positive? Where is that fork in the road that splits people into the "that won't work" (no matter what it is) group and those that want to see things succeed and will bend over backwards to make it work?

What is the difference between the fellow who dismisses this paper's goals and Joseph Hutcheson, WA5SXR, who says, "The service you offer is, beyond any doubt, one which is very important to Amateur Radio."?

The chap who was most unenthusiastic about our chances pointed to the fact (which has been related in earlier reports) that only three percent of those who have seen a copy of this paper subscribe. That doesn't bother a bit, for we knew that only three percent of any given group are the innovative, imaginative and foresighted that make up its vanguard.

For an editor it is far more challenging to attempt to produce a paper that will satisfy people like, for example, Don Wallace, W6AM, and Max Meyer, WB6KOL. Only three percent? Right, but our cup runneth over with those of accomplishment, achievmment, involvement, participation and contribution. Those who have tasted the sweet wine of such activities understand what this paper is about. It was C.F. Rockey, W9-SCH, who wrote in and said, "Your interesting paper seems genuinely dedicated to amateur activity with human-achievment overtones." There are those, sadly, who do not find such appealing.

"Worldradio" wants to illuminate the accomplishments of the Amateur Radio Operator. We believe one of the finest stories we have run was, in the last issue, the adventures of Larry Lazar, WA2AAD/HK3, helping the people of Peru after the devastating earthquake. Such stories are run to hopefully inspire others to use their knowledge and equipment to come to the aid of others. What greater thing could we do than to help relieve the suffering of a fellow human being?

Our subscriber list looks like the roll call of the "giants" of ham radio. But we are not deluding ourselves that this paper is so good yet that it has attracted them, rather the opposite is true. We are attracted to their type of activities, and they are the kind of people who are helping us. They understand what our attempt is and they want to make it happen. This attitude is what makes them what they are. For example, while the knowledge of our existence rolls off the back of most advertisers, the other day we received a long-distance telephone call from a manufacturer. He called with excitement, cordiality and a real understanding of the purpose of this publication. It is always a joy to speak with a dynamic person. While most ham product manufacturers have tears rolling down their cheeks, this fellow is doing very well. Could it be that his success is the product of his own attitude? Look for Jim Wilson's antenna ad in next month's issue.

What are the long range plans of "Worldradio" ? First, it is to put out a publication that is up to the level of its audience. Eventually we hope to have a country site so as to put up some good antennas to participate in medical relief operations, message relays, emergencies, etc. Many have mentioned that "Worldradio" would be a place that the foreign hams would like to visit when they come to the U.S and we would like to have enough space so that U.S. hams in campers and trailers could come and visit and operate the club station.

For those that enjoy a challenge, that like the satisfaction of seeing something grow, of being part and parcel of something important and with real meaning, you are invited to climb aboard the "World-radio" bandwagon.

We don't think that this is somethink to be merely picked up, read and laid down again. It is more. We think it is a spirit that you can carry with you. It is at this moment 772 others who think pretty much the way you do. 772 people with zip, people not content to merely putter.

Armond, WB6AUH

Harry Tummonds, W8BAH 1900-1971

Harry A. Tummonds, W8BAH, founder of the Amateur Radio Editors Association, died on March 11, 1972 at the age of 71.

Mr. Tummonds was first licensed in 1919 and had been an ARRL member for 50 years. He also was a Mason, a member of the American Legion, Cleveland Rotary, Quarter Century Wireless Association, Old Old Timers Club and Navy Military Affilliate Radio System. As a Lt. Commander in the U.S. Naval Reserve (retired) he was buried in Arlington National Cemetary.

In 1928, as Chief Radioman, USNR, he was involved with other amateurs in handling messages for the Red Cross and Coast Guard during the Ohio River floods. In 1929 he was instrumental in an Amateur Radio first as amateurs furnished communications for the Cleveland Air Races.

Mr. Tummonds served two terms as Section Communications Manager in the 1930's and wrote the Ohio column in QST. On June 7, 1957 appeared his first "Ham Antenna" column for the Sunday edition of the "Cleveland Plain Dealer", Ohio's largest newspaper. On August 7, 1961 he founded the Amateur Radio Editors Association. The organization is made up of amateur club bulletin editors and others who write, speak about, or are engaged in a public relations effort on behalf of Amateur Radio. Members received an information-packed monthly publication from W8BAH. Working on behalf of the group was indeed his joy. He once said, "The only things I live for are peanut butter sandwiches and AREA."

He is survived by his wife, Lydia, son, Charles, and grandchildren, Alan and Cathy. Contributions may be sent to Andrew Doles, W8DUG. One large check will then be turned over to the VA hospital memorial Amateur Radio station.

The remarks below appeared in the "Cleveland Plain Dealer" on March 19. Coast Guard messages, keeping con-

By Chuck Tummonds

Most readers of this column know of the death of W8BAH-another silent key in the fraternity of amateur radio operators. Harry Tummonds had written the Ham Antenna column for more than 10 years.

Ham radio was a part of my father's life for as long as I can remember.

He lived in the West Side YMCA when he came to Cleveland at age 16. In later years he enjoyed telling about about the large numbers of copper wash tubs buried around the building

to provide a good ground for his antenna. Those were the days of spark transmitters, crystal sets and early radio tubes.

He worked for National Carbon Company building Eveready radios and helped set up American Bosch. When Eveready closed its radio receiver operation he went into the radio service business. He founded the Northern Ohio Laboratories to supply radio equipment and parts to servicemen and amateurs. This grew into a seven-branch operation run by hams for hams, before World War II.

In 1929 and for some years after, my father was chairman of the Air Race Committee of the Cleveland Wireless Association. Every August we spent weeks at the Cleveland Airport setting up equipment on top of the grandstands and at every pylon. The communications links provided by those hams were vital to the races and provided a lot of excitement for my father and myself. Power was by batteries which had to be recharged every 48 hours. Stations were located in portable voting booths provided by the city of Cleveland.

Attendance at a hamfest started my father off on a career in the U.S. Naval Reserve. He enlisted in the Communications Reserve, a volunteer, non-pay group that trained weekly on the air and went on twoweek cruises in the summer. The group assisted the regular Naval Reserve unit at the old Central Armory and also drilled with it. We never missed a parade in Cleveland.

The radio drills were held at our house where my father had installed multiple operating positions along the counter in the store. This is where many operators were trained in Navy communications. These same men often manned W8BAH for a week or more, 24 hours a day, to handle messages during Ohio river floods. They handled Red Cross and tact with the hams in the flood area.

My father had encouraged all the men who operated branches of Northern Ohio Laboratories to join the Naval Reserve. World War II wiped out the NOL branches. The men were called to active duty and father went in 1939 as a lieutenant, junior grade. He had been working with the Navy by copying German radio broadcasts for several years prior to active friendship I learned much from our service, all without pay.

His first duty station was Great Lakes, Ill. the Ninth Naval District Headquarters. There my father, other reservists and recalled retired officers were assigned the task of

building the Great Lakes Naval Trade School for training radiomen and many others. He then went on to Cornell and Harvard, where he helped set up radio schools and taught. In the early part of World War II teams were set up to design radio transmitters with available ham parts and the Army particularly, bought ham parts and built needed equipment. By that time hams were off the air because of the war.

While my father was teaching at Harvard, I graduated from high school, went to work at the radiation laboratory at MIT and then went into the Navy to electronic schools and submarines. I next met my father when he was lieutenant commander in charge of the Pacific Fleet Schools in Pearl Harbor.

Atter the war he returned to Northern Ohio Labs and was one of the early distributors of TV sets in Cleveland.

He started the Amateur Radio Editors Association to help promote writing about amateur radio.

In recent years my father was hospitalized several times at the Veterans Administration Hospital here. He wrote about the ham station in the hospital and the people who operate it.

W8BAH had limited his active participation in the last few years, but still checked into the Apricot Net and the Trestleboard Net.

Amateur radio has been kind to the Tummonds family, providing both work and pleasure. It led me into electronics and then into the reinforced plastics business as president of the Tummonds Corp. in Mantua, Ohio. One of my father's proudest moments was his first radio contact with his grandson, Alan, when he received his novice license.

W8BAH is buried at Arlington National Ceremony. Contributions in his memory may be sent to the Amateur Radio Station, U.S. Veterans Hospital, 10701 East Blvd., Cleveland, Ohio 44106

By Eunice Bernon, K8ONA

Vital chapters in Amateur Radio's history have been written, thanks to Harry's unswerving dedication. Efforts of his mighty pen will be sorely missed. His expressions were inimitable.

Throughout the years of very close "Sir Harry". "Tell it like it is". "Public Relations remains the weakest facet within our privileged hobby". "Don't keep secrets". "Place a value upon yourself". (Turn to page 26, please)



Worldradio reports on - and

supports - the very best in amateur radio.

l'Il help support
Worldradio

Published every month -

name

address

city, state & zip

country

The space below is for news, information, comments, suggestions, your activities.

one year subscription-USA-Canada-Mexico-\$5 other countries-\$6 or 40 IRCs (local currency or mint stamps ok)

trial subscription - 2 issues - \$1 (worldwide)

please clip and mail to:

Worldradio - 2509 Donner

Sacramento, Calif. 95818 USA

thank you



Light the way
for a friendSend in the name and
address (or call) of
another amateur that
would be interested in
Worldradio and we will
send them a complimentary sample copy.

gift

To give Worldradio as a gift to an overseas friend (or one in your own country) fill in blank about recipient. Put your name below and we will send a gift card in your name.

Why Bother?

(Continued from page 10)

Why would amateurs spend countless days in muck and stench ruining their rigs, generators, automobiles and even endangering their health so that vital communications might be carried out in an emergency-isolated area.

Why would writers whose talents are worth maybe two bits a word donate reams of copy to QST for free?

Why would amateurs give up their spare time to help non-amateurs obtain licenses?

Why do amateurs snatch up their valuable gear and head for a disaster-smitten area?

IMRA

IMRA International Convention 1972:
Location-Rochester, Minnesota
Dates-August 18, 19, 20, 1972
Charges-\$25.00 for three days.
Meals are extra and an extra charge
of \$2.50 for those checking in on
Thursday night. Sister Alverna and
Father Vern Peters are in charge
of the program. Since both are very
creative and original, watch for something beyond expectations. For info
concerning reservations contact
Sister Alverna, Assisi Heights,
Rochester, Minnesota 55901

Why do busy executives and officials spend thousands of dollars and hours just to run phone patches for servicemen overseas?

The answer to all these questions is hard to explain to a non-amateur. But anyone who has heard the tearful thanks of parents in a distant city when informed that their children and grandchildren in a devastated area are all right knows. So does anyone who has let a serviceman in a foreign land or on a ship at sea talk directly with his wife or parents. So does anyone who has spent many hours trying to get word to a man in South America that his wife is gravely ill; or who has helped a suffering little girl in

Burbank

Hamfest (©



Seventh Annual Burbank Hamfest 10 am-8pm Saturday, 20 May 1972 2814 Empire Avenue, Burbank, CA. The only major annual ham convention in the Los Angeles area. Sponsored by the Lockheed Employees Amateur Radio Club. Location is seven blocks east of Hollywood-Burbank Airport. Exhibits-Programs-Adventure-Excitement. Pre-registration-\$2.00. Send to LERC-address above.

a crippled children's hospital talk to her family in Nicaragua.

If you had ever operated a station after a hurricane, when a dazed young wife in torn, wet clothes, cradling a baby on her hip, handed you a scribbled message to her serviceman husband saying:"Tommy lost...Suzy saved...please come home..." then you'd know, too.

So, why bother? Lord, don't ask me. I just know that hams do, and I'm glad I'm one of their breed.

(From "QRM" of the Ozone Amateur Radio Club and "Affiliated Club Bulletin" of the American Radio Relay League.)

Tummonds

(Continued from page 22)

Before my husband's death we operated a "Ham Shack" in downtown Cleveland. Harry enjoyed helping us; our store reminded him of his own family venture, his and Lydia's. He disapproved of the commercially run shop. No warmth, no gathering spot for local Hams, no coffee potsuch as our store offered.

Our fraternity has lost an ardent member. Many of us have lost a dear friend and counsellor.

The Mart

Teletype fans - Read RTTY Journal, now in 18th year. Exclusively RTTY - Technical-Operation-DX-VHF etc. Sample 30¢ - \$3.00 a year. RTTY Journal, P.O. Box 837, Royal Oak, Michigan 48068

AUTO-CALL keeps up with the latest ham info from Washington, D.C. area. Subscriptions \$2.50 a year, sample copies 25¢. Address: AUTO-CALL, 2012 Rockingham, McLean, VA 22101

Jazz up your QSL card. 100 photo stamps, send glossy photo and \$2. 1,000 address labels, 4 lines-\$1.50. Linsley Hamilton, Box 4373, Torrance CA 90510 WB6PAV

ARMAGEDDON! Invasion from Outer Space! Written by W3ZS. Free but stamp appreciated. Write: METHODS, 416 Palo Alto Ave., Mountain View, CA 94040 K6QF

TWIN CITIES HAMS- For gear see ECI Communications, 127 Third Avenue North, Minneapolis MN 55401

Join the greatest club in the world. New York Chapter, National Awards Hunters Club. Free information. Write to: Joseph Schwartz, K2VGV, 43-34 Union St., Flushing, NY 11355

Interested in finding French teachers, students, Frenchspeaking people willing to speak on ham bands French with high school French students. K7SPH, Box 4099, Tucson, AZ 85717

California Amateur Radio News
Starting in May: New Monthly
Publication for California Hams.
-Clubs, Nets, Operating News,
Technical Articles
Only \$1 Per Year -(10 issues)
Subscribe now at this special low
rate-you subscription will start
with the May, 1972 issue...
Send \$1 (or 20¢ for a single copy)
California Amateur Radio News
1240 -21st St., Hermosa Beach,
CA 90254 (213) 376-4089

Buying? Selling? Trading? Don't make a move until you've seen our new publication. Free sample copy! Six issues \$1. HAM ADS, P.O. Box 46-653M, Los Angeles, CA. 90046

We buy, electron tubes, diodes, transistors, semiconductors, intergrated circuits. ASTRAL ELECTRONICS, 150 Miller St. Elizabeth, NJ 07207 (201) 354-2420.





Ham-to-Ham

R178/URM-3 noise-interference receiver (.15-42 MHz) all accessories, manual, excellent condition....\$125

Lampkin LM-105B frequency meter, manual and charts, excellent condition....\$125

Hammarlund SP600/JX-17 (.54-54 MHz) receiver, excellent condition....\$125

GE Progress-Line mobile FM transceiver, 2-M converted: \$75, unconverted, untested: \$45

RDO Navy 38-100 MHz receiver with manual, complete, excellent condition....\$150

AN/ALR-5 (APR4Y) 38-1000 MHz receiver with CV253 tuner, AM/FM, aligned, converted to 120v, 60 hz, excellent condition....\$250

URR-13 200-400 MHz tuneable receiver, complete, not working: \$35..excellent: \$85

Weston #978 dynamic/mutual conductance tube tester, book.....\$45





All prices FOB:

Bob Grove,

WA4PYQ,

846 Rutherford Lane

West Palm Beach,

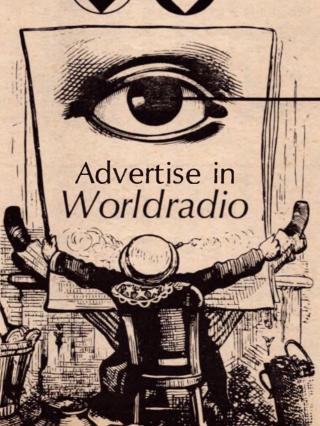
Florida 33406

STEPS TO CHRIST. Free but stamp appreciated. Write METHODS, P.O. Box 1263, Mountain View, CA 94040



Editing a Club Paper? Need Help? Amateur Radio News Service would like to hear from you. For information write to Rose Ellen Bills, Sec'y, 17 Craig Pl., Pennscille, NJ 08070

THE NOVICE Magazine-new Novice publication. Single copy, 40¢, \$3 per year (10 issues). 1240 21st St., Hermosa Beach, CA 90254



Advertising Rates

CLASSIFIED:

From private individuals-3¢ a word
Business firms remit -5¢ a word
Non-profit groups -2¢ a word

DISPLAY:

Full page-\$23.35. Half page-\$14.00
Quarter page-\$8.40. Minimum-\$4.50
These rates for next three issues.
Quotes are for camera-ready copy.
Our art department can make up your ad for reasonable one-time charge.
Reach the discerning and serious
Amateur Radio operator with your advertisement in WORLDRADIO.

BULK RATE U.S. POSTAGE PAID SACRAMENTO, CALIF. PERMIT 410 correction

VOCIORAGIO 2509 Donner Way Sacramento, Calif. 95818 USA

Late News

this space is for last minute news or information - deadline: Se hours before mailing - call (916) 456 - 6725 with news.



Guita de Blau, TI2CI, San Jose, Costa Rica

P. O. Box 21073, Kennedy Space Center, Florida 32815 in rotation. Foreign DX stations will be allotted regular intervals. Will take seven calls from each call area then move to next area 3930 kHz, 7265 kHz, 14340 kHz, 21375 kHz, 28600 kHz Space Center Amateur Radio Society, WB4ICJ P.O. Box 86, Greenbelt, Maryland 20770 MHz, 145-146 MHz, 146-147 MHz, FM 3950 kHz, 7275 kHz, 14325 kHz, 21400 kHz, 28650 kHz, 50,2-51,0 Goddard Amateur Radio Club, WA3NAN, Special Event, WG3SFC 4800 Oak Grove Drive, Pasadena, California 91103 3965 kHz, 7285 kHz, 14280 kHz, 21375 kHz, 28575 kHz JPL Radio Club, W6VIO, Special Event Call, WP6JPL P. O. Box 423, Huntsville, Alabama 35804 3965 kHz, 7250 kHz, 14300 kHz, 50.2-52,0 MHz, 144-146MHz Huntsville Amateur Radio Club, K4BFT, Special Event, WM4SFC club for their special launch day certificate, when requesting a QSL card and 50 cents to the Cape Kennedy be sure to send a stamped addressed envelope to the three clubs contact each station more than once during the operation. Please nedy will have a special Launch Day certificate. Please do not The stations will all have special events QSL cards and Cape Kenmission such as lunar insertion, lunar orbit, lunar landing, etc. sonnel will operate during the launch and special periods of the

Amateur Radio Operators around the world are invited to participate in a special events marathon activity commemorating the flight of Apollo 16. Four radio clubs made up of NASA per-

April 1972 mateur

United States Amateur Regulations PART 97 - AMATEUR RADIO SERVICE

- signed to provide an Amateur Radio Service having a fundamental purpose as expressed in the following principles: 97.1 Basis and purpose. The rules and regulations in this part are de-
- the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications. (a) Recognition and enhancement of the value of the amateur service to
- tribute to the advancement of the radio art. (b) Continuation and extension of the amateur's proven ability to con-
- nical phases of the art. rules which provide for advancing skills in both the communication and tech-(c) Encouragement and improvement of the amateur radio service through
- of trained operators, technicians, and electronic experts (d) Expansion of the existing reservoir within the amateur radio service
- international good will. (e) Continuation and extension of the amateur's unique ability to enhance