

Worldradio/NEWS

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Ham picks up SOS & saves a life

Great Lakes ARRL Director Alban Michel, W8WC, Dies



Alban A. "Al" Michel (left), W8WC, was named "Ham of the Year" at the Dayton Ham-vention in 1971. He received the award from his old friend Elmer Schubert, W8ALW. Long active on the air and in Amateur Radio affairs, he will be missed by hundreds of friends and associates in and around Ohio, as well as by thousands of QSO friends all over the globe.

by Eunice Bernon, K8ONA

The Amateur Radio fraternity lost one of its most noted members when Alban A. Michel (W8WC/W8SMQ) of Cincinnati, Ohio, ARRL Great Lakes Division director, became a silent key Sept. 8.

"Al" leaves a 57-year-old bequest of inspiration and accomplishment to hams whose paths he touched, and to those who would emulate his dedication to our hobby. His ham-related biography would be difficult to recount in limited space.

Al helped organize the communications department of Hamilton County's Amateur Radio War Emergency Service, forerunner of the Civil Defense program, when he served as its radio officer. He was a charter member and past president of the Greater Cincinnati Amateur Radio Assn. and for 40 years a member of its board of directors. He served as president of the Ohio Valley Radio Assn.,

and the Dayton-Cincinnati Chapter, Quarter-Century Wireless Assn. Al participated in public service activities of the Queen City Emergency Net. Other affiliations included the Antique Wireless Assn.

He helped organize and promote code and theory classes in the greater Cincinnati area; he enjoyed hours in the radio shack uniting local families with their servicemen sons overseas via ham radio telephone patches.

Al was recipient of the QCWA golden 50-year award and the OOTC recognition certificate. He received the coveted "Amateur of the Year" award in 1971 at the world's largest hamvention in Dayton, Ohio. This honor, together with his installation in the Greater Cincinnati Hall of Fame, were Al's "favorite unforgettable thrills."

Al participated in DX contests, operating CW and phone. He worked all bands, and was recipient of ARRL's DXCC award.

When cancer claimed Al's life at 67, it was fitting that amateur radio operator Fr. Edward Burke (K8VWN), a Jesuit priest, gave the eulogy and recited the Lord's Prayer. Honorary pallbearers included ARRL legal counsel Robert M. Booth Jr. (W3PS), and Al's close friend Elmer Schubert (W8ALW) of Cincinnati.

"For Alban Michel's many dedicated contributions toward the betterment of Amateur Radio," Schubert said, "may his soul rest in perpetual peace."

Afganistan Ends Radio

KABUL, Afghanistan-- By order of the Minister of Communications of the Republic of Afghanistan, all Amateur Radio activity in Afghanistan has been ended, and equipment used for that purpose has been sequestered by the ministry.

Until this ruling is modified to permit such activity, there will be no further activities of an Amateur Radio nature emanating from Afghanistan. We ask that bureaus hold any QSL cards they may have for Afghanistan in their offices until further notice as the post office address for this bureau will no longer be in existence.

We also request that radio magazines and Amateur Radio publications give discrete publicity to this order to cease Amateur Radio activities in Afghanistan, pending further advice.

In sending out this notice, we do so with our thanks for all the cooperation, good fellowship and technical assistance that has been afforded to the radio amateurs in Afghanistan, and hope that someday, and somewhere, we may "see you again."

de The Radio Amateurs of Afghanistan

from "The Sunday Times" - SINGAPORE

A local radio ham picked up a distress call on Friday (Sept. 14) night from a vessel in the Andaman Is., off Burma, and helped save the life of a sailor on board.

Geologist Edward A. Gribi Jr. (WB6IZF, 9VIQF, YB8AAP) was speaking to other Amateur Radio operators at 7:30 p. m. (1200 Z) when his call was interrupted by an "SOS" call.

The captain of a New York-registered vessel, Export Buyer, was seeking assistance for an injured sailor who had his right hand badly injured.

Capt. Kirk Carlson (W2ZXM, hero of the Flying Enterprise) told Mr. Gribi in the message that there were "no adequate medical supplies" on his ship "and no doctor." He needed help urgently to save the life of sailor Francis Jones.

Mr. Gribi then spoke to several other amateur transmitter operators in Thailand, Saigon and the Philippines.

"All we knew was that the vessel was 15 miles north of the Andaman Is. and was heading for Burma with a badly injured sailor. My colleague in Manila (DU6EG), a doctor by profession, then spoke to Capt. Carlson and gave advice.

"Meanwhile, I got in touch with the American Embassy here and told them of the SOS. I was told that there was a huge drilling rig near the vicinity of the ship. I then transmitted the message to the captain to head straight for the rig.

"The rig's regional administrative manager then gave the green light for the injured sailor to be transferred to the rig."

Mr. Gribi said the sailor would be conveyed later to Rangoon for better treatment.

This is the first time that a local radio ham has answered an SOS and rendered help.

Mr. Gribi said every evening about 7:30 p. m. a group of Amateur Radio operators would tune in on the same frequency to find out if "all's well."

"I am glad that the distress call was not only answered but immediate help was rendered," he said.

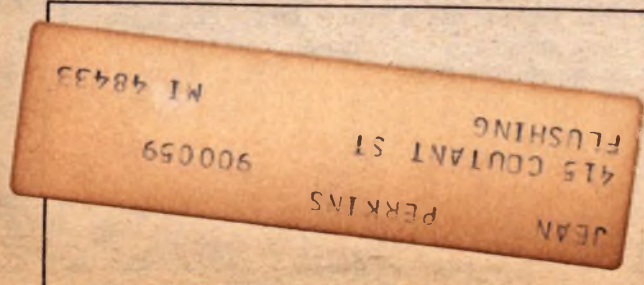
The international SEANET convention of radio hams in Southeast Asia will be held at the Marco Polo here from Nov. 9 to 11.

Ed Gribi tells WORLD RADIO:

"Things do happen on SEANET (14.320 MHz, 1200 Z) a la WCARS. Less than four hours from the first call on SEANET, the sailor was under medical care on the rig. The captain had a reply to his commercial message for assistance 30 hours later.

"The sailor was transferred to Rangoon by a Mynama Oil Co. helicopter. A U. S. Air Force C-130 was waiting and transferred him to an armed forces hospital in Thailand the next day.

(Turn to page 48, please)





Newsfront

Around the World

Conn. ham makes news in England

by Peter McLennan

For ham radio operator Bill Flaherty, communicating with other hams in foreign countries is nothing new. Just last week, he spoke with a missionary priest in Nepal, and operators in Portuguese Angola, the Philippines, and someone on the DEW line in the Canadian Northwest Territories.

So when he reached a fellow ham in Bristol, England, it was nothing out of the ordinary. But what Flaherty rapidly learned is that our mother city in the British Isles is celebrating

its 600th anniversary as an incorporated city.

"They were so pleased to contact me," Flaherty told the Press last week, "that they promised to send me a bottle of sherry." Harvey's Bristol Cream, one of the world's finest sherries, is made there, but Flaherty wasn't sure if that specifically was to be his gift.

That same night he returned to his home at 80 Vincent Drive from his job as an engineer for the Stanley Works and discovered a telegram from England. The folks in the original Bristol wanted him to contact them at 8:30 a. m. Saturday (1:30 p. m., their time), when a British Broadcasting Corporation television crew would tape the event for posterity.

The Bristol, England folks have established a special amateur radio call letter - it's GB2-BEX - for use specifically for the 600th anniversary festivities. They plan to contact every Bristol in the United States by radio, if possible, during their festival week, which began Saturday and runs through this Sunday.

(After assiduous research, the Press staff, with the help of the Public Library, has determined there are at least 12 other Bristols in the U. S. : in Colorado, Florida, Georgia, Indiana, Maine, New Hampshire, Pennsylvania, Rhode Island, South Dakota, Tennessee, Vermont and Virginia. There are also counties bearing that name in Massachusetts and Rhode Island.)

The festivities in Bristol, England include games, contests, medieval jousting, and other events suitable for a city of its age. Press reporter Kathy Rivard and her husband Glen, Press Circulation Manager Charles Poole and his wife Lillian, and the two Press carriers who won a subscription contest in the spring - Kathy Conlin and James Gallus - are there now. Mrs. Rivard will do a series of articles for the Press.

Flaherty, 30, has been a ham radio operator since he was 14. He operates 20-meter amateur radio band and says he speaks "almost exclusively" with hams in foreign countries.

(Turn to page 48, please)

Washington Report FCC



September 18, 1973

ACTION IN DOCKET CASE

By Administrative Law Judge Byron E. Harrison:

JACKSONVILLE, FLA. (SAMEUL C. McCLUNEY, III) SUSPENSION OF AMATEUR RADIO OPERATOR LICENSE KØECG AND ORDER TO SHOW CAUSE WHY THE LICENSE FOR THE STATION SHOULD NOT BE REVOKED. Granted request by McCluney and continued certain procedural dates (Docket 19562).

September 20, 1973

ACTIONS IN DOCKET CASES

By Chief Administrative Law Judge Arthur A. Gladstone on the date shown:

Terminated the hearings and certified to the Commission proceedings on orders to show cause why the licenses for the following stations should not be revoked:

Sept. 13 - JOHN M. DOWNING, Lake Worth, Fla., licensee of Amateur Radio Station K4TPA; ROBERT G. MASSIE, Tallahassee, Fla., licensee of Amateur Radio Station W4GDY.

WASHINGTON, D. C. -- The FCC has denied two petitions for delayed deadlines for comments on creation of a new class of Citizens Radio Service and reallocation of frequencies between 224 and 225 MHz--but set the deadlines back 30 days, anyway.

Charles A. Higginbotham, acting chief of the FCC's Safety and Special Radio Services Bureau, granted the extension Sept. 19 on his own motion. New deadlines for filing comments and reply comments are Oct 19 and Nov. 23, 1973, respectively.

Earlier, Higginbotham had turned down requests for delays from both the ARRL, supported by the U. S. Citizens Radio Council, Inc., and the Land Mobile Section of the Electronic Industries Assn. The ARRL had asked for a five-month deadline setback, while the EIA had requested approximately what Higginbotham granted a day after he refused the association's request.

The bureau's acting chief cited as his reasons for the 30-day extension "an inordinate delay" in announcement of the EIA's request rejection, and possible difficulties in obtaining for study filed documents in the case because of renovation of the FCC's public reference room.

(Turn to page 48, please)



September 20, 1973

FCC has extended the time for filing comments and replies in Docket 19759, Class E Citizens Band, for 30 days.

September 20, 1973

Announcement is made of one deletion and two additions to the ARRL Countries List. The deletion is the present listing of Germany, the additions the Federal Republic of Germany and the German Democratic Republic, effective Sept. 18, 1973. Contacts before that date will be credited to Germany. West Berlin will be

credited toward the Federal Republic of Germany listing and East Berlin toward the German Democratic Republic. DXCC credit submissions for the two new listings may be made starting Dec. 1, 1973. Submissions received for these two new listings prior to that date will be returned without credit.

September 27, 1973

ARRL is pleased to announce a new ten meter contest to take place 1200 GMT Dec. 15 to 2359 GMT Dec. 16, 1973. As recommended by the ARRL Contest Advisory Committee, the activity is open to, and contacts are permitted with, all amateurs worldwide. DX may work DX. No time limit. Double points for QSOs with novices. A station may be worked once on CW and once on phone. Two points for each complete contact and the multiplier is the sum of states, Canadian call areas, countries and ITU regions in the case of non land based stations. Full rules will appear in the November issue of QST. Please help disseminate this information in an effort to improve occupancy of ten meters.

October 1, 1973

The ARRL Executive Committee met Saturday (Sept. 29) to examine nominating petitions filed by members for league directors and vice directors. By reason of but one eligible candidate, the following were declared elected: the Canadian Division Director, Noel Eaton, VE3CJ; Dakota Division Director, Larry Shima, WØPAN; Delta Division Director, Max Arnold, W4WHN; Great Lakes Division Director, Richard Egbert, W8ETU; Midwest Division Director, Paul Grauer, WØFIR; and Southeastern Division Director, Larry Price, W4DQD. Also declared elected was Canadian Vice Director A. George Spencer, VE2MS. Whenever the committee found valid petitions naming more than a single candidate for these offices and candidates meeting the requirements as to league membership and freedom from any commercial radio connection, ballots were ordered mailed to full members concerned covering contested offices. Such offices by division are: Atlantic director: Hippisley, K2KIR, and McConaghy, (Turn to page 48, please)



Amateur Radio is more than communication-It's a service

AREC Serves Old Car Parade

by Jim Weaver, WA8COA/WA9FEW

Radio amateurs provided communications support for the "Largest Antique Car Parade in America" yesterday. The Butler County Division of Southwest Ohio Amateur Radio Emergency Corps and its affiliate, the Butler County VHF Association, organized and provided communications.

Starting at 1 p. m. from Hamilton Plaza West Shopping Center, the parade of antique and classic cars wound around the area and stopped for showing at Fairfield High School. From there they were driven over an equally indirect route to the Butler County Courthouse where they were left on display until 5 p. m.

Continual contact between radio amateurs monitoring the parade, and parade directors and police command post was maintained through radio operations control station, W8-CCI set up portable at the Courthouse.

The entire parade route was under continuous surveillance by the more than 30 radio hams who participated - including four motorcycle mounted, radio-equipped amateurs. (At this writing it is not known if the SW Ohio AREC "Air Force" directed by John Dine, WA8-DFD, was in operation to provide air coverage for the event.)

The assignment of the radio amateurs - many with hand-carried portable units, others operating from their radio-equipped cars - was to ensure the smooth and steady flow of the parade. In getting the job done they hurried vehicles which were slowing the pace, moved disabled vehicles out of the parade route and lent police a hand with traffic control when the need arose.

Parade officials and police were never more than a moment's notice away from the parade through ham radio. And, hams were never away from the parade.

Sponsored by the Antique and Classic Car Club of Butler County through the co-operation of the Hamilton Association of Trade and Industry, more than 400 cars were in the parade.

Amateur radio communications were organized and directed by Andy Seybold, W3GEC, Butler County Emergency Co-ordinator of Fairfield.

Southwest Ohio Amateur Radio Emergency Corps consists of the Brown-Clermont Counties, Butler County, Hamilton County and Warren County AREC divisions, each headed by its own Emergency Co-ordinator. The four ECs in turn form the Southwest Ohio AREC Planning Team.

(From the Cincinnati "Enquirer", "Ham Call")

What we really want WORLD RADIO to be is a dialogue and that means it has to be a co-operative venture. We ask you for your help, to take part in the conversation. Tell us what you are thinking - about opinions expressed in the articles, about your experiences and observations or anything you feel like soapboxing about. And give us your criticism - we can use all we can get. Nobody can keep up a dialogue by himself.

Weather Watch

From: Richard L. Siff, WA4BUE, Radio Officer, Norfolk, Virginia

To: Norfolk Civil Defense
Chesapeake Civil Defense

Subj: Weather Watch

After close monitoring of WTAR's Radio weather alert bulletins, and the sighting of a tornado at 2104 EDT by Suffolk Police, a weather watch was called on the WA4ZAU, 146.19/.79 MHz repeater at 2130 EDT.

All stations monitoring the repeater were informed of the adverse weather conditions and requested to monitor the repeater and WTAR radio. A call-up of stations monitoring the ZAU repeater was begun by WA4BUE. The following stations checked in: Leon H. Barnes, K4IV; Martin Lerner, WA4UHL; Thomas J. Lussen, WB2NPO/4; Maury A. Swartz, WA4-LYL/M; David A. Robertson, W4GTB; and Lewis B. Steingold, W4BLO/M.

At 2200, WA4BUE checked into the Virginia Sideband Network (VSBNO, 3935 kHz), and reported the weather watch. K4ISW was net control. WA4BUE via W3QNY alerted the State Emergency Co-ordinator, Montie F. Cone, WA4PBG, in Falls Church of the Tidewater activation at 2212 EDT. W3QNY confirmed that the message was delivered at 2215 EDT.

At 2235, de-activation of the ZAU repeater call-up and VSBNO alert was announced by WA4-BUE after the weather bureau cancelled the weather watch as announced by WTAR radio. The activation was an unqualified success. No local telephones were used and direct Northern Virginia message handling was accomplished by the VSBNO.

The activation proved that the WA4ZAU 2-meter FM repeater is an excellent way to monitor for local emergencies and the VSBNO, a national traffic system (NTS) make an efficient means to communicate across the state.

The activation also demonstrated the effectiveness of a secondary control center (WA4-BUE) to communicate simultaneously on HF and VHF.

If an emergency situation had arisen, the C. D. control center could have been activated in a matter of minutes.

(From "The Virginia Ham")

Topstar

A very real and vital facet of amateur radio in Canada is the "TOPSTAR" Net which keeps servicemen and civilians in the Far North in touch with their families. Few of these outposts in our Arctic have commercial telephone facilities and the phone patches provided by the TOPSTAR operators are a link between these men and their wives and children or sweethearts from which they are separated for many months at a time.

The Southern end of the link has been handled (Turn to page 26, please)

Energy Crisis

On Tuesday, September 4, NBC-TV devoted its entire evening to a special "NBC Reports: The Energy Crisis".

With power blackouts and brownouts becoming more common, the role of the amateur in assisting his neighbors may take on even more significance than in the past.

As reported in TV Guide - S. David Freeman, director of an ongoing Ford Foundation energy study, said: "The Chinese character for the word 'crisis' is made up of two symbols: one means 'danger' and the other means 'opportunity'."

Possibly his statement could be transposed into a meaning for Amateur Radio - the opportunity to be of service, to assist others, comes in times of trouble.

We must be prepared to operate our radios without that vital necessity - commercial power. More and more amateurs are preparing themselves. And the manufacturers are now making products available that can be independent of commercial mains. SWAN has fully transistorized equipment in the 15, 50, 100 and 200 watt power levels. In their ads they even suggest having a 12 volt battery with a charger attached. The battery is thus fully charged and is ready if and when needed. The Ten-Tec Company has a line of low-powered CW rigs that operate off a lantern battery and now have come out with battery-operated rigs in the 100 and 200 watt power levels. WORLD RADIO recently obtained Ten-Tec's "Argonaut", in the hands of "Worldradio" staffer Craig Rutledge, WB6NUM; its five watt input (on SSB) has resulted in out-of-state and out-of-country contacts.

Batteries may prove to be a more reliable power source than the usual gasoline generator. Gasoline is difficult to store. Also more stations are closing early. During a recent power failure in Sacramento gasoline could not be purchased as the pumps operate off electricity from the commercial mains.

At one emergency communications conference (held in San Francisco), the fact was brought out that it had been assumed that the mobile rigs with their battery operated rigs would be the answer if the power was lost (as would be the case in an earthquake). However, without the engine running, to charge the automobile battery, and without gasoline to keep the engine running, the rig would be useless.

Thus the answer seems to be having more batteries on hand (charged) and being able to operate equipment that consumes less power.

In a previous "Worldradio" article (The Neighborhood Emergency Communications Plan - October 1972), Art Smith, W6INI, (recently appointed to the ARRL Emergency Communications Advisory Committee) suggested that in case of a local emergency that amateurs set up communication centers at the local elementary schools. The reasoning behind that is because everyone knows where their local elementary school is located and they are within walking distance.

If a medical emergency should arise at a home (even if telephone service was available the lines would probably be overloaded), one could run to the school and the amateurs - tied in to a link with fire, police, medical and ambulance services could obtain aid.

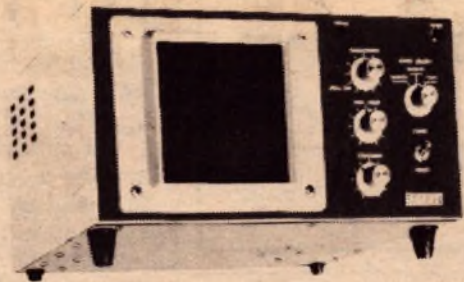
While many of the local repeaters have emergency generators that cut in if the commercial power is lost, many do not. Even for those that do have such a system the risk of failure always exists. To be of maximum value to the community the amateurs should have as much redundancy built into the system as possible.

Possibly one lantern or storage battery could someday make the difference.

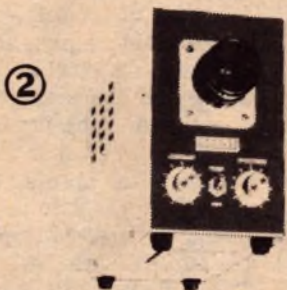
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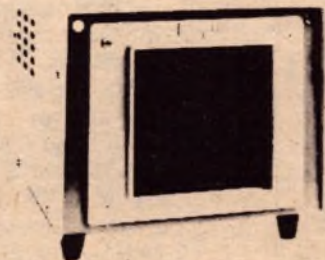
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Amateur Radio

The Preservation Of Its Right To Operate

by T. R. Clarkson, ZL2AZ

ZL2AZ was a member of the I. A. R. U. team at the 1971 Space Conference.

Present Significance

Radio Amateurs operating today commenced their operations in an era of stability, as regards their right to operate. Even in the early days, half a century ago, there were rules and regulations, and within them there was scope for what Amateurs wanted to do and were able to do, at that time. Later, things expanded and became more complicated, but the general framework was the same, reasonable opportunities with official approval and encouragement. There naturally developed a kind of trusting attitude, a general belief among Amateurs that things would go along satisfactorily, and that Amateur operations would continue into the indefinite future.

This happy state of mind is engendered by the slowness of the controlling changes which can alter the general situation, and the remoteness of influence that may be at work to our disadvantage. We may be all right today, and next year - but there is not the slightest doubt that every five to ten years decisions are made which shape this subject of ours, a relentless control, on which the more distant future of Amateur Radio is directly dependent. The structure of our present subject was mainly identified with decisions made at Washington in 1927 and at Cairo in 1938 - Amateur Radio for the rest of this century at least, will stand or fall, grow or decline, in terms of what is done in this present decade.

So my remarks are to draw attention to the present situation, and make some suggestions as to how we should safeguard our interests. First I should emphasize the need, and special opportunity at this time. Things have changed in the world of radio since the last major changes in operating conditions were introduced in 1947 - demands by other services have increased, and so have Amateur ambitions.

The ionospheric era has declined, with the ascendancy of space, and rules and practices prior to space technique are out-dated, with VHF and higher frequencies being pre-eminent now. Changes in the world at large act to our detriment. At Atlantic City, 1947 policies were pushed through by the radio advanced nations, who had an enlightened self-interest in Amateur Radio prosperity.

But now the international influence of less developed nations is discernible as opposing proper Amateur Radio development. The special message of the Space Radio Conference at Geneva in 1971 was that "in the world today, there is no majority opinion favorable towards the advancement of the Amateur Service". Individual and corporate action is needed to remove Amateur Radio from its position of weakness.

What Our Needs Are

My remarks will conform to the principle adopted in international and national regulations that Amateur Radio constitutes a "radio service" in which the participants have motives only of personal interest, and no pecuniary purpose.

We know of the many compelling reasons that justify Amateur Radio, in the community, the nation, and the world, and they are excellently documented in our literature (e. g. Stanford Institute Research Report). Sometimes there is insufficient attention given to the "superior" position of Amateurs compared with other radio work by virtue of its being "voluntary". Its unique character arises from spontaneous motivation in the individual - the urge to communicate, with similarly imbued fellows, using skills and resources within their sole proprietorship.

When practicing this kind of self-expression there are numerous desirable secondary products, community value, self training, research and development, etc., which are the obvious justification for a nation to support its Amateur Radio. The essentially personal nature of our thoughts and actions entitle them to recognition as a human right, which should not be denied by others. Nevertheless, practical politics bring the secondary effects into prominence, and for the present at least our welfare has to be thought of in the pattern of existing kinds of regulations.

Amateur Radio needs the opportunity to use representative parts of the radio frequency spectrum. But in general the parts for practical use are those where equipment limitations do not prevent individual ownership and operation.

Radio communications use frequencies as low as 14 kHz., but throughout its ascendancy Amateur Radio has used frequencies higher than 1500 kHz. I am not aware that there has ever been a need expressed for Amateur transmissions at say 100 kHz. So there has been adequate scope for Amateurs in the higher part of the spectrum, and this has exploited the VHF and higher bands. Now very much higher frequencies are coming into use for various services and the international regulations foresee allocations as high as 275 GHz. There is provision for Amateur work in bands extending up to 24 GHz.

During the next few years services will be making claims to get future assignments in the higher gigahertz part of the spectrum. Many of the needs are for intercommunication in space beyond earth's atmosphere and other earthly effects. The question will come up as to whether the Amateur Service should seek allocations for the future at frequencies above 24 GHz.

Present technical approaches to communications in space involve plant and equipment far removed in nature from the modest resources of Amateurs giving satisfactory scope for earth-bound activities. Beyond the realm of the geostationary orbit radio intercommunications seem to fall outside normal Amateur aspirations. So the very high part of the spectrum seems to be of little practical interest, the same as the very low part.

These considerations lead to the idea that Amateurs need access to parts of the spectrum, say, between 1500 kHz. and 24 GHz., that is where techniques are attractive for operating individual links of communications. Amateurs should be free to explore parts of this spectrum having different characteristics, using both earth and space techniques. What I am suggesting is that we should concentrate our interests primarily to earth-bound links, but using space techniques to distances as far as the geo-stationary orbit. Those of our fraternity who wish to extend their interests further out in space may well find scope in some other radio service, for example radio astronomy.

By defining our interests to a part of the total spectrum, we should be able to strengthen the claims we have for it. We should also concentrate on having access, to operate, in representative bands from 1500 kHz. to 24 GHz., both on earth and in space.

The Squeeze on Amateur Bands

It is only natural that in the progress of radio, the use of the spectrum should become more economical, with tighter standards and closer scrutiny among all users to avoid wastage of frequency space. Even so, Amateur bands have been compressed unduly, and the same effects can be expected, particularly at VHF and higher. It has been a continuous process since some of our popular bands had their origin at the Washington Conference of 1927.

Then there was world wide access of 500 kHz. at 3500 kHz., 300 kHz. at 7 MHz., 400 kHz. at 14 MHz. - the latter two being exclusive. At Cairo in 1938 some broadcasting came into the 7 MHz. band and in Europe Amateurs lost access to 3950-4000 kHz. At Atlantic City 1947 Regions were introduced, Region 1 Europe and Africa, Region 2 the Americas, Region 3 the rest.

At 3500 kHz. the Amateur access became, Region 1 300 kHz., Region 2 500 kHz., Region 3 400 kHz. At 7 MHz it continued 300 kHz. in Region 2 exclusively for Amateurs, but only 100 kHz. in Regions 1 and 3 but sharing with broadcasting in another 50 kHz. In those regions broadcasting took 150 kHz. of the original Amateur band.

In the higher Amateur band at 14 MHz., the U. S. S. R. claimed the use of 100 kHz. for a reduced Amateur band for fixed services. The overall Amateur band became 14,000 to 14,350 kHz. At Geneva in 1959 the general table at 3500 kHz. remained the same, except that Amateur access was reduced in Australia to 200 kHz. and in India to 10 kHz. At 7 MHz in Regions 1 and 3 Amateurs were reduced to the exclusive part only, i. e. 100 kHz., that is one-fifth of what it was once.

Despite the losses in this period of 30 years there was an important indirect gain - the fact that Amateur Radio became recognized as a "Service" in the international negotiations concerned with the control of radio.

Before mentioning other bands, and particularly those of most importance for the future, I will refer to the general world attitude as it exists at present, towards Amateur affairs.

How Do We Stand in World Opinion?

Leadership in the use of the radio spectrum used to be taken by the leading countries in science and technology. They pushed through the international legislation necessary, and in general Amateur Radio received reasonable provision. There was not much actual voting, policies being advanced largely by "force of character" at the international conferences. The last example of this was in 1947 at Atlantic City where the main decisions were contributed by the U. S. A., U. S. S. R., France and China. There were 72 signatories at Atlantic City, but at the Space Conference last year there were 96, an increase of one-third. The new countries that have built up the membership of the I. T. U. and contribute to the decisions of its conferences include many that do not have a background of technology, or a national climate favorable to Amateur Radio. Some other services such as broadcasting are favored. In some developing countries it is not just a lack of understanding about Amateur Radio, leading to indifference towards its interests, but there is actual antagonism, to oppose the moves made by enlightened countries. The altruism of such moves is also brought into question.

Some advanced countries use their influence against Amateur interests. This is probably because of economic, political and military reasons, and only a moderate degree of support within the particular countries.

In this unfavorable situation there are only very few countries in the world today who will come out boldly and advocate a helpful progressive attitude, when matters concerning Amateur Radio come into prominence, and when support is weak there is a readiness to vote quickly and dispose of the matter.

Spectrum Demands and Changing Techniques

The world of radio that we have mostly been concerned with has come about during the era of the ionosphere. We have experienced the good and bad features of ionospheric propagation. In negotiating for spectrum space the peculiarities of the ionosphere have had to be dealt with. While this kind of radio communication will now decline in importance and occupy a subsidiary role, it has meant that we have gained valuable experience, not only in operations, but in meeting the difficulties of obtaining satisfactory spectrum space for our activities. Valuable techniques of sharing have been developed.

Now major interest is in VHF and higher frequencies. This applies to all radio services, brought about by improved equipment, the vast frequency width available, and most notably the improved types of services available by using space techniques.

One of the great changes due to space technique is that frequency bands once considered as of local, or national use, are now international. This has prevented the higher Amateur bands from being readily available for space use. It is also found that in many countries bands that were thought to be available for Amateur use are actually in operation for other terrestrial services. So new problems are coming to light.

The allocation table is rather complicated - at Atlantic City 1947 it had 120 footnotes detailing irregular use and these had increased at Geneva 1959 to 240 for a similar spectrum width. Last year at the Space Conference more were added. It becomes increasingly difficult to get anything in the nature of an exclusive world wide allocation, on any frequency whatsoever.

The Space Radio Conference Geneva 1971

Proposals were put before the Space Conference by a number of friendly countries to lead to Amateurs being able to use all their existing bands in space as well as terrestrially. There were pious hopes that there would not be much objection to this.

The result was the opposite. There was intense opposition, with a categorical denial for space operations in any of the shared bands. Space work was approved in exclusive bands, the only important ones of these being at 144 MHz. and 24 GHz. There was a very special exception for 3 MHz. at 435 MHz. to be used on a sharing basis with special restrictions, but apart from this there is no availability of space Amateur transmissions all the way from there up to 24 GHz. The allocation at 435 MHz. was only approved af-

ter the most exceptional actions by supporters at the conference.

The failure to get proper provision for Amateurs in space was accompanied by another failure. That is the obvious general lack of support for Amateurs and their requests, made through their respective governments

This condition can be expected to continue at more general administrative radio conferences, when other bands also will be under scrutiny. (I have already referred to the general squeeze experienced in the last 25 years.)

I quote just one example to illustrate the atmosphere met at the Space Conference.

In the principal allocation committee, there were proposals for the five shared Amateur bands starting at 1215 MHz. to be approved for use in space. The chairman proposed that all five bands should be dealt with together. New Zealand disagreed and proposed that each band should be considered separately, and statements in support of this action were made by Israel, U. S. A., U. K., Philippines, Denmark, Canada, Italy. Statements against were made by Sweden, Syria and Cuba.

The chairman called for a vote on the New Zealand proposal and it was lost, 38 to 26 with 6 abstentions. So it was clear that of the 68 participants, a major favored a summary package deal, rather than a close study that might well have found some little slice of a band that would have met Amateur needs. So the chairman called for a vote on the use of the bands by Amateurs, the result being:

Against Amateur use	46
For Amateur use	18
Abstentions	7

So it was not only the result, but the approach to it, that contains a lesson for us to study. There were numerous other somewhat similar examples.

How to Influence the Situation

The first thing is to deserve and retain the understanding and good will of the official government administration. This is not only to promote good operating arrangements within our national boundaries, but also to try and have our country take its place for Amateur Radio at large when engaged in international negotiations. Obviously our own influence will only be the best if all our activities are pursued to the highest possible standard.

If all Amateur Radio National Societies in all countries gained support by their governments, things would be very different, and the kind of thing that occurred at the Space Conference would be unknown.

I. A. R. U. Headquarters has a continuance policy of promoting liaison of national societies with their respective governments. The Regional I. A. R. U. organizations work along the same lines. However, the road is by no means easy.

I. A. R. U. has access to I. T. U. conferences, as an observer, and this is a great advantage. In addition to what might be done through administrations by societies, it gives direct contact with the scene of action, when matters affecting Amateurs are being decided. In big international conferences dealing with all aspects of radio usage the official delegations have little time to spare for concentrating on Amateur matters. Here is where an international society can assist, in adding an element of continuity, performing useful functions on the side lines of the meetings. Moreover, this is the only way to find out details of what really happens to questions that are vital to us.

Experience has shown that the presence of observers can make the difference between success and failure in some of the outcome.

Amateur Radio differs from all other radio services in that it is, by regulation, voluntary. It, therefore, has no back-up of income to meet expenses. Attendance at conferences is an expensive business. It devolves on societies, to see that the I. A. R. U. is present in effective strength at these critical times.

Present is Time for Opportunity

Now is a unique time for Amateur Radio to use all its resources to advance its interests for the future, not only because of the importance of the present challenge, but also because the world organization of Amateur Radio is in pretty good shape.

Despite the weaknesses we know of in many countries, I. A. R. U. and its set up, including organizations in the three I. T. U. regions, provides machinery through which proper actions can be taken. This has been proved in connection with the Space Conference last year, which conference was better prepared for in regard to Amateur interests than any other in history.

Moreover, such degree of success as was achieved can be linked very directly to the efforts of national societies and I. A. R. U. headquarters.

The radio frequency spectrum is in the process of being expanded right up to 275 GHz. and it is opportune for Amateur Radio to declare its ambitions, with a view to asserting their needs for spectrum space and sampling. Claims have been made in the past for Amateurs to be able to apply their talents to small sections through the whole spectrum.

The present is the time of the vast change in communications technique in which VHF and higher becomes the principal important part of the spectrum. Old concepts of frequency allocation and regulation need to be scrutinized and perhaps changed in the light of this new order; Amateur Radio needs to be in the formative stages of new methods to ensure its rights are not missed out. (There is an opportunity here to wield influence through the I. T. U. Radio Consultative Committee, C. C. I. R.)

Countries who do not support the advance of Amateur Radio seem only recently to have been showing up definitely in this role. So it is opportune for Amateur Radio to identify its friends and marshal support as widely as possible while there may yet be a bit of flexibility in some of the attitudes.

Actions to Take

Our Association follows a policy of participating in I. A. R. U., and promoting its declared objectives, which include that of wielding international influence through the national amateur societies throughout the world. The points that have been made deal with features of the present situation which enhance the value of this participation.

We have tried, by our travelling to meetings in Sydney and Tokyo and collaborating with other member societies of the Region 3 Association, to get other countries in Region 3 to improve their influence, eventually through their governments.

This costs money. The present contribution both to Region 3 and in travelling expenses has to be regarded as a direct cost for some assurance of our satisfactory operating conditions in the future.

It is important for all Amateurs to be aware of this subject, and to have it in mind, whatever branch of Amateur Radio they may specialize in.

In conclusion, let me express the opinion that our strength will continue to be in pursuing Amateur Radio vigorously, and enthusiastically, and concentrating on the characteristics in which it is unique, and which cannot be usurped by others. If we continue to aspire to excellence in these, our position is secure.

(Reprinted from I. A. R. U. Region 1 "News")

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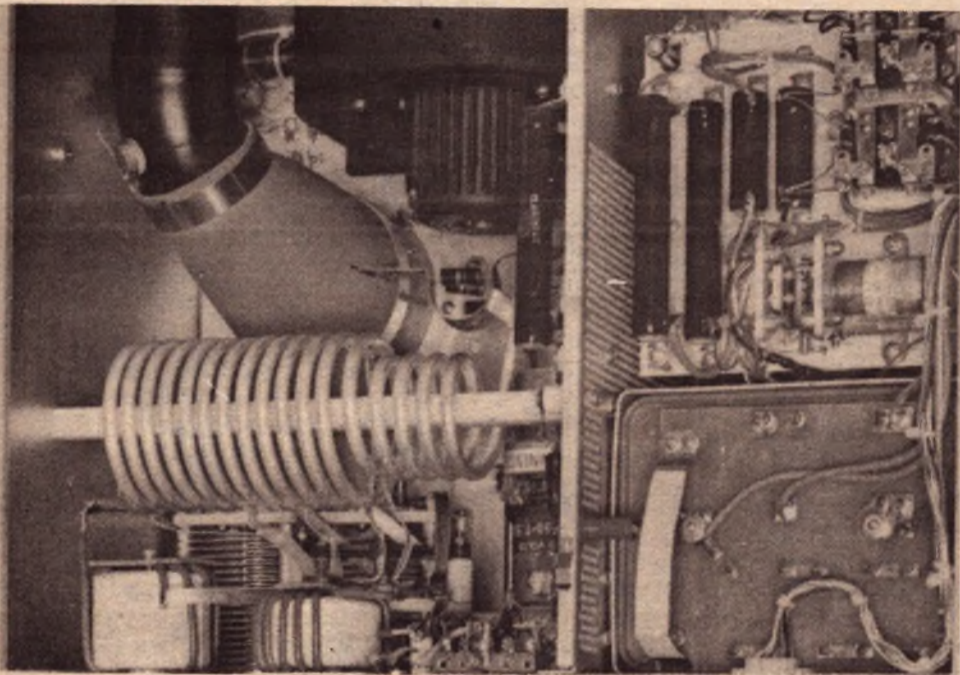
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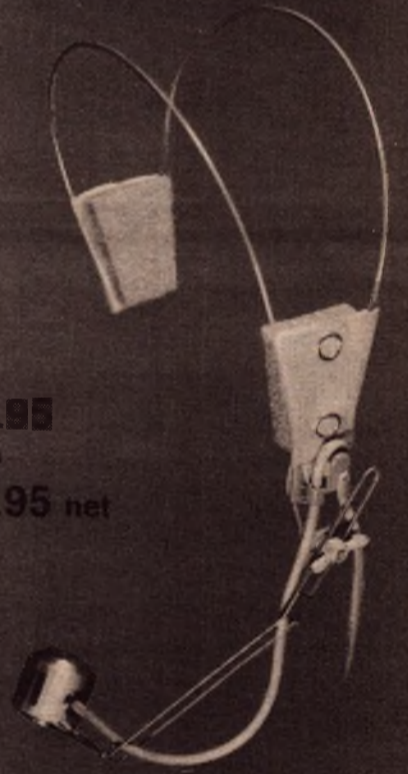
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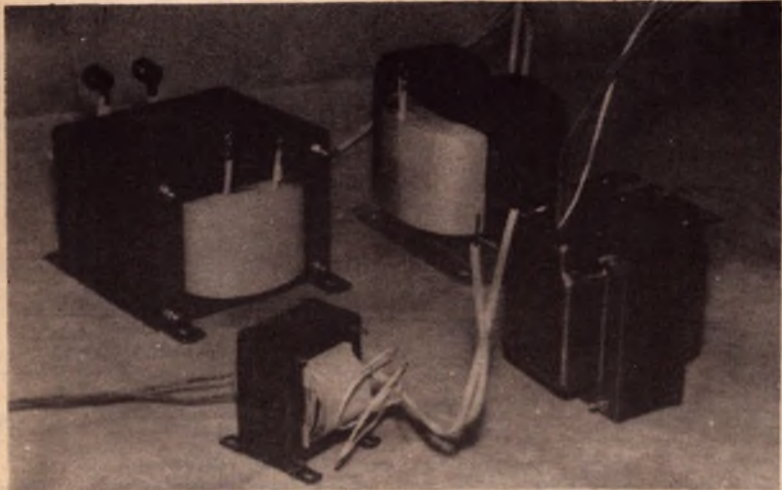


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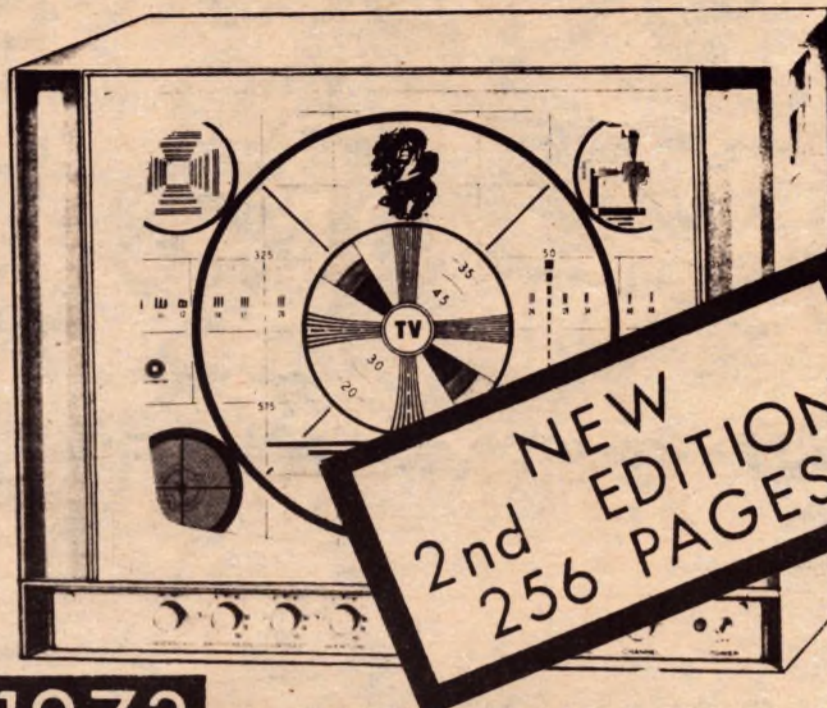
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Dade County, Florida



Emergency Plan

Public Service & Disaster Communications

Introduction

This describes the Dade County, Florida, Amateur Radio Emergency Corps (AREC) public service and disaster communications plan.

The Dade County AREC group is a body of volunteer, licensed Amateur Radio operators who have indicated they will donate their time and radio equipment to provide their community with disaster and relief type communications circuits when the need arises.

The AREC is sponsored by the American Radio Relay League (the National organization of amateur radio operators), and is a component of the nationwide Amateur Radio Public Service Corps (ARPS).

In addition to describing the Dade County plan, this will describe the facilities to be provided by this plan, the amateur radio clubs and organizations involved in this plan, and the Amateur Radio Emergency Corps.

It is also the purpose of this to make the community we serve aware of the facilities that trained, licensed, amateur radio operators can provide during times of need.

A Special Note to All Amateur Radio Operators in Dade County:

This master plan for amateur radio operations in Dade County was published by amateur radio operators involved in public service.

It is hoped that through the printing of this, other amateurs in the County (and elsewhere) would become interested in joining the public service side of amateur radio.

Any amateur wishing to join the Amateur Radio Emergency Corps is invited to do so. Membership in any organization, or the ARRL, or subscription to any amateur radio magazine is not a prerequisite for membership in the AREC.

The only requirement is an honest desire to participate in public service to your community.

Before Emergency

PREPARE yourself by providing a transmitter-receiver setup together with an emergency power source upon which you can depend.

TEST both the dependability of your emergency equipment and your own operating ability in the annual ARRL Simulated Emergency Test and the several annual on-the-air contests, especially Field Day. Test your operating ability on the daily and weekly traffic networks.

REGISTER your facilities and your availability with the local ARRL Emergency Co-ordinator.

In Emergency

LISTEN before you transmit. Never violate this principle.

REPORT at once to your Emergency Co-ordinator so that he will have up-to-the-minute data on the facilities available to him. Work with local civic and relief agencies as the EC suggests, offer these agencies your services directly in the absence of an EC.

RESTRICT all on-the-air work in accordance with FCC regulations, Sec. 97.107, whenever FCC "declares" a state of communications emergency.

QRRR is the official ARRL "land SOS," a distress call for emergency only. It is for use only by a station seeking assistance.

RESPECT the fact that the success of the amateur effort in emergency depends largely on circuit discipline. The established NET CONTROL STATION should be the supreme authority for priority and traffic routing.

CO-OPERATE with those we serve. Be ready to help, but stay off the air unless there is a specific job to be done that you can handle more efficiently than any other station.

COPY all bulletins from WIAW. During time of emergency special

bulletins will keep you posted on the latest developments.

After Emergency

REPORT to EC as soon as possible and as fully as possible so that the Amateur Service can receive full credit. Amateur Radio has won glowing public tribute in many major disasters since 1919. Maintain this record.

Dade County AREC Plan - Organization

When activation of the Dade County AREC plan occurs, the Amateur Radio master control station for the county co-ordinates the activity of certain predesignated amateur radio stations. In addition, the master control station activates certain emergency amateur radio networks for local communications, as necessary.

The master control station also maintains liaison with other state AREC organizations and networks and selected agencies in the Dade County area: NOAA-National Hurricane Center (weather bureau); Dade County CD communications center; Homestead area CD shelter.

As mentioned above, the master control station has previously designated certain stations for emergency communications. These stations are called "Key Stations." The Key Stations will maintain communications on Florida statewide teletype, high-frequency SSB (Voice), and CW (morse code) nets. In addition, two area amateur radio clubs have volunteered their communications facilities (amateur radio VHF repeaters) for Dade County AREC use, and their members have indicated they will volunteer their time and equipment to provide communications through the repeaters. Other Dade County clubs will provide trained operators to man the Key Stations.

The Dade County amateur radio master control station (K4IWT) is presently located in the American National Red Cross building, 5020 Biscayne Blvd., in Miami. The station is sponsored by the Dade County Chapter, American National Red Cross Amateur Radio Society. The Station Trustee is the Dade County ARRL emergency coordinator, appointed by the Southern Florida ARRL Section Communications Manager.

The Dade County EC is also the chairman of the Dade County AREC planning committee. The committee is composed of the EC, and one designated member from each Dade County Amateur Radio Club.

AREC Plan - Activation

At the present time, the Dade County AREC group primarily serves the American Red Cross in the county area. If requested by the county Red Cross to provide back-up radio circuits, this plan will be activated to provide those circuits.

It is anticipated at this time that the plan will be used to provide communications for the community during emergency or disaster situations, such as hurricane, storm damage or power black-outs. The use of emergency generators and battery-powered radios by amateurs will be well-suited to achieve these plans.

In addition to activation by the Red Cross, this plan can be activated upon request by other community agencies (Civil Defense, police, fire departments, with co-ordination by the Red Cross and the Dade County Amateur Radio Emergency Co-ordinator. Also, certain radio circuits and radio communications facilities provided by this plan may also be used for other community communications needs, of a non-disaster nature, such as parades and fairs.

It is understood that in the use of amateur radio for communications, the licensed operator is prohibited from directly or indirectly accepting any remuneration of any sort for his or her services. With this understanding, amateur radio operators donate their time for public service.

Upon notification by Red Cross officials, the EC, or other designated amateur radio operators, will open the master control station (K4IWT) as soon as possible. In addition, the EC or one of his assistants will attempt to contact as many members of the county AREC planning committee as necessary for the situation. In addition to those people necessary for immediate mobilization, other amateurs should be contacted for stand-by relief of those on duty and to provide more man-power if necessary.

Key stations will be activated as

necessary, depending upon the type and quantity of traffic anticipated to be originated during the emergency. All key station operators should be aware that plan activation is in effect, even if their station is not put to use.

Amateur radio clubs providing operators for the master control stations and the key stations will be continually advised during the plan activation so they can schedule operators for duty on a continuing basis, if necessary. It is anticipated that after activation, communications will be maintained on a 24-hour basis, if necessary.

During activation, amateur radio stations will be used to provide circuits for written, message-type traffic. It is understood that traffic will not be transmitted in the name of the amateur radio operator, but in the name and title of the official using the amateur radio operator's facilities.

Communications will remain in effect until such time that the master control station is released by the Red Cross. At that time, operators in the field and key stations will be released from their duties, providing all back-logged traffic has been transmitted. Those normal communications circuits and networks activated for emergency use will, at the time of completion of all emergency traffic passing, be restored to routine amateur communications.

1973 DADE COUNTY RED CROSS COMMUNICATIONS ASSISTANCE.

The Dade County Chapter has modified its Disaster Assistance plan for 1973, and this modification will directly affect those amateurs assisting in disaster shelters.

The Chapter has established in the County and in the Upper Keys five branch offices, in addition to the headquarters office. The branch offices are located throughout the city: the Model City office, the Latin office, the Southwest office, the Homestead office, and the Upper Keys office.

In the past, amateurs have been directly dispatched to disaster shelters for communications assistance. With the establishment of the branch Red Cross offices, amateurs will go to one of the branch offices for further assignment and dispatch to shelters or locations where needed. It is felt that this arrangement will be most satisfactory and most beneficial to all concerned in this assistance plan.

Headquarters: 5020 Biscayne Blvd., Miami. 751-6661
Model City Office: 628 N. W. 62 St., Miami. 751-7534
Latin Office: 1351 SW 1 St., Miami. 649-8376
Southwest Office: 5770 Sunset Drive, S. Miami. 665-3691
Homestead Office: 354 NW 1 Ave., 248-1133
Upper Keys Office: Firehouse, Tavernier. 852-9612

K4IWT - the Dade County Chapter,

American National Red Cross Amateur Radio Society club station.

Primary Function: To serve as Master Control Station directing all amateur radio communications within, into, and out of Dade County during periods of emergency.

Secondary Function: This station will also serve as a back-up transmitting and receiving station for SSB HF Florida statewide amateur radio networks.

Sponsored By: The Dade County Chapter, American National Red Cross.

Station Location: In a permanent radio room located on the premises of the Dade County Chapter, ARC, at 5020 Biscayne Blvd., Miami, Florida.

Permanent Facilities: Include operating positions for five operators on as many permanently installed transmitters and receivers, provided by the Red Cross. Antennas are installed for the 80-75, 40, 20-10 meter HF amateur radio bands, and the 6 and 2 meter VHF amateur radio bands. In addition to amateur radio operations from the radio room, the South Wing, Florida CAP will also have a transmitting position. A telephone is located in the radio room, phone number 751-6661, extension 119, for official use by communications personnel on watch in the radio shack. Radio room facilities also include a supervisor's position for monitoring all active circuits and processing all written traffic being relayed through the station.

The building is provided with a manual-start emergency generator, in the event that commercial power is lost to the building.

Station Staffed By: Volunteer, licensed, amateur radio operators from the Dade County area. At the present time, members of the Dade Radio Club, the Dade County Amateur Radio Public Service Corps, the South Florida FM Association, and the Palmetto Amateur Radio Club are being trained in traffic handling procedure to become station operators of K4IWT.

Contact: The Dade County Chapter, American Red Cross, 5020 Biscayne Boulevard, Miami, FL., phone 751-6661.

K4JVA/4 - The NOAA - National Hurricane Center Amateur Radio Station at the University of Miami.

Primary Function: To gather and disseminate weather information to and from the NOAA-National Hurricane Center on the HF and VHF amateur radio bands.

Secondary Function: This station will also serve as a back-up transmitting and receiving station for Florida statewide SSB HF amateur radio networks.

Sponsored By: The South Miami Radio Club (K4JVA), which will supply all necessary equipment and radio operators to maintain 24-hour extended operation if necessary.

Station Location: On the campus of the University of Miami, in Coral Gables, Florida, in the NOAA-National Hurricane Center building.

Permanent Facilities: Include space for two, simultaneous, operating positions and antennas installed for the HF and VHF amateur radio bands. Telephones are also centrally located to facilitate delivery and pickup of message traffic. In the event of commercial power failure, the entire building will shift to auto-start emergency power within seconds.

Contact: Assistant Emergency Co-ordinator, The South Miami Radio Club: 10950 SW 179 St., Miami, FL 33157.

The South Florida FM Association and the Palmetto Amateur Radio Club.

Primary Function: These two amateur radio clubs will make available to the American Red Cross, operators and equipment to provide back-up communications from ARC-designated disaster shelters located in the Dade and Monroe County areas. Short-range, VHF-FM amateur radio will be used to provide these circuits.

Secondary Function: To provide operators and equipment to establish communications for other activities in the community interest, and to provide communications circuits for overflow traffic handling on an inter-city basis to adjacent communities in the area.

Permanent Facilities: Each club maintains an amateur radio repeater station that greatly extends the communications range of low-powered VHF mobile and hand-held radios. Through the use of repeaters, consistent communications coverage is maintained with mobile units at ranges well over 50 miles from the repeater sites.

The South Florida FM Association's VHF repeater is located on the campus of the University of Miami, in Coral Gables, Florida. The Palmetto Amateur Radio Club's repeater is located in Hallandale, Florida.

During organized, county-wide communications alerts, it is anticipated that jurisdiction of the two repeaters would be divided by Miami's NW 36 Street. All shelters located north of 36 Street would normally communicate with Palmetto Amateur Radio Club repeater in Hallandale. All shelters located south of NW 36 Street would normally communicate with the South Florida FM Association repeater located in Coral Gables. Co-ordination will be maintained between the two groups for adequate communications between the two geographical areas.

Contact: Assistant Emergency Co-ordinator for the Palmetto Amateur Radio Club, 40 NW 189 Terr., Miami, FL 33169.

Assistant Emergency Co-ordinator for the South Florida FM Association, Post Office Box 25, South Miami, FL 33143.



THE DADE RADIO CLUB

The Dade Radio Club, being a general interest radio club, will provide trained, traffic oriented, operators and back-up operators for all key stations in the Dade County AREC plan.

Operators for both CW (Morse Code) and phone circuits will be available as necessary.

In addition to providing operators for key stations the Dade Radio Club operators will make available, as necessary, their own amateur radio stations for back-up usage as Dade County key stations, and for overflow usage for message traffic handling on the statewide radio networks.

Contact: Assistant Emergency Co-ordinator, Dade Radio Club, P. O. Box 73, Biscayne Annex, Miami, Florida 33152.

EVERGLADES AMATEUR RADIO CLUB

The Everglades Amateur Club is an association of Amateur Radio operators in the Homestead, Florida area.

The Club sponsors the WB4JPZ amateur radio station at the Homestead Civil Defense (CD) shelter, and will use that station to provide back-up communications facilities for Homestead in the Dade County CD and ARC plan.

In addition to amateur radio communications, the club also coordinates RACES (Radio Amateur Civil Emergency Service - an official communications service for emergency use sponsored by the FCC for use by CD and other government organizations) communications for the Homestead area.

The Everglades amateur radio station will serve the Dade County AREC plan as a secondary back-up key station for HF SSB voice communications and as a net control station for VHF-FM operations in the Dade County area.

Contact: Assistant Emergency Co-ordinator, Everglades Amateur Radio Club, Civil Defense HQ, Homestead, FL.

(Turn to page 12, please)



S I R A

The SIRA, Sociedad Internacional de Radio Aficionados, Inc. is an international organization of Spanish-speaking amateur radio operators. They maintain their headquarters in Miami. This group of Spanish-speaking amateurs were invaluable in their communications assistance in the Managua disaster, and they have agreed to assist the Dade County AREC and the Dade County Red Cross by providing amateur communications in the Latin sections of Dade County.

SIRA will provide operators and equipment for two-meter FM operations in the Latin section and they will be dispatched from the Red Cross Latin office at 1351 SW 1st Street, in Miami. In addition, SIRA members will also man other circuits for communications as required by manpower needs.

Contact: Assistant EC for SIRA, P. O. Box 71, Miami, FL 33148.

THE CW (MORSE CODE) AND SSB (VOICE) KEY STATIONS

The CW (Morse Code) and SSB (Voice) key stations will act as the primary relay point for all traffic entering and leaving the county on the Florida statewide amateur radio networks. During emergency periods, these active networks will modify their daily schedules and will activate as emergency networks and will remain active as long as is necessary. Through relay on the statewide networks, traffic leaving Dade County, and destined for delivery outside of the state of Florida, will be relayed by the Amateur Radio National Traffic System.

At the present time, the CW key station is sponsored by the Dade County Amateur Radio Public Service Corps, (W4EHW) and will be located in the Civil Defense shelter in the North Miami City Hall. Facilities include operating positions, permanent antennas, and emergency power for the building. The CW key station will be manned by proficient Morse code operators. Through VHF city-wide relay the station will receive traffic for transmission on "QFN" and "QFEN", the all-Florida CW traffic network (QFEN-the CW emergency network).

The SSB key station is presently designated as the master control station at the American Red Cross, and is described previously in this plan.

In addition to these two key stations for CW and voice, other Dade County amateurs are prepared to assume duties as back-up or relief key stations.

The CW key station, W4EHW, is located in the North Miami City Hall basement, at NE 125 Street and 8 Avenue, in the Civil Defense Emergency Operations Center, Phone 751-8431, and is sponsored by the Dade County Amateur Radio Public Service Corps.

AMATEUR RADIO TELETYPE OPERATIONS

Certain amateurs in the Dade County area have equipped their amateur radio stations for transmission and reception of messages by radio teletype.

The very nature of teletype to immediately produce written hard copy of messages with a minimum of effort by sending and receiving operators makes this mode of transmission very adaptable to passing large volumes of traffic by radio.

It is anticipated that this mode of radio transmission will be used for relaying traffic between key cities within the state on the HF amateur radio bands. Co-ordination between the Dade County master control station and the teletype key station will be maintained by VHF radio link.

(ACKNOWLEDGEMENTS: The majority of the above information was compiled and written by John Deegan, WA4QLZ. Special thanks also to ARRL for much of the material.)

PRECEDENCES

The precedence will follow the message number. For example, on cw 207R or 207 Emergency. On phone, "Two Zero Seven, Routine (or Emergency)."

Emergency - Any message having life and death urgency to any person or group of persons, which is transmitted by amateur radio in

Emergency Plan

the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. On cw, this designation will always be spelled out. When in doubt, do not use it.

Priority - Important messages having a specific time limit. Official messages not covered in the "Emergency" category. Press dispatches and other emergency-rated traffic not of the utmost urgency. Notification of death or injury in a disaster area, personal or official. Use the abbreviation P on cw.

Inquiry - Messages pertaining to the health or welfare of persons in a disaster should carry this precedence, which is abbreviated to Q on cw. These messages are handled after Priority traffic but before Routine. The Q precedence replaces the old "priority two" (P2 on cw).

Routine - Most traffic in normal times will bear this designation. In disaster situations, traffic labeled "Routine" (R on cw) should be handled last, or not at all when circuits are busy with emergency, priority or inquiry traffic. Most traffic handled on amateur circuits in normal times will fall in this category.

DADE EMERGENCY NET PREAMBLE

CQ THE DADE EMERGENCY NET
CQ THE DADE EMERGENCY NET
CQ THE DADE EMERGENCY NET
This is (Call Sign) calling the Dade Emergency Net to order.

I am located in (Location) and my name is _____.

The Dade Emergency Net meets each Wednesday evening on 146.940 MHz at 8 p. m. local time. This net meets for the purpose of training amateur radio operators in written traffic handling. This net will meet for only one hour per week. We invite all amateurs to check in.

We invite your questions at any time during the net.

This net will handle any written traffic in standard ARRL form for relay throughout the United States and Canada, by amateur radio.

This is a directed net. Please do not transmit until invited to do so.

This is (Call Sign) and the Dade Emergency Net, listening for stations with emergency or priority traffic.

Any stations with bulletins for the net. Call Signs please.

This is (Call Sign) and the Dade Emergency Net listening for stations with traffic only. Your Call Sign please.

This is (Call Sign) beginning roll call of member stations (NCS read list alphabetically by Call Sign).

This is (Call Sign) and the Dade Emergency Net listening for any station wishing to check into the net. Your Call Sign please.

This is (Call Sign) closing this session of the Dade Emergency Net, and inviting all stations to check in again next Wednesday evening at 8 p. m. on 146.940 MHz. Good evening. This is (Call Sign) clear.

HANDLING INSTRUCTIONS

HXA - (Followed by number.) Collect landline delivery authorized by addressee within _____ miles. (If no number, authorization is unlimited.)

HXB - (Followed by number.) Cancel message if not delivered within _____ hours of filing time; service originating station.

HXC - Report date and time of delivery (TOD) to originating station.

HXD - Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time and method of delivery.

HXE - Delivering station get reply from addressee, originate message back.

HXF - (Followed by number.) Hold delivery until _____ (date).

This prosign (when used) will be inserted in the message preamble before the station of origin, thus: NR 207 R HXA50 WIAW 12. . . (etc.). If more than one HX prosign is used, they can be combined if no numbers are to be inserted, otherwise the HX should be repeated, thus: NR 207 R HXAC WIAW . . . (etc.), but: NR 207 R HXA50 HXC WIAW . . . (etc.); On phone, use phonetics for the letter or letters following the HX, to insure accuracy.

AREC

The radio amateur best justifies his existence by the service he renders his community in times of disaster and distress when normal communications media are not available, have failed or are badly overburdened. The pleasure he derives from the pursuit of his hobby during normal times establishes a

debit that he can offset only by his steadfast determination to be prepared and willing to be of service when disaster strikes.

In the event of a communications emergency all amateurs are dedicated to serve in the public interest, within their ability, to provide temporary communications for a stricken area until normal facilities are restored.

The Amateur Radio Emergency Corps, division of the Amateur Radio Public Service Corps, is composed of licensed amateurs who have voluntarily registered their qualifications and equipment for communication duty in the public service when disaster strikes.

Every licensed amateur, whether or not a member of the ARRL, is eligible for membership in the

Emergency Corps. The only other qualification is a sincere desire to serve. There are two grades of membership in the Corps: (a) Full Membership, under which the applicant pledges active participation in periodic tests, and (b) Limited Membership, requiring only limited participation as time permits. The possession of emergency-powered equipment is desirable, but is not a requirement for either grade.

Maritime Mobile?



F. DE BOER, M.D.

SS "STATENDAM"
Holland America Cruises
Pier 40 - North River
New York, NY 10014

At Sea, August 17, 1973

This is PAØMT calling - my name is Frederik, my home-QTH is Vlieland Isle in the Netherlands. I'd like to accept your invitation and "tell you something".

Let me begin to tell you that I am a MARCO member. I live on one of the West-Frisian Islands along the northwest coast of the Netherlands and that makes you understand my close connection with the sea and that I am really sea-minded.

So when I was asked in the spring of 1972 to make a trip on the Dutch Hospital-Church Vessel "De Hoop" as a doctor at sea, I immediately accepted. Ultimately it was arranged that I would make the trip in February 1973 on the North Sea amidst international fishing boats.

As a general practitioner I had an electrocardiograph and also procured a cardiotele. By this, as you may know, an electrocardiogram can be reported by telephone to a cardiologist, either direct, or after having it stored, from a tape recorder.

While preparing for my trip I realized: why not an experiment and transmit an ECG with my SB-101 transceiver via an amateur to a cardiac clinic? So I started working out plans. First I asked cooperation of the cardiac clinic of the St. Anthony Hospital in Utrecht, Netherlands. Next I asked the Association of "De Hoop" for their permission. Everything went smoothly. The last step had to be the maritime mobile license. So I very politely requested the relating authorities for it, explaining why and how and that it would be temporary only. But oh boy.....

To begin with, I had to wait exactly one month before I got any answer (because they were so busy, they explained later...). Besides the letter was undersigned unreadable, without mentioning who was who... (for this they apologized later). The answer itself completely ignored my request for a maritime mobile license; instead I was told that transmitting an ECG was NOT allowed according to the International Radio Law of 1904 (yes: nineteen hundred and four). The type of signal (viz. frequency-modulated audio frequency of about 2 kHz amplitude modulated on SSB carrier) was not mentioned in that law. Neither was it mentioned in the additional National (Netherlands) Radio Law of 1930.

I was flabbergasted. I must say, but law is law and I am a legal ham, so what.....?

After a phone call, however, with a lesser authority, I was offered due-free time for my experiments to be carried out via the official AM-rig aboard on 2030 kHz. I really was happy with this, and I wish to express my thanks also in this place for the given opportunity.

However the story has not yet, by far, come to an end. I still have no maritime mobile license and in the meantime I have accepted a function as a ships-physician on the Holland America Line cruising ships.

So on February 24th, immediately after my North Sea voyage, I again very politely asked for an MM-license. Three months later, already out at sea, I received via my wife, in Lisbon, the reply, dated May 15, 1973.

In the Netherlands, it said, no maritime mobile license is given to any amateur. There is no real need and there are no regulations; these were the excuses given to me... oh boy... and I knew one - I contacted him twice on board the WX-ship "Cumulus", a real Dutch ham: PIICU/MM. By Jove.....

My reply was too easy this time: I really need an MM-license and why not make regulations? I am only too eager to help you; e.g. : a) only one amateur per ship; b) only operating allowed when the official ships-radio station is closed. Besides the IARU will certainly give you information. And what about PIICU/MM? (My reply was dated June 18th and was written on board the SS "Statendam").

In the meantime I was so fortunate to arrive in New York on June 28th, the very day of the MARCO Convention in the Plaza Hotel over there. As you may know, my experience on the Hospital Church vessel, the transmitting of the ECG was read there. Of course I took my chance and attended the evening meeting with the banquet and an illustrated lecture. I had vy fb eye-ball QSOs with MARCO members I had often talked with over ham radio.

Naturally, I inquired about maritime mobile licenses. And once more I was flabbergasted: in international waters you do not need any maritime mobile license at all, I was told. You just mention you are maritime mobile. Self-evident is that you obey, as always, international amateur radio regulations.

Company officials, captains and wireless operators on board comment: as long as you are legal and do not interfere with the ships radio traffic, which might endanger passengers, crew and ship, there is no objection.

But what about operating from a ship in territorial (national) waters or in port? I had QSOs with maritime mobile stations far out at sea, also in territorial waters when anchored, and even in port. Alas... I wasn't informed about their licenses that time, because I wasn't concerned yet.

I have been a ham for ten years, but never had much time, because of QRL. Also I am a member of VERON, the Dutch section of IARU. The reason I did not request via this association is that I supposed it was just a matter of a temporary license; just as I had my holiday license in France last year from the French Telecommunication Service; within a week after I sent a photocopy of my authorization and license, I got my French call as FØAMB. (How's that?) After all, I am sure authorities would have told VERON what they did tell me.

One more remark: the H. A. C. - ships are registered in Willemstad, Curacao, Netherland Antilles. In April, I also wrote a letter to the Radio Control Service in Willemstad; but I think it was "relayed" to The Hague, because I never received any word.

This was a long monologue; I hope you do copy, so "mike" to you. Many thanks, vy 73's, es hpe cu sn.

Ham's pupil in space



by Ray Meyers, W6MLZ

Retired army Capt. Robert Wells (W6LHW) must be proud of one of his many proteges he taught code and theory to back in Enid, Okla., as one of his pupils has broken all records for walking in space, living in space and many other accomplishments while circling the earth in the orbiting space platform.

Bob is president of Cal Crystal Lab Inc. in Westminster, Calif., and is well-known to the thousands of amateurs operating in the VHF frequency-modulated portion of our allocated amateur bands.

The pupil mentioned was taught the fundamentals of Amateur Radio by Bob and is Dr. Owen Garriott (W5LFL), holder of the advanced class FCC license, who was up there in the space platform with his two companions. The trio have broken the record held by USSR cosmonauts for persons living in outer space. Doc is a scientist-astronaut and not an M.D., as was his counterpart in the first space platform mission. As we all know, his services have come in mighty handy during his stay in space due to the many scientific, electronic and electrical malfunctions that have taken place as they orbited the earth.

Unfortunately, Owen was not permitted to take along a piece of radio equipment operating in the amateur bands, although his voice is often heard on a number of NASA frequencies used for communication with ground stations located around the world. He would have liked to have taken along some equipment but after careful study, due to rapid doppler effects, he felt it would be difficult to operate any of the two-meter gear, and also the six-meter equipment, which would be much heavier, would be reliable for a few brief minutes per contact.

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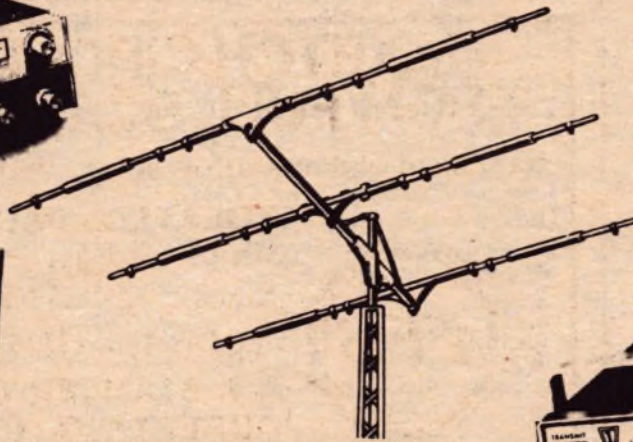
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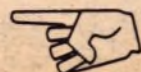
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Worldradio: as a Gift - Page 27

Calling Doctor London

A neurosurgeon whose advice can be heard 'round the world.

Sometimes late at night, Dr. Jack London, bone-tired, returns from a hectic day running from hospital to hospital, he slips into his small radio "shack", and becomes another personality.

He does this through K2JVA, his "ham" radio station in Queens, New York, and from this site he speaks frequently to fellow physicians and other ham operators in areas ranging from Zaire, Africa, to Easter Island in the Pacific.

Dr. London, a neurosurgeon, is a stocky, broad-shouldered man, with a variation of a cavalryman's gallant mustache, and gray, thinning hair receding from a massive brow. He conveys the air of a less hurried age, and as he packs tobacco reflectively into one of his many pipes, he might very well serve as the model of the vanishing family physician.

"I developed an interest in ham radio back when I was about nine or ten years old," he said in a voice which grew stronger and more vigorous as he described his hobby. "I was living in Brooklyn, and I met a friendly priest who had built a radio transmitter. That started me off, but it took some time before I actually built my own set. I grew fairly expert at radio, and soon was servicing radios. Now that I look back, I remember that I earned more money servicing radios while I was in high school and college than I later earned in my early days as a doctor."

Dr. London received his amateur operator's license shortly after World War I. "Before that, I was a 'second operator'," he explained. "That meant that I was permitted to use a set that another fellow built. Voice transmission had already been developed, but we still used 'CW', or Morse code. I had a ham shack in the backyard."

While his interest in radio continued, he also developed an interest in photography and in automobiles. He became the official photographer for the City College of New York, while a student there, and also did freelance photography assignments for the rambunctious New York Graphic, a now-defunct New York City tabloid.

His interests in radio, photography and automobile mechanics pushed Dr. London in the direction



(From "Physician's World")

of engineering, but the economic winds decided otherwise. The country was beset by the economic depression, and there were few jobs for engineers. Dr. London had also had an opportunity to meet many physicians who were friends of his father, a businessman. He applied for admission to the Long Island College of Medicine, and was accepted.

During his medical student days, he found time to tinker with automobiles and even to race in dirt track racing car meets. There followed graduation in 1934, internship at Kings County Hospital, Brooklyn, and the development of interest in neurology and psychiatry. He served residencies in the Central Islip State Hospital, and in Bellevue Hospital. Then he took postgraduate training at the famous Montreal Neurological Institute.

For some years, he was too busy to pursue his ham radio hobby. He had opened his office as a neurosurgeon in Brooklyn, and had served as a consultant both for the Children's Court and for the Episcopalian Diocese of Brooklyn. Then, while serving as a neurosurgeon on the staff of St. Joseph's Hospital, Far Rockaway, New York, he decided to train youngsters as radio operators. "I thought that some day it was possible that communications would break down on the Rockaway peninsula, and if I could get a radio station set up, the kids could carry on with walkie-talkies," he said.

Dr. London, meanwhile, continued his own ham radio activities. In 1966, together with other physicians who were ham radio operators, he formed MARCO, the Medical Amateur Radio Council, Ltd. Its purpose is to establish personal communication among members and their ham colleagues, and to disseminate medical, electronics and communication information. Members are licensed amateur radio operators. By profession, they are mainly physicians, dentists, veterinarians, osteopaths or holders of doctoral degrees, practicing in related paramedical sciences.

Dr. London was president of MARCO in 1968. "We have members around the world," he said. "For example, we have one member, a missionary physician in the republic of Zaire (formerly the Belgian Congo), who has ten first aid stations, 1,000 to 1,600 miles apart. Without ham

radio, and the ability to fly, he'd be stuck. This way, on ham radio, technicians he has trained contact him, and he can tell whether it is necessary to fly to any one of these stations. His call letters are 9Q5GE, and many of our members have chatted with him on many problems. His hospital has 250 beds, and it serves an area the size of Michigan, Indiana and Ohio."

The Ham Network

Dr. London feels that the ham network plays an important role in medical communication, and cites numerous examples of its value. "Duke University Medical School, for example, has a station which any physician can call, and where he can get answers to his medical problems," Dr. London said. "If it's orthopedic, he can get an orthopedic man who will answer questions, or if it's a medical man who's needed, he can talk to him, too. They do this for distances of 2,000 or 3,000 miles. One of our members has helped to interpret EKGs from thousands of miles away in Africa.

"About six months ago, I received a call from a physician member in Liberia. A four-month-old baby had a sort of inversion, and this physician wasn't sure whether it was a penis, a clitoris or vagina, and wanted to determine the sex. I suggested that if he sent a urine sample to Rockefeller University, they would analyze it and send him an answer."

Dr. London also recalled the call from a missionary physician in Zaire. "This was about a 14-year-old boy who was paralyzed on one side, after suffering a skull fracture from a falling tree accident. There was a cerebral contusion over the motor strip, but no subdural hematoma. I asked the physician if he had cortisone, but he replied, he had only aspirin. Well, aspirin works out very well in a great many instances. I suggested some measure to take, and how to make intravenous solutions, so that we could dehydrate the brain. Every day, I would come back to my station at a certain hour so that I could discuss the progress of this patient. The boy recovered nicely."

Shortly thereafter, another missionary physician, 500 miles away from the first physician in Zaire, reported he had just delivered a hydrocephalic baby with an encephalocele.

"So we discussed the operation and how to do it," Dr. London said. "Now, you may ask, how can a man do that operation if he hasn't been trained. Keep in mind that the missionary doctor is a very well-trained man."

Once, Dr. London had to reach Teheran in a hurry. "Ten years ago, while I was visiting one of my patients at a Queens hospital one night, a colleague came to me and said he had a patient, an old woman, in very poor condition. He wanted me to reach the woman's son, a captain in the American army, then stationed in Teheran. I hurried home - it was a few minutes before one in the morning - and I reached a young man in Teheran who was just about to close up for the night on the Military Amateur Radio Frequency Service. He told me he had to close down.

"So I said, 'This is an order; I have to reach this captain.' I finally persuaded him to call the major in charge, and he called the captain. The captain was aboard a plane in short order, but by that time, unknown to him, his mother had died of a heart attack."

Use in Research

In medical research, MARCO has also been important, Dr. London said. A missionary member in Africa was recently asked to do maturation studies on leprosy patients by stimulated tissue cytology. The studies indicated that leprosy inhibits formation of cartilaginous arthritis. Leprosy also seems to inhibit formation of atherosclerosis.

With other MARCO members, Dr. London sprang into action on March 10 last year when a "May Day" (distress) call came from a radio station aboard the 37-foot sloop Avior, which had run onto a reef in the Bahamas. The five persons aboard had been unable to make contact by ship-to-shore telephone. The sloop's radio could not contact Miami because of weather conditions, and the MARCO members jumped into the breach. The Miami Coast Guard rescue station was reached by MARCO members, and a plane was sent to the scene.

The plane reached the area at midnight, and the pilot discovered extremely rough seas; the Avior was in serious danger. The pilot then found a small fishing boat nearby and directed it to the sloop. All five persons were taken aboard the fishing vessel at 2 a. m. The Avior was lost at sea. For his part in the rescue, Dr. London received a citation which hangs on his office wall.

"Most people become ham operators when they meet another ham," Dr. London said, thoughtfully re-lighting his pipe. "It's the same reason kids become interested in souped-up cars, and why people who become priests or geologists don't choose other careers. It's because they're near someone who is interested in it."

(Continued on next page)

Mexico EARTHQUAKE



Ham Operator Waters Listens To First-Hand Report Of Mexican Disaster

Journal Photo by John Huber

A young ham radio operator in Jacksonville was getting first-hand reports of earthquake damage in Mexico yesterday (Aug 29) from another operator near the center of the stricken area.

Curtis Waters of 1119 Wycoff Ave., (Jacksonville, FL), tuned in at 11:40 a. m. to an international network and heard the operator, identified only as "Gilbert", transmitting from Tehuacan.

The city is about 36 miles away from Orizaba, one of the cities hit hardest by the mammoth quake Tuesday.

Gilbert was answering queries from other operators around the world about friends and relatives in the quake area. He reported one dead in his own city, apparently from a heart attack, and heavy damage to buildings.

Waters asked Gilbert to provide them with all of the available information from the area.

The Mexican operator said that he was going to fly to some other cities to take photographs and gather information and would return to the airwaves later to make a report.

Gilbert did not make it back to his radio yesterday afternoon, but Waters said he was going to tune in again today and see if he could find Gilbert on the air.

Waters is a 17-year-old senior at Lee High School. He has been a ham operator for two years and said he often receives Mexico on his equipment.

(From the Jacksonville, FL "Journal")



RED CROSS HAM OPERATOR HAS FRIENDS AROUND WORLD
Chuck Ford brought happiness to Gadsden, Birmingham parents

Ham brings good news

Late-night telephone calls this week brought fear and then happiness to parents at Gadsden and Gardendale (Ala.).

"What's happened? What's the matter?" exclaimed R. S. Newell of Gadsden when the caller said, "This is Chuck Ford, a ham radio operator with the American Red Cross."

A few seconds later, Newell was exchanging greetings with his son, Eddie Newell, 17, one of 10 Alabama students spending the summer as Red Cross first-aid and home nursing instructors in Guatemala.

Fifteen minutes later, Mrs. Waymon F. Pounders of Gardendale had the same thrill when she talked to her 17-year-old daughter, Marla. "I was so excited I can't remember whether I thanked the Red Cross radio operator," she said. "Please tell him how happy he made us."

They were brought together through an international radio-telephone hookup made possible when Diane Huck of Birmingham, team leader, located a co-operative ham in Guatemala City.

Charles (Chuck) Ford, 18-year-old Woodlawn graduate, began calling the Guatemala City station Monday, and they established communications Tuesday. They arranged to begin making the calls home Tuesday night.

"The operator is a young woman named Anna," said Chuck. (He doesn't bother with last names). "She said she had been studying English for a year. I could understand her, but she made Diane do all the talking while we were making arrangements."

"We're having fun. Don't worry," Eddie told his father.

Marla had a frequent problem of teenagers. "Mom, I'm broke," she said. "Send me some money." She had lost her billfold.

Mrs. Pounders said Marla told her the food was delicious and "I'm afraid I've gained 20 pounds."

Marla said the Guatemala students she had met were "very friendly". She added, "They're always giving us little gifts."

Chuck is the son of Mr. and Mrs. C. E. Ford of 1117 Del Ray Drive. He became interested in radio as a small boy, watching Robert Seabury, a neighbor who was a ham, talking to distant friends on the air.

"I have friends around the world," said Chuck, whose personal station is WB4VFA. "There's Matt in New Zealand, Al (Alberto) in Argentina, Jean in France and Pablo in Paraguay. Pablo teases me because I can't pronounce 'Asuncion', the capital."

Chuck has been a volunteer in the Birmingham Red Cross radio room 18 months. He handled emergency messages the night of Sunday, May 27, after the tornadoes struck. He was ordered home, under protest, around 4:30 a. m. when Emergency Service Corps Chief, John Godwin, learned he was planning to skip his Woodlawn High School graduation exercises and remain on duty.

Other members of the Guatemala team will talk to their parents when they can get to Anna's home and transmissions are clear.

(From the Birmingham, AL "News")

Doctor London (Continued from page 16)

Suddenly, Dr. London chuckled, and a broad grin creased his face. "I picked up a copy of the old New York newspaper, PM, the other day," he said. "This clipping was dated July, 1940, and it described an incident during a radio quiz show.

"The clipping described how the master of ceremonies was set back on his heels by a young doctor who told him his name was Jack London. The master of ceremonies says, 'I enjoyed your novels,' and the doctor, obviously tired of the gag, answered, 'It's a pleasure to know you can read.'"

Dr. London chuckled again. "That radio man blew his stack after my remark," he said. He added: I also won the prize for the right answer."

Antenna Problems

Then Dr. London lost his smile and shook his head sadly. "Somebody cut my roof antenna the other day," he said regretfully. "It's the

first time that has happened in the 20 years I've had it up on the apartment house roof. What happens is that sometimes kids use citizen's band radio transmitters, and they cause interference on TV sets. People may have thought it was my station. It's hard to track down these kids; the FCC simply does not have enough personnel to monitor them."

The other night Dr. London wearily drove his car into the garage. It was late in the evening. He had done three spinal taps at three different hospitals: Mary Immaculate, Deepdale, and Terrace Heights in Queens. He was also thinking of points in a lecture in his post as an Assistant Professor of Neurosurgery at the New York University Medical School. "I'm too 'hyper' to go to bed right now," he said packing his pipe carefully. "I think I'll get on the air." His face relaxed as he entered his radio room. His brown eyes gleamed. Dr. London flipped a switch, twirled the dials, and settled back with a sigh for some global communication. Dr. London had become K2JVA again.

Powder Puff Derby

By Margaret McEnroe



Her name isn't as popular as Jack Benny's but Mrs. Carolyn Curren of Norristown, Pa., has been on radio for a long time.

She's better known as W3GTC, the star of the ham radio operations for the Powder Puff Derby for the last 17 years.

Her volunteer work for the Derby takes her from coast to coast each year. In the comfort of her den, Mrs. Curren talks with other radio operators across the country requesting them to join in the excitement of the air race.

"If I ever hear someone on the air who's on a stop along the next year's race, I'll ask them if they care to help with the radio system," she said.

The airplane race from Carlsbad, Calif., to Elmira (N. Y.) ran only four days this past weekend. But Mrs. Curren began preparing for it as soon as she closed up shop on last year's race.

She set up a national network of radio communication by organizing radio stations in each airport along the race route. A chairman was appointed to head each with a staff of at least 40 volunteers working in shifts. Everything is donated - time, equipment and energy.

The operators kept track of each plane's location. Every evening, a list was compiled called "Remain Over Night" informing officials and interested path followers where the pilots landed.

For all the time Mrs. Curren gives to the operation she doesn't find it that exciting.

"Some people like to work contests but I don't," she said. "It's very cut and dried."

Her involvement began as a ges-

Ham Radio System Sparked by 17 Year Vet.

ture of friendship. The Powder Puff Derby came to Philadelphia near her home town in 1957. Though only having received her operator's license a year earlier, Mrs. Curren was enthusiastic about "getting involved, particularly since it was a women's race."

She became acquainted with the chairman of the All-Women Transcontinental Air Race Inc., the race's sponsor group. Before the race festivities were over, Mrs. Curren had accepted the responsibility of setting up the next year's relay system.

And she's been "boss" ever since.

Her husband, Hal, often called W3EQZ, thinks Mrs. Curren is crazy for all her hard work. But as a radio enthusiast himself, Curren understands her dedication to the race.

His interest in radios is what got Mrs. Curren started in the first place, she said.

Few women are licensed radio operators. Of 280,000 operators in the country, only 10,000 are women. The radio license test is hard for everyone, Mrs. Curren said, "but especially for women because they don't normally take electronic theory in school."

Mrs. Curren attended a high school that offered a preparatory engineering course and she was enrolled in many of the science courses. She received added help from her husband so was able to pass the license

test without too much trouble.

Though it is a male-dominated field, Mrs. Curren gets little static from men operators. However, she added, "some men resent being corrected by a woman."

The shortage of women in the field is particularly noticeable when it comes time for enlisting radio operators for the Derby race.

"Since it's a women's race we try to get them involved," Mrs. Curren said. "We'd like it if we could get all women but there's not enough."

This year Mrs. Curren was able to find a few women along the route and she assigned two of them as chairmen of their stations.

Even with such high level organizational responsibilities, Mrs. Curren still views radio operating as a hobby.

"I just like to get on and talk to people and find out what they're like," she said.

Mrs. Curren gave the race operations another thought and admitted that she really loves it. "So many nice people I've known through the years I've met at the races."

She even takes part of her vacation time to work the race. The only thing you could call that - besides dedication - is W3GTC.

(From the Elmira (NY). "Star-Gazette")



Mrs. Curren keeps in radio contact with airports along the route of the Powder Puff Derby.

Looking in the wrong direction

by George Goldstone, W8AP

As everybody knows, the FCC is terribly busy. So busy that they haven't the time to enforce their rules in the Citizens' Band, where the kilowatt rigs are only exceeding the lawful power limit by 2000 percent; where call signs are ignored, and profanity and obscenity are part of the game.

Too busy, yes, indeed; and busy, would you believe, deciding that ham radio operators who furnish 'phone patch facilities to GIs in Viet Nam cannot accept recompense for their actual out-of-pocket telephone expense in making calls to the GI's family!

That, me lad, is "compensation, direct or indirect". Compensation for what? The amateur radio operator who runs a phone patch for an overseas serviceman is doing two things: He is creating a radio circuit with his amateur radio station from Podunk to Viet Nam, for which he received no compensation, either direct or indirect. In addition, he is using the telephone system to call the GI's family -- which is not operating an amateur radio station, but operating a telephone. If his actual cost of that call is reimbursed to him, he still has received nothing for operating his radio station.

So why the fuss? To find the answer, we suggest that the FCC send the bureaucrat who conceived this inquiry to Viet Nam for a 17-month tour, with amateur radio phone patches his only alternative to letter mail.

One has to look pretty hard to find a ham who is by any stretch of imagination receiving compensation for the use of his station facilities.

We did hear of an old timer out East who received an 88 foot tower installed in his backyard - in return for which he let the guy who gave it to him put a commercial 2-way antenna on top of the tower, above the ham antennas! On top of that, the ham was paid for space in his garage where the commercial transmitter sits. But sneaky as it may be, it still is a case of renting out a piece of your real estate, not your station.

So if some ham at the South Pole desperately needing some new bottles for his transmitter asks you to patch him through to Harrison Radio in New York - beware! Big Brother at the FCC may be listening!

If the FCC isn't really so busy; if they have the Citizens' Band under control; if they have some time left over for policing, how about tackling these real offenders?

(From Detroit (MI) Amateur Radio Association "Bulletin")

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SPECIFICATIONS

BANDWIDTH: 80 Hz, 110 Hz, 180 Hz (Switch selectable)
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CENTER FREQUENCY: 750 Hz
INSERTION LOSS: None. Typical gain 1.2 at 180 Hz BW, 1.5 at 110 Hz BW, 2.4 at 80 Hz BW
INDIVIDUAL STAGE Q: 4 (minimizes ringing)
IMPEDANCE LEVELS: No impedance matching required
POWER REQUIRED: CWF-2 . . . 6 volts (2 ma.) to 30 volts (8 ma.); CWF-2BX . . . standard 9 volt transistor radio battery
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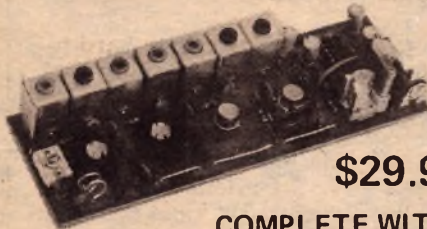
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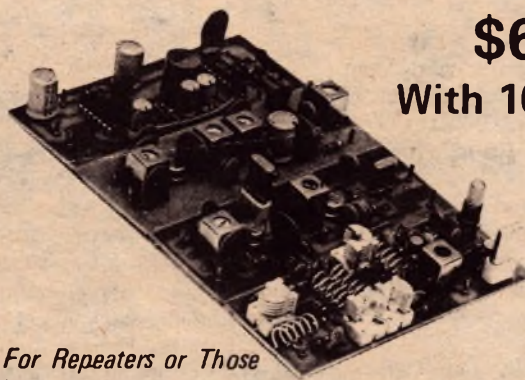


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NETS

Hams help motorists

by Ray Meyers, W6MLZ

One of the many public service functions performed by the Amateur Radio fraternity is that of rendering assistance to the travelling American motorist.

Operating in the east is a group known as EASTCARS, in the central states it is MIDCARS, and in the west, WESTCARS (West Coast Amateur Radio Service, Inc.).

WESTCARS is an organization of base and mobile stations with membership in nine western states, devoted to the public with a prime interest in public health, safety and welfare.

Normally operation is on the frequency of 7255 kHz from dawn to dusk with net controls scattered around the western states.

Several hundred WESTCAR members driving around the country daily keep in touch with base stations, net controls or other moving vehicles.

Traffic accidents which may require assistance from Highway Patrol units, ambulances, fire department vehicles or highway maintenance crews, are reported to net control, or the nearest base station, for assistance. These messages are quickly telephoned to the appropriate agencies, and help is on the way within a matter of minutes.

Traffic tie-ups during the rush hours are channeled to George Martin of Radio Station KNX, Los Angeles, or stations broadcasting similar traffic conditions in the San Diego, San Francisco, Portland or Seattle areas, so that the public may be alerted.

When band conditions permit, similar service is rendered to stations as far away as New Mexico, North and South Dakota, and Texas. Occasionally, someone in Idaho may relay a message from one of the MIDCARS units unable to contact a WESTCARS station.

Many a motorist has been served by WESTCARS. A number probably owe their lives to quick action by net members in obtaining an ambulance in accident cases or a case of sudden heart seizure.

Several California Highway Patrol headquarters have licensed amateurs operating an amateur station at CHP dispatch points where it is possible to tune in quickly on the 7255 kHz frequency to obtain details not provided in an initial message telephoned to the station.

Many possible forest fires have been averted due to quick action by WESTCARS members reporting blazes along the highways, resulting in quick action by local, county, state or federal firefighting units being dispatched to the scene.

Stranded motorists, including WESTCARS members, have been able to get word to family members at home as to why they are delayed or for obtaining the service of any of the well-known tow-truck operators.

Often a fellow member will personally

assist by bringing a gallon or so of gasoline to a motorist who happens to run out of gas a few miles or so from the nearest service station.

Members equipped with air conditioned cars will often assist some stalled motorist during the extreme hot weather by permitting women and children to sit in his or her vehicle until assistance has arrived on the scene.

QSO... Kudos to the Honorable Barry Goldwater (K7UGA), who happened to be in the right place at the right time. Barry, if you have not heard through the press or news broadcasts, dove from his yacht to save the lives of a man and woman who had been tossed from their speeding boat off the California coast. Barry is president of the Quarter-Century Wireless Assn. and often checks in with WESTCARS whether while operating aboard his yacht or in his car while in southern California.

(From the Los Angeles, Calif., "Herald-Examiner")

Western Public Service System

OPERATIONAL GUIDELINES AND GENERAL INFORMATION

PURPOSE:

The purpose of this writing is not to set forth rules and regulations, but to offer a guideline from which to work when there is a doubt in mind regarding procedure. There is no manual that will replace common sense and good judgment. They are acquired through practice and experience. It is for this reason that these suggestions have been written. They are not infallible and will be subject to change. Your comments and suggestions are welcome.

EFFICIENCY:

Successful service will depend on EFFICIENCY. All NCS should strive for a quick, brief and informative method of operation. Use relays whenever necessary. When selecting your relays, keep in mind the following:

1. Some people may be overeager to act as relays in time of emergencies or poor band conditions.
2. This will be confusing to NCS.
3. To alleviate this condition, the NCS should make sure that his relays identify by the the relay's CALL LETTERS, instead of just the word "relay." This will prevent NCS from picking up unofficial relays.
4. Identify according to regulations--identification of each brief transmission is not required and only slows down the operation. Avoid unnecessary repetitions in replies to stations using the frequency. We can be courteous, yet brief. IGNORE DELIBERATE QRM--comments only encourage such an interfering station.

BASIC GUIDELINES:

1. The NCS are requested to verify their roll calls with the Net Manager or the Assistant Net Manager prior to calling roll (please check one day previous to calling the roll, if possible).
2. Net Control will open the net on 3.952 kHz at least by 0200 GMT. Request North and South relays prior to 0230 GMT. Preamble and roll call will commence at 0230 GMT. Assigned Net Controller will pick up net from Roll Caller at 0330 (or earlier, if arrangements are made with Roll Caller).
3. Under the "buddy" or "partner" system

of Net Control, any arrangements may be made between partners to ensure roll is called each week. Net Operations continue until approximately 0500 GMT (see 17 below).

4. Net Controls, be familiar with the contents of the preamble. Do not read meaningless words--be aware of the procedures outlined therein, operate and enforce accordingly.

5. When an emergency or priority situation occurs:

- a. Request ALL stations stand by and take copy.
- b. Identify the station calling.
- c. Obtain the station's exact location or nearest landmark, highway marker, etc.
- d. Determine the exact type of assistance needed (ambulance, fire truck, tow, etc.).
- e. See that the proper authorities are notified.
- f. If unable to locate a station to handle immediately, then handle it yourself.

6. During the handling of a triple break (emergency) keep the net frequency closed. Acknowledge only those stations that are involved with the emergency.

7. Death messages should NOT be handled by WPSS at any time.

8. When heavy QRM is experienced on the service, DO NOT AT ANY TIME make derogatory remarks toward the interfering station. Encourage those monitoring to do likewise. If the QRM is prolonged, the net frequency may be moved plus/minus a kHz or two to lessen the QRM.

9. During heavy traffic periods, NCS should stand by, periodically, for mobiles and Seventh Area stations.

10. Listen before you talk. Use VOX--if possible--or short push-to-talk transmissions.

11. Give priority to weak and mobile stations.

12. The handling of routine traffic or phone patches on Net Frequency is to be avoided; however, at the discretion of Net Control, such traffic may be handled under special conditions such as an emergency, or under light traffic conditions.

13. WPSS is NOT a message-handling service, nor should messages be held for parties unless they are of an emergency nature.

14. Keep your traffic listings current. Check periodically to see that all stations listing traffic are still on frequency. If, after several calls, they do not respond, delete the listing. Check all listings frequently, but not at the expense of tying up the frequency during heavy traffic periods.

15. If a station breaks the service with improper procedure, handle his traffic and then politely inform him of our procedures. DIPLOMACY IS OF THE ESSENCE IN HANDLING PEOPLE.

16. In handling a large number of check-ins, NCS should say, "W6OAW, WB6GHS, please stand by, W6AWB go ahead." This lets the calling stations be picked up, also stations working will realize the need for brevity.

17. In the event you are in the position of Net Control and find it necessary to QRT and are unable to secure a replacement, do not feel obligated to remain on frequency. Simply close down the service. Chances are someone else will shortly come aboard and reopen it.

(Turn to page 26, please)

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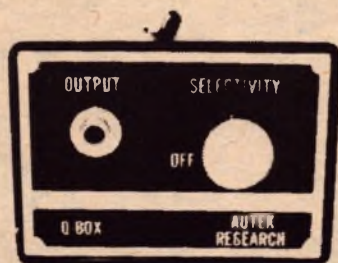
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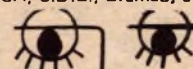
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Our Hobby *a new direction?*

Mindless diversion or-meaningful activity?

by Armond Noble, WB6AUH

Publisher, *Worldradio*

(Delivered as keynote banquet address at the Fresno, California, Amateur Radio Convention.)

It may not come as any surprise or sudden knowledge that most of the public has a rather poor image of Amateur Radio.

As with most images, they are brought on by the actions of the viewed. The image of used car dealers, for example, didn't happen by accident--they brought it on themselves.

This was in a newspaper article that was recently syndicated around the country:

"The average Amateur Radio operator, or 'ham,' is sometimes thought of as a self-indulgent adult who, having outgrown his toy trains and other childhood gadgets, spends most of his time fiddling with switches and dials, his ears filled with static sounds and scrambled call letters..."

Now where did they get that idea?

And why do so many look at amateurs as strictly "attic tinkers"?

Let's look at one aspect of Amateur Radio, one that if we did it in public we would be put away:

You are at that international crossroads, the Honolulu airport. Sitting in a chair is a Japanese fellow. You sit down and say, "Hello. My name is Bob."

He says, "My name is Hiro and I hear you fine."

And Bob says, "I hear you fine, also. I would like to talk to you, but others want to."

So he jumps up and Bill sits down, and they go through the same thing... and then Jack, Paul, Jim, etc.

If what happened on the ham bands happened in real life, the airport guards would haul the whole gang off to the funny farm.

It may well be that all these certificates have been the worst thing to hit Amateur Radio. People--living, breathing people, just like you--are reduced to mere contacts, "got 'em," and we trade their personalities for a mere piece of cardboard.

"Can't talk... so many calling you." They need a piece of paper--isn't chatting with someone reward enough in itself?

Now, are there awards for visiting every state, or every country, or for going to 100 countries (which certainly is a far greater feat and far more illuminating than working 100)? Or an award for talking to ten residents of Merced, California?

Is there any other avocation that is so award crazy? Even to the point of awards for chasing award-chasers...

Do you get an award for, in stamp collecting, let's say, having collected 200 German stamps?

Sure, awards and certificates are fun, but

it seems now they are more important than communication. Maybe we could have doubled the attendance here if we had given an attendance certificate, or one for the most people we said "Hello" to--and that would then be given only the most hurried, minimal exchange.

If Amateur Radio keeps going like it is, eventually with code wheels, tape recorders and computers, we could take the operator completely out of it--just come home at night and see who we had worked.

But there is another side of Amateur Radio that cannot be automated, and we'll come to that later...

What is the image we present to outsiders? When they listen to the bands, they come away with the impression of someone going to visit someone else and spending all night talking about the car and the highway that got them there. One sociologist, listening to the bands at my home, came away with this: "My tower is taller than your tower."

Maybe years ago, when everything was home brew, and it was a minor miracle that anything worked, everything was a mystery, it was justified. But today? Is there more?

In a local ham store, one ham I know said to me, "That public service stuff in your paper is all well and good, but the important thing in radio is technical contribution."

When I asked him to name the last technical contribution made by an amateur, he couldn't do it, nor the next-to-last one. I finally asked him to name any contribution ever made by an amateur.

So this fellow, who is very proud of his membership in the IEEE, thought for a while and said, "Well, in the 1920s we pioneered short wave bands."

Remember, the 20s were 50 years ago. Is ham radio going to live in the past, or the present, or its promise of the future?

Let's be honest--the only reason the hams moved up in frequency is that the government forced them to do so. To be brutally frank, the average amateur has as much chance of making a contribution as an airplane buff has of building a 747 in his basement.

Contribution is not to be confused with the pleasant pastime of homebrewing a rig copied directly from the pages of Ham Radio Magazine. A contribution is truly advancing the state of the art, and all advances, the tube, the transistor, nuvistor, ICs, SSB, etc., did not come from the amateur ranks.

Possibly the ham should shift gears, search out new areas where he or she really can contribute.

Don't expect that your getting an 807 to operate on 1296 MHz is going to make the front page of the New York Times, or that Walter Cronkite is going to tag any such gem with, "That's the way it is..."

But Paul Harvey has told the nation that U. S. hams saved the life of a child in Ecuador. Chicago newspapers told of it when hams brought a child there from South America for medical treatment. The Los Angeles Times recently bannered on the front page the story when hams got medicine to Guatemala to save a life. Everyone can understand actions like these, and they elevate us from the ranks of attic tinkers.

And all amateurs bask in the glory of the few that do the good works...

Ham radio may have a new role. During the Depression, a ham license was a step toward learning radio, and the possibility of a precious job; after World War II, a ticket helped one in the booming television and electronics fields.

Possibly now, though, it will turn into an aural passport and lead people into an awareness of the world around them... an interest in geography or languages, possibly leading our young people into careers with the State Department or other agencies, public or private, foreign trade, journalism, etc. Amateur radio can bring one to become an internationalist, and open up all the pleasures that this world has to offer.

On 75 meters the other night, I was chatting with a fellow who was licensed when he was quite young and liked DX, but to him the contacts were more than just prefixes--he looked up the countries in his atlas. From that beginning he is today a professor of geography at California State University, Sacramento.

But today there is an illness in Amateur Radio. It is the "I'm only interested in the technical" malady... and sad.

Maybe those afflicted with this disease think they are saying something... but let's look at the broader people who, I find, accomplish more.

I know a leading engineer at Jet Propulsion Labs--when he goes home, he uses his radio to help an orphanage and school in Mexico. A top avionics engineer at Grumman in New York uses his radio to help missionaries. One of the top microwave engineers in the world does not say, "I'm only interested in the technical," and Carl Sletten didn't stop there, either. He came up with the foreign language QSO course so hams can learn phrases in German, Spanish and Japanese to use on the ham bands.

One fellow I know--he's in charge of all the electronics for the FAA at a major airport--works on the ham bands with Partners of the Americas in getting medical assistance, drugs, information and messages to the Latin American countries.

The director of Partners of the Americas recently said of that ham, "He believes deeply in the philosophy of communications as a means of promoting understanding and good will among people of the world--he lives what he believes."

That's quite a compliment, and for a technically-oriented person... but he, and the others, don't stop there...

Let's look at those who have really made "technical contributions," such as the inventor of the tube, Lee DeForest. He saw radio as a means of bringing information and entertainment to everyone.

Probably the most gifted was Major Edwin Armstrong. You might say he knew a little--he invented the regenerative circuit, which would have been enough for any one man. He then went on to invent the superheterodyne receiver. He could have rested on his laurels after that, but he went on to invent FM. The reason he did that was not to watch the meter needles flop back and forth--he was dissatisfied with the way classical music sounded on AM, and he wanted to find a way to make it sound better.

Armstrong was a bit more than a screw-driver jockey, and he was never heard to say, "I'm only interested in the technical."

(To be continued.)

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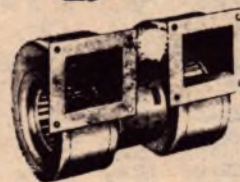
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A Man For Others

The Story Of Ned Carman, WØZSW

by Sister Alverna, WAØSGJ

Public service is amateur radio's privilege and duty, a creed that was almost a religion to Ned. But equally close to his heart were the physically handicapped. His circle of friends grew slowly, steadily:

"ZSW had talked to me many times from his mobile, and then one day he stopped to see me. We talked books the first visits he made. Always the diplomat, Ned's charm was famous at our house because of the way he won our Doberman's affections by exclaiming at her beauty.

"Gradually Ned came to know and visit many handicapped people. When Eddy wrote me that she'd like to try for a ham ticket, I wrote Ned, asking him to drop in on her.

"He did, and the rest is Handi-Ham history." Bob Russ, KØGKI (Good Kind Indian)

He ... Melted My Doubts

Handi-Ham Prima Donna, Edna Thorson ... muscular dystrophy keeps her in a wheelchair bodily, but here's a dynamic lady indeed, known to the Handi-Hams as "the tiger that purrs". Active in many community events, she admits there are tired days she'd like to ride on her disability and take a more passive role. But her feminine iron will plus a discerning Mom had kept her in a delightful mainstream to the benefit of many. Simple and direct, her appreciation of Ned:

"In 1966, early December, Ned dropped in to see me, sent by KØGKI. From then until the following summer he stopped at least every two weeks to note my progress with the receiver, tape recorder and books he had found for me to use. He ALWAYS found progress, always something to pat me on the back for -- and after he left I was fired up to do battle with the theory again. His confidence and enthusiasm melted my doubts concerning my ability to master a totally strange field. He was great." Edna Thorson, WAØRRA. (Ned had once commented: "When our God sketched Eddy, he crumpled up the carbon paper.")

The Humble Beginnings

By now, Ned is getting his friends together. Our story from now on is mainly Handi-Ham history; we should probably start with some thoughts from the president:

"In his last editorial to the FLYER, perhaps only days before his death, Ned Carman wrote with



Ned and Erdene Carman, 25th wedding anniversary

nostalgia of the humble beginnings of the Handi-Ham System and mentioned a few of the early calls and names. With considerable 'nostalgia', I too can recall my first visit to the Olmstead County Court House in Rochester when Ned's first group was having an on-the-air round-up. At the operating position that Saturday afternoon was Ned; Kevin Fjeldstead, a young blind boy, now WAØUWW; Helen Swanson, now WAØSVD; Alta Mitchell, now WAØVTZ; your reporter, Ward Jensen, WØTLE; and his XYL, Elma. Helen and Alta were in wheelchairs.

"Now Alta has become vice-president of the system, WØTLE is Chairman of the Board, and Helen has become internationally famous for her DX work and helpful phone patch activities. After the round-up, Ned had a telephone call from Sister Lauren, WAØRRJ, inviting us all out to St. Mary's for a chat and a snack, and a look at her shack. Upon hanging up the phone and telling us of the invitation, Ned left and came back wheeling an oxygen tank with some accessory gadgets ... it was then I noticed that Helen had a tracheotomy. This Ned



Jack Maus, WØMBD, standing left, and Ned Carman, WØZSW, standing right, with FCC officials at Camp Courage Ham Shack

carefully unplugged and applied suction to clear the air passages, after which he placed an oxygen mask over her face to permit her to inhale for several minutes during which time he told us how Helen must be confined to a rocking bed during her sleeping and many of her waking hours. Next, he rolled the equipment out and loaded it in his car, came back to wheel Helen's chair to the car; Kevin followed, wheeling Alta. Ned lifted the girls into the front seat of the car, put the wheelchairs into the trunk and soon, we were all riding out to St. Mary's, where the procedure was reversed for us all to go in for a pleasant visit ... We just can't say enough for the graciousness of Sister Lauren, WAØRRJ, or for her ham activities either, for she likewise has become very well known for her overseas and South American phone patches between patients and their families. We are so sure that many readers of Worldradio are or have been in radio contact with the folks we tell about that it amply justifies reinforcing Ned's moment of 'nostalgia'." Ward Jensen, WØTLE.

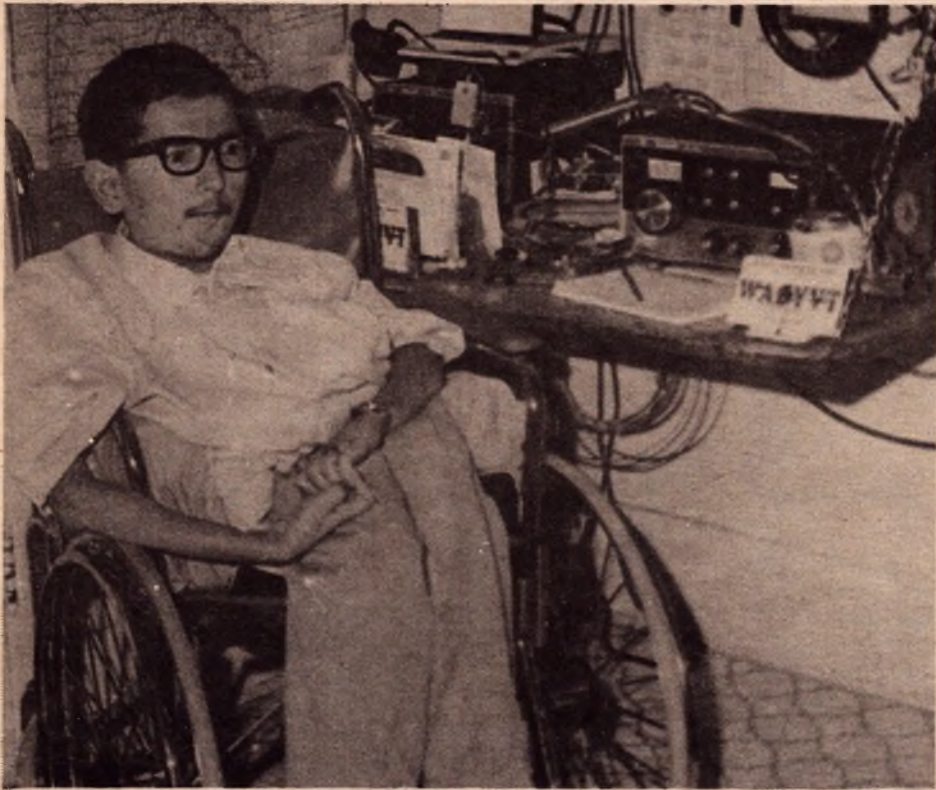
Nuns Come Into the Picture

Civil Defense was well organized in Rochester, Minnesota, where the clinic doctors and other civic leaders co-operated closely. Areas for refugees and injured were set up at the Court House, the state hospital, and the Franciscan Motherhouse at Assisi Heights. Radio equipment was maintained at each of these stations. The solution to the problem of keeping the Motherhouse station in operation was to have a nun operator. Sister Judith Simon, WAØQVN, became the first Sister to hold a General Class license. Sister soon recruited others. The Sky Room Shack at St. Mary's also did weather watches and is still manned by Sister Lauren, WAØRRJ.

That explains why, in October, 1967, five Franciscan nuns began taking code and theory classes at the Court House. Among the students were three paraplegic women and a blind boy -- all eager and challenged. The big jovial man who brought them to class also helped with the instructions, which he carefully doled out in tasks that could be mastered in few to several tries. The nuns also felt Ned's friendly interest, and they soon found in this group of radio beginners a very good fellowship indeed.

He Challenged Me

Besides his Rochester students, Ned continued to encourage others in outlying areas. Karl Koppelman,



Le Roy Youngs, WAØYVT

WAØTFC, writes: "Ned called on me in the Spring of 1967 to say he had come on suggestion from MiS-CCA (Minnesota Society for Crippled Children and Adults). I had code tape from a friend and had purchased a receiver. My first contact over radio was December 19, 1967. Two years of work followed, Ned helping me on frequent visits. I am grateful for Ned's continual challenge for me to represent LeSueur County on the air."

"Generosity, patience and courtesy in radio work for the handicapped" was the tribute given Ned Carman by the Rochester Chamber of Commerce in 1967. Radio Station WCCO cited him as Good Neighbor Award Winner the same year. Ned was adroit with such honors -- he pointed them away from himself, focused the light on his cause.

The Handi-Ham System of Minnesota

Is there anything more exciting than having a dream turn into a hope? In that radio classroom, with nuns and handicapped persons forming friendships, Ned foresaw a working relationship that could be mutually beneficial. Handi-Ham students were generating enthusiasm among relatives, friends, the public. An organizational meeting was held February 10, 1968. Officers starting work after this meeting: Charlene Mott, WAØQWE, and Helen Swanson, WAØSVD, Co-chairwomen; Ned Carman, chief co-ordinator; Sister Lauren, WAØRRJ, treasurer; Don Johnson, WAØEPX, historian;

Wes McAnally, KØHGO, equipment co-ordinator; Sandy Carlson, WAØTLH, personnel and equipment manager.

Sister Alverna, WAØSGJ, was elected secretary in her absence to which she reacted with understandable dismay and indignation. Ned used a stock soother of his -- "It really won't be so much work, and I'll help you." Help he surely did, but the work grew like a healthy child. The project attracted followers who needed certain help to be able to follow. It has been demanding and rewarding in a way only those deeply involved can know. Physically handicapped people with a cause are appreciative, sensitive and generous. Life's reverses have disciplined them to maintain authentic value scales and a rugged sense of humor.

As director of occupation activities for the aged and infirm Sisters, Sister Alverna fell quite naturally into the motivating, helping role. The Sisters have been proud to have the radio station next to their work room, to have Handi-Ham visitors and they have regarded Ned as a fairy god-father who breezed through the department, stopping to greet them and admire their work, frequently bringing records from the library for their enjoyment.

Once his gift was Molly, an inimitable Pekingese (too much a rover for Anne's home). Her antics and welfare absorb many an empty moment, and her staccato barks

have been heard often in the background of the Voice of Assisi. The Activities Department of Assisi Heights had become very active, and the Handi-Ham System had a home.

Following a time as secretary, Sister Alverna's duties became those of student progress director. Handi-Hams are most welcome at Assisi Heights Ham Shack; students and prospective hams especially so. Sister handles traffic for MARS, is an active member of the International Mission Radio Association, and handles much of the correspondence with students and applicants. At this writing, Sister has again been elected secretary.

Hams Are Altruists.

This brave new organization soon had "Promises to Keep". Transmitters and receivers were sent in by the members of PICONET (Public Interest Convenience and Necessity Net), a ham emergency network covering thirteen counties in southeastern Minnesota, and proving it was well named by the generosity of its members who really cleared their shacks in behalf of their new brother hams. These receivers and transmitters were loaned to prospective handi-hams. Loans of cw transmitters were made to those getting novice licenses, to be exchanged for those capable of phone operation when general class licenses were earned.

Dreams . . . to Hopes . . . to Reality

Success! Edna Thorson, WAØRRA; Charlene Mott, WAØQWE; Helen Swanson, WAØSVD; Alta Mitchell, WNØVDA and Scott Suddendorf, WAØVUA, were the first to gain tickets. Scott writes: "My first encounter with Ned Carman resulted from my reading a newspaper article in September, 1967-- 'Handicapped "HAMS" Promoter Is Honored'. The gist of the article was Ned's assistance to handicapped persons, instructing them in the use of amateur radio facilities. My life had become somewhat monotonous and useless because of my total disability from multiple sclerosis. I called Ned that same day to get more information and he offered to meet me at the Clinic after my physical therapy treatment the next afternoon. I'll never forget my feelings when he walked into that small examining room -- his presence seemed to encompass the entire room and everyone in it -- my wife, my children and myself. Little did I realize at that meeting how much Ned would encompass the rest of my life.

He introduced me to ham radio, encouraged, assisted and never lost patience with me during the next two years when I finally received my amateur radio license. No longer is my life monotonous and useless, thanks to that generous, patient and extraordinary man who took the time to 'care' about me."

Scott brought a lovely people-and-fun-loving XYL into the Handi-Ham circle. Dorothy makes it possible for Scott to be an active ham; she cuts stencils for the FLYER and is fun queen at ham gatherings. She likes ham radio. . . "One of the best things Scott ever did was get into amateur radio, because when he's on the band hamming it up, I get a little extra time . . . for just breathing."

Handi-Ham Round-Up

"On the Air" on 75 meters each Saturday afternoon were all available members of the steering committee of 14. Conversations concerned students, problems, progress. It was advantageous for the students to listen on their receivers. Noah's Ark, a pet name the Handi-Ham students had given the shack at the Rochester Civil Defense Station, was their favorite gathering place.

(Continued next month)



Ned Carman, WØZSW, in 1968



Reach Out!

Hams Help

by Alex Burr, W5QNG

The Mesilla Valley Amateur Radio Club, of Las Cruces, N. M., again this year provided radio communications for the running of the Billy the Kid Enduro, a cross-country endurance rally for motorcycles run on Labor Day weekend.

A death and an unusually large number of injury accidents on the extremely rugged 100-mile course laid out through canyons and the desert northwest of Las Cruces this year placed heavy demands on communications.

Work for the club started early in the week when Dick Carroll, WB5HWK, and Carl Bundschuh, W5OPN, started lining up volunteers to man the three remote check points located well off any paved roads. Saturday, the two club coordinators met with enduro organizers to finalize communication requirements, while Chuck Lewis, WB5DCM, drove up a small mountain to repair a broken antenna on the club's two meter repeater, WR5ABG, a .16-.76 machine, which was to relay all traffic.

The event, a cross-country rally rather than a race, had some 300 entrants, with many times that number of people involved. Each entrant had to maintain a set average speed between check points, and was penalized for arrival too early or too late. The course led from its campground headquarters west of town out into the desert, down arroyos and up canyons, through terrain impassable even for four-wheel-drive vehicles. Each of the three check points was manned by an amateur with a two meter FM transceiver. They reported back through the repeater to the rally headquarters base station.

Sunday, the day of the event, dawned clear and soon became hot--usual for the time of year. By 7 a. m., Dick Carroll was on his way to operate the base station, set up in a van at headquarters. Dudley Wilson, W5OLF, operated another base station, with telephone facilities, in Las Cruces. Karl Larson, W5NQC, manned Check Point One; George Stewart, K5YRY, and his wife Rose, WA5ALX, set up Check Point Two near their camping bus; and Paul Watsen, WB5FTR and W5OPN, drove in a Jeep to Check Point Three.

The motorcyclists started off in small groups at appointed times. As the day wore on, getting hotter all the time, it was quickly apparent many starters would be unable even to finish the first lap of the two-lap event. Some got lost. Many suffered mechanical trouble because of the extremely rough paths and abandoned their bikes to walk off across the desert. Other riders carried inadequate water supplies and soon placed a heavy drain on water kept at the check points.

Before the afternoon was half over, the situation had become very serious. One rider was reported to have suffered a heart attack up a narrow canyon, and many riders were

forced to abandon their bikes because of mechanical trouble or heat exhaustion. Several riders were injured in falls or while passing too close to large rocks.

At this point the rally was stopped, while a helicopter was requested to bring out the heart attack victim and the sheriff's department was asked to bring out some of the incapacitated riders. With my mobile amateur station, I went to the hospital to meet the helicopter with instructions for it to go to rally headquarters for additional water for Check Point Two, nearest to most of the heat exhaustion victims. Gus Miller, W5YGR, loaded his four-wheel-drive vehicle with water and started for the check point.

Clacy Leonard, W5HDR, whose wife was in the hospital, relieved me there and then drove back to rally headquarters a rider who had helped bring in the heart attack victim. He had to report, unfortunately, that the stricken man was dead on arrival at the hospital.

By 5 p. m., check point personnel had been ordered to come in; within a half-hour, all had reported reaching paved roads. It was even later, however, before Dick Carroll closed down the network and headed for home.

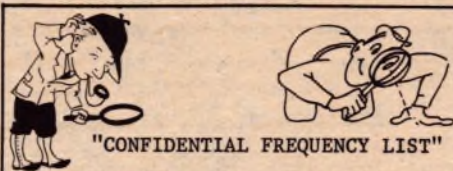
Topstar (Continued from page 3)

for many years by a number of volunteer operators in Ottawa, but, with the re-locations of the servicemen's home base from Ottawa to Kingston, the traffic load is changing to the latter city. Kingston is served by VE3RCS at the signals base (Vimy Barracks to those old enough to remember the Royal Canadian Corps of Signals). In Ottawa the net is manned by a rotating crew consisting of Ron Haines, VE3-DNH (who has done his bit in the Arctic); Don Haycock, VE3BDO (an old northern hand himself); Vern McCourt, VE3PY; Charlie Grove, VE3CT; Ron Belleville, VE3AUM (who is also familiar with the tundra and ice country); and Al Stinson, VE3ANT.

The TOPSTAR Net is on every night except Sunday and can be found on 14.165 MHz at 2000 to 2300 Zulu Time. Its success is due to the devoted interest of these operators and the others who from time to time in the past participated at this end.

At the other end of the link, TOPSTAR takes in regular callers from Alert, Eureka, Isaacson Island and others. There is an intercom net between these posts stretching from Inuvik to Frobisher. The "Arctic" Net operates 14.125 MHz, Wednesdays at 2000 Hours Zulu Time. Control is VE8AE.

(From "Groundwave/The Manitoba Amateur")



by Bob Grove, WA4PYQ

Callsigns/frequencies of unusual radio stations outside the ham bands: RTTY, USAF, USCG, AMVER, Ice Patrol, VOLMET, Flying Doctor, LF Beacons, Spy & Numbers, Interpol, CAP, Coastal CW, etc.

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PHONETICS

by Jack Shepherd, W8OMY

With all of the interference, man-made and otherwise, on the ham bands it is sometimes very difficult to make out the call letters of a station that is calling. One of the ways the amateur tries to overcome this difficulty is through the use of phonetics, using a word to represent each letter in his call.

Very early in Amateur Radio there was developed a phonetic alphabet, using standard names to represent the letters. For example, the letter "A" might be signified by the name "Adam," the letter "B" by the name "Baker," and so on. The only trouble with this system was the difficulty of getting other stations to use the same alphabet. Many amateurs who formerly had been in the military service used the phonetic alphabet they had learned there, which differed in some instances from the amateur one.

In addition, many amateur stations whose call letters happened to lend themselves to other words would use phonetics of their own choosing. Thus a station with call letters "W8ABO" might send his call phonetically as "W 8 Always Beautiful Ohio," while one whose call ended in the letters "NLM" might facetiously refer to himself as the "Nasty Little Monster."

The main difficulty with such phonetics is that they are primarily meaningful when the operator at the other end has English as his native language. If he speaks French or German he may have a hard time understanding the phonetics. And as Amateur Radio ventured beyond the United States, and amateurs began talking to others all over the world, the use of individual phonetics declined.

Some amateurs tried to circumvent the problem by using place names in their calls, so that a call ending in "SFG" might be signed as "Spain, France, Germany." However, this system creates a problem, since country and place names are not the same in many instances. For example, the word for "Germany" in French is "Allemagne," and this makes for complete misunderstanding.

In the late 1950s the problem began to be solved with the creation of a new International Civil Aviation Organization alphabet, one agreed on by all countries. This ICAO alphabet, as it is called, was adopted by the military, and has become something of a standard in amateur circles also. Not only is it well-known abroad, but the words representing the letters can be pronounced by almost any foreigner and still be understood in English.

Amateurs all over the world use the ICAO alphabet. Here are the 26 words of that alphabet: Alpha, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliette, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo, Sierra, Tango, Uniform, Victor, Whiskey, X-Ray, Yankee and Zulu.

So if you hear a station on the ham bands identify himself as "Whiskey Eight Alpha Bravo Oscar" it will simply be W8ABO using the very latest phonetics (But it's still not as distinctive as "Always Beautiful Ohio").

(From the Columbus, Ohio, "Dispatch")

note:

If this copy of WORLD RADIO came to you in the mail and you are not a subscriber, it was a sample copy sent to acquaint you with this publication. If you like it, we cordially extend an invitation to you to subscribe.



by Perry Klein, K3JTE

AMSAT 1973 Annual Report

AMSAT, the Radio Amateur Satellite Corporation, was established in 1969 to provide amateur satellites and satellite experiments for the Amateur Satellite Service. The purposes and objectives of the corporation, as given in the Bylaws are:

- A. To provide satellites that can be used for amateur radio communication and experimentation by suitably equipped amateur radio stations throughout the world on a non-discriminatory basis.
- B. To encourage development of skills and the advancement of specialized knowledge in the art and practice of amateur radio communications and space science.
- C. To foster international goodwill and co-operation through joint experimentation and study, and through the wide participation in these activities on a noncommercial basis by radio amateurs of the world.
- D. To facilitate communications by means of amateur satellites in times of emergency.
- E. To encourage the more effective and expanded use of the higher frequency amateur bands.
- F. To disseminate scientific, technical and operational information derived from such communications and experimentation, and to encourage publication of such information in treatises, theses, trade publications, technical journals or other public media.

Membership in AMSAT is open to all radio amateurs and other interested persons. AMSAT encourages the participation of all interested individuals in its activities and invites licensed amateur radio operators of all countries to engage in radio transmissions to the satellites. Membership is international, and currently totals over 954 members and 60 member societies in 46 countries, representing a growth in membership of 47 percent since the OSCAR 6 launch in October 1972.

Accomplishments for the Year 1973

The most significant accomplishment during 1973 was the continued successful operation of OSCAR 6, launched on October 15, 1972. With the exception of a drastic drop in output of the 435.1 MHz beacon since January 10, 1973, and the loss of output from one of the six solar panels, the spacecraft has continued to work well. A problem of transient switching of the satellite's functions, including the intermittent switching of the two-to-ten meter repeater on and off, continues to be present but has been largely overcome, at least in some parts of the world, by the intensive use of ground control stations. After some months of preparation, command stations in Canada, Australia, New

Zealand, Germany and the United States are now reportedly prepared to provide the degree of control necessary to maintain the satellite in its desired operating mode.

During the year, under a contract from AMSAT, curriculum material for the use of OSCAR in classroom instruction was prepared by the Talcott Mountain Science Center in Avon, Connecticut, for distribution to schools. This work has now been completed, and one class unit has already been distributed to educators throughout the United States. The American Radio Relay League has assumed the responsibility for administering the amateur satellite education program, and will also be assisting in the publicity and international aspects of amateur satellite activities.

In March 1973, a series of demonstrations of the use of OSCAR terminals in classrooms was conducted in Little Rock, Arkansas, as part of a NASA Community Involvement Program.

OSCAR 6, in its first ten months of operation has been used by approximately 1400 amateur stations, nearly half of them in the United States. Approximately half of the 1400 stations on the official AMSAT "OSCAR 6 Users List" have been confirmed by QSLs or written reports from these stations. The other half were compiled from two-way QSOs reported on OSCAR 6 communication report forms received by AMSAT. (Reports of stations heard rather than worked are not included in this compilation.) It appears from incoming reports that between 100 and 200 new stations are coming onto the satellite with each passing month, but that some of the original stations are no longer using OSCAR 6. As of early August, the ten countries with the largest number of users of OSCAR 6 were Germany (126 users), England (83), Japan (72), France (63), Australia (51), Canada (46), New Zealand (39), Sweden (35), USSR (23), and the United States (around 640). These countries represent about 85% of the calls of stations reported using the satellite. Stations in 64 countries have been operating successfully, and amateurs in at least five other countries are known to be preparing for operation.

Among the interesting and unusual operations reported with OSCAR 6 are DX-peditions by FP8AA; V. A. C. Labega, PJ7VL; PJ9JT; and ZKITA; automobile operation by Fred J. Merry, W2GN; P. J. A. Gowen, G3IOR; and JAIVDV; and aeronautical mobile operation by David A. Clingerman, W6OAL. V. H. Jacobsen, OZ7-DX, reports preparing for maritime mobile operation from the "Dana", a Danish research vessel. RTTY operation has been reported by G. N. Long, VK3YDB; G3CUO; David A. Clingerman, W6OAL; and S. Thomas, Montgomery ARC, WA3EWJ. Don C. Miller, W9NTP; Gordon P. Howlett, WA9UHV; and Christian Lingen, SM6OH, all reportedly have been active on slow-scan television, and Elwyn R. Angle, WA6GUY, reports successful facsimile transmission to Edward L. Arnn Jr., WA3-FVG/6, via the satellite. In addition, SSTV and audio tone ranging tests have been conducted by Karl Meinzer, DJ4ZC, who uses the data for satellite orbit determination. Finally, all fifty U.S. states have been worked and confirmed by Jack D. Colson, W3TMZ, who qualifies for the first OSCAR Worked All States award.

Current Activity

In support of OSCAR 6 operating activities, a number of AMSAT nets have been established throughout the world. These include the international AMSAT nets meeting Sundays at 1800 GMT (14, 280 kHz) and 1900 GMT (21, 280 kHz), the North America East Coast AMSAT Net meeting Mondays at 9 p. m. EDT (May through October) and 7 p. m. EST (November through April) on 3855 kHz, the North American West Coast AMSAT Net on Mondays at 8 p. m. PDT (3850 kHz), a European net on Sundays at 0930

GMT (7070 kHz), another European net after passes on ON days (3780 kHz), and other nets on 75 meters in Japan and New Zealand. These nets have proved an excellent means of communicating changes in the OSCAR 6 operating schedule, co-ordinating special satellite activities and experiments, as well as providing a forum for satellite users to compare notes on their operating activities.

The OSCAR orbital predictions generated by several different groups throughout the world have proved generally quite good. Using data provided by NASA, it was found possible after the initial two to three months of tracking experience to determine OSCAR's orbital period with an accuracy of ± 0.0001 minute, corresponding to an error of ± 0.1 minute after 80 days. Orbital predictions provided for WIAW bulletins, for example, are now generated for five to six-month periods and maintain an accuracy of better than $\pm 1/4$ minute.

In addition to the nets already mentioned and information relayed by bulletin stations, AMSAT maintains a telephone "hotline" (now at a new number in the Washington, D. C. area: 703-938-5678). Weekly recorded bulletins on the orbit and other information can be obtained by calling this number.

Turning now to other current activity, AMSAT's Board of Directors on June 30 authorized an acceleration of the AMSAT-OSCAR-B satellite project for completion in time for launch during the first quarter of 1974, and authorized additional expenditures (estimated at between \$38,000 and \$40,000) for the project. The required additional funding, which covers the salaries of two engineers and two aerospace technicians employed full-time by AMSAT, as well as funds for needed space-qualified components and ground support test equipment, is covered entirely by special funds provided by ARRL and individuals who have designated their donations specifically for the purpose of completing the A-O-B spacecraft as rapidly as possible. General membership dues and general donations are not being used to pay salaries.

Assisting with A-O-B development are several groups in addition to the Washington-area AMSAT members. These include the newly-incorporated AMSAT Deutschland E. V., AMSAT's affiliate in Marburg, Germany (under the leadership of Dr. Karl Meinzer, DJ4ZC, and Werner Haas, DJ5KQ), WIA-Project Australis in Melbourne, Australia (particularly Dr. Peter Hammer, VK3ZPI), the Jet Propulsion Laboratory Amateur Radio Club and San Bernardino Microwave Society in southern California, and a group headed by Larry Kayser, VE3QB, in Canada. Other individual AMSAT members in other locations are also involved. For example, John Goode, W5CAY, is constructing another Codestore unit.

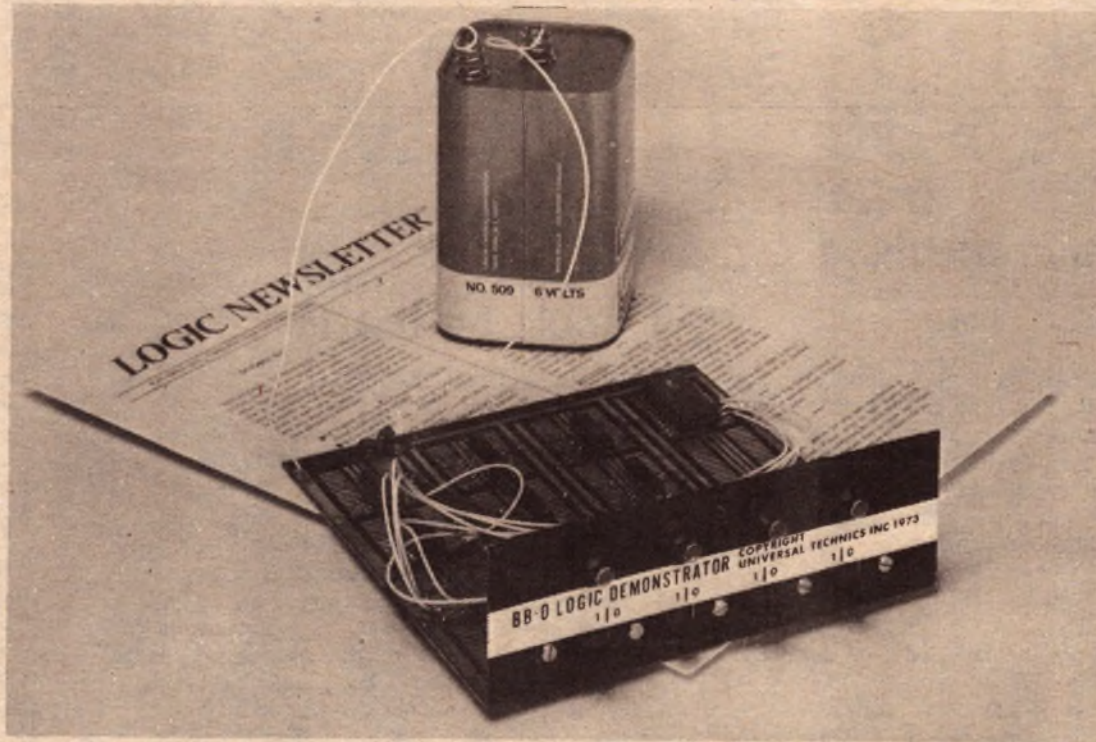
Future Activity

AMSAT's activity during the coming year is expected to continue to focus on the OSCAR 6 and A-O-B satellite projects. Concurrently with this activity, AMSAT is exploring with WIA-Project Australis and AMSAT Deutschland, the development of new satellites to be constructed by these groups using some AMSAT-provided A-O-B series hardware, along with new communications repeater experiments. Additional projects showing excellent progress toward use for future OSCAR satellites include a new spaceframe structure under development by Project OSCAR, Inc. in California, and 144-to-435 MHz linear repeaters under development in Germany and Australia.

In addition to technical activities, efforts are now underway to secure funds for continued AMSAT projects, directed not only toward providing more advanced satellites of the A-O-B series, but also toward developing the capa-

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the repeating machine

by Herbert Lipson, W8FBH

Since driving a car takes up a goodly portion of my daily chores, and to find time to do any operating at home was quite difficult, I picked up one of the two-meter FM machines and installed it in the car. I figured this would enable me to get in a little operating time as I cruised the expressways.

Gentlemen, if you haven't tried it, it's a different world. It's a new way of life for us "low banders" who are used to 80, 40 and 20.

First, it's a sort of surprise. Remember when the few times movies showed ham radio in action, the signals came out broadcast quality with no QRM, whether the signals came from across the street or across the world? Well, this is the first surprise. Within the range of the repeater, all signals are clear, without QRM, and excellent voice quality. Of course there is a small percentage of maladjusted rigs, fringe area transmissions, and assorted faulty microphone techniques, but by and large the quality of reception is excellent. The second surprise is the fact that you can carry a small handful of handy-talkie with you where ever you go, and be in instant communication with anyone in a 30 to 50-mile radius.

Then there are the drawbacks. It is necessary to learn Repeater Procedure and Etiquette. There are certain technical features built into repeaters to comply with FCC regs and to assure everyone a fair chance to use them. If you talk too long, you get cut off. If you don't pause before you come back to a caller, you might cut someone off who has emergency traffic. You must be alert for "squelch tails" and other assorted signals.

There is a new vocabulary. Have you ever been "destinated"? Someone apparently decided that reaching one's destination could be abbreviated as "destinated," and now it has become part of the language. All through the day you hear conversations come to an abrupt end because one or the other station has "destinated" and must leave the air.

And then, there is the party line aspect. Many of us are not inclined to talk with everyone, so we listen. Since there is only one channel, at any given time you might have up to 50 sets of ears listening to your voice. But the effect, in your own private car, is as though you were connected by private line telephone, and you tend to get intimate with the station you are working. It takes supreme mental effort to keep your conversation innocuous enough so that you don't blurt out something you don't want the entire tri-county area to know about.

At odd moments, especially late at night, the channel seems to sound like CB, when the sillies get on and spout nonsense to each other. It's all very legit--everyone identifies

and observes procedure, but the topic of conversation has no redeeming social value.

When used seriously, the repeaters have great value. We have guided many a ham traveler through our maze of expressways, and have heard many calls requesting assistance. There is the ability to contact your friends from anywhere by means of the little hand-held jobbies by their elbow (Dick Tracy style). There is the security of knowing that someone is always monitoring in case you need emergency help. And there is the pleasure of making new friends as you travel.

All in all, I like it, even at the risk of being dubbed an appliance operator.

(From the Detroit Amateur Radio Assn. "Bulletin")

it could be better

by Clem Quinton, K6TMH

I may step on a few toes, but it is not my intention for any of the ABM (WR6ABM, and the Grizzly Peak VHF Amateur Radio Club, Inc.) members to take offense. There are, however, several points in the operation of ABM that should be re-examined and possibly some toes should be stepped on--if you feel that some of the following points mentioned are aimed toward you, please take it as constructive criticism, but please take it to heart and try to correct the bad habits mentioned.

First of all, WB6AAE/WR6ABM has been on the air since October, 1962; many of the old original members are still with us, many of us are relatively new to FM and repeater operation. The old-timers and those who built this repeater have donated uncounted thousands of hours of sweat and labor, and quite a few thousand dollars to place the system in operation and keep it going. As you can see, it is not a toy, but a complex expensive machine, and it should be treated as such.

Most of the points that I am going to bring up are either in our operating rules or in our bylaws.

When you sign on the repeater, remember that there are some 150 members using this machine. If you have no specific traffic, do not monopolize the frequency. When breaking in, just announce your call and wait to be picked up in the order of the conversation. If you have traffic, call in by asking, "Is W6XYZ on frequency? This is W6ABC." Such a question can then be answered by a specific "yes" or "no", taking a minimum of time. Remember the order of traffic on the repeater: EMERGENCY traffic, directed traffic to a station, then rag-chews. Do not interrupt traffic with traffic unless it is an emergency.

When a station breaks into an existing conversation in progress on the repeater, stop and think a minute. Are you prepared to join in the topic under discussion? Or when it is turned to you, are you going to give out with a long-winded discourse containing eight references to your location, 16 AHs, six comments about the weather and what corner you just turned, 14 "oh"s, a dozen "um"s and six more "duh"s. Others on the repeater will wish they could rip out your mike by its roots. Nothing will get you on the you-know-what list quicker than breaking into a smooth-running conversation with three minutes of drivel and/or non-related ramblings just because you like the sound of your own voice. When in doubt, keep quiet. You do not have to talk just because the repeater is on. When you do operate mouth, please make sure the brain is engaged. You also don't have to break in every five minutes to announce that you are "just monitoring." The control station will remem-

ber you are around, and if someone wants you, they will call you.

When the control station brings up the repeater and announces, "W6XYZ in control and monitoring," this means that as a courtesy he has turned up ABM. Don't bug him for reports, a QSO, or general chatter. If he wants to talk, he will say so--no one has to talk to you just because they are monitoring or on the frequency. Some of our members only come on when they have traffic, others like to rag-chew, and many monitor continuously. Learn the patterns of operation, abide by them, and avoid the you-know-what list.

Not too long ago, a non-member station became rather angry when the control station announced that he was turning off the repeater, and tried to keep him on the air. This station forgot one salient fact: he was a guest on WR6ABM and the members and control stations have no obligation at all to keep the repeater up for non-member stations. To those of you who are not members of ABM, try to remember that you should conduct yourself as though you were a guest in someone's house, using someone else's equipment. Would you be demanding of your host? I think not. Well, ABM is your host--you are a guest. Please remember that you are using their equipment.

Please remember, too, that membership in ABM is by invitation of its members; it is their repeater, they support its existence. How you conduct yourself while a guest on ABM will determine if you will be invited to be a member. Membership is not a right, it is a privilege extended by invitation of the members. To be a member you should be able to contribute socially, technically and financially, with most of the emphasis on socially and technically. A lousy signal and a pointless, vague conversation with no intelligence displayed will win you no friends, and it is doubtful if you will be invited to join ABM at all. If you can be an asset to ABM and its operation, you will be welcome; if not, you will not be welcome.

Finally, please, if you have a gripe about the operations or conduct of a member or guest on our repeater, please do not air your gripes on two-meters. A written letter to the Operations Committee will be looked into, and all confidences will be kept within the committee. We should never air our differences in public. It makes the public image of the repeater look bad.

We have a good reputation--let's keep it that way.

(From "The Repeater" of the Grizzly Peak VHF Amateur Radio Club, Inc.)

Shrine Net

The Shrine Nobility Net runs phone patch traffic every Sunday at 2400 GMT on 3.905 MHz. The patches are for children who are patients in the Shriner's Crippled Children's Hospitals, located in Shreveport, La., and Houston, Galveston and Dallas, Tex. The patches are to the children's parents in Mexico and all of South America. Lance Gordon, WB5FNA, is primary net control station.



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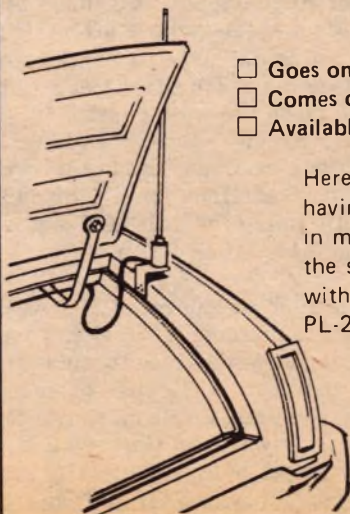
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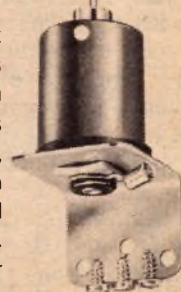
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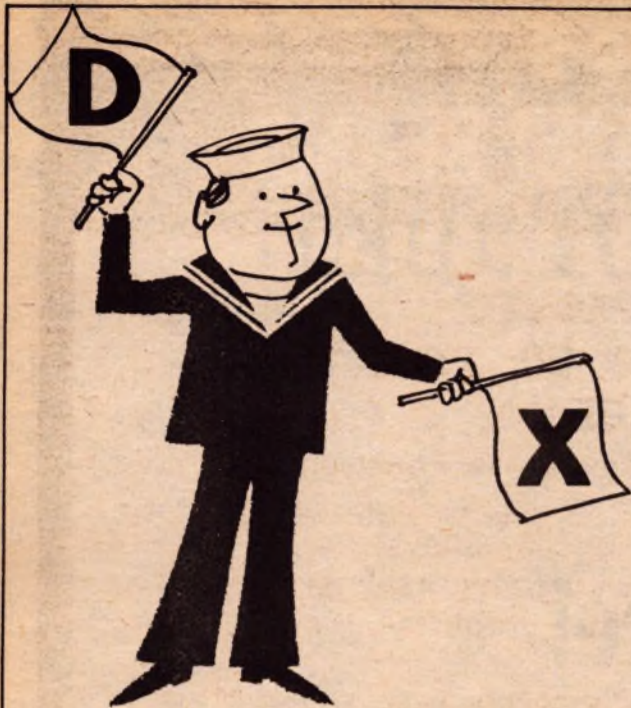
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If there had to be one main piece of advice for DXers it would be "listen". This can open all the doors to DXing. If you know exactly who you are calling and where he is located, your call to him can be more successful. A DX station calling CQ may give instructions as to where he is listening for calls. He may be calling only certain call areas. Don't barge in like a bull in a china shop!

If you hear a pile-up calling a DX station listen to the stations that are calling him. This can often tell you if you can expect to hear him. If you are on the East Coast and the VE7s are giving 5/9 reports there is a good possibility you may not hear him. The DX station may be transmitting in the foreign phone band (below 14,200) and listening on a certain frequency or frequencies above 14,200. If the DX station is not on the same frequency as the stations calling, look for him just below 14,200 or possibly just above 14,100. Many DX stations and DX-peditions operate in this manner in order to reduce QRM on their transmitting frequency. The key to working him is always to listen carefully.

Use established phonetics and don't change them in the middle of your call.

Keep your transmissions short until you can establish whether the DX station wants to rag-chew or if he understands much more English than a few stock phrases.

If you hear a DX station working a pile-up listen to his response to a call. If he is working rapidly and is obviously trying to handle as many VE/W/Ks as he can, keep your transmission to him short. A signal report and 73 is quite sufficient. Names, QTHs, gear and WX do NOT interest him one little bit and serve only to slow down his activity.

If you want to be more successful in answering DX stations that are calling CQ don't repeat his call more than once. If he is listening on his transmitting frequency give his call once and your call several times. He is interested in your call, not his.

Use VOX if at all possible. Push-to-talk is fine for mobile. Possibly the clacking of relays is distracting at first, but you can get used to it. The long-winded one-sided transmission went out with AM. These days the conversational type QSO is the thing. Questions can be answered immediately. You can determine if your frequency stays clear. If your signal fades or QRM interferes, the other station can interrupt you to point this out.

Breaking in on the DX bands can lose you a lot of friends. Generally speaking, unless you know the stations involved, don't break in. Go and find your own DX station to work. If you must break in, just announce your call. Don't call break-break.

Use a "countries list" in order to determine, in advance, what country the station you are working or calling is in. Don't ask him what country he is in.

Again, generally speaking, if a DX station advises you to send your QSL to his QSL manager, that manager expects your QSL to arrive with a self-addressed envelope plus sufficient postage stamps of his country or the equivalent in IRCs. If the QSL manager is in Canada, use a Canadian stamp. If he is in the U.S., use U.S. postage or International Reply Coupons (IRCs). If your QSL is sent without the S. A. E. (self-addressed envelope) and proper postage, you will probably find your request ignored. Don't expect miracles from a QSL manager. He cannot respond to your QSL request until he has received logs from the DX station. This may involve a period of months. If you send requests for more than one DX station's QSL, send a S. A. E. and proper postage for each QSL required so that they can be separated and returned to you as the various logs are received.

(From CANAD-X)

Don't forget to keep a S. A. S. E. (self-addressed stamped envelope) at your local incoming QSL bureau.

Use GMT (Greenwich Mean Time) for all your logging.

(From the Calgary Amateur Radio Assoc. Bulletin)

Connected with Australia

Andy Wisler, an amateur radio operator, succeeded in establishing direct two-way communication between his station, NU9AMK, and that of Mr. R. J. Sanisbury, radio OA2YJ of 6 Walley Street, Concord West, New South Wales, Australia. The letters OA and NU are international amateur symbols which mean Australia and the United States, respectively.

The transmitter at this end (9AMK) was operating on a wavelength of almost 41.6 meters, using a 30 foot, one-wire antenna and a similar counterpoise. The transmitting tubes were two Type CX-310, such as are used in the last stage of audio frequency in many receivers, and were drawing about 60 watts, less than an ordinary 75 watt light bulb, on the plates.

The distance, about 14,230 miles, is the greatest over which any Liberty station has ever established two-way communications.

The above item was written by William Goodson, 9DVD, and appeared in the Liberty (MO) "Tribune" in the latter part of January, 1928.

(Andy Wisler is now KH6DDZ)

3 Mumfords - CU

More than 50 years ago, we three brothers operated the amateur radio station 7CU in Vancouver, Washington, using a rotary spark gap and contacting many other amateur radio stations up and down the west coast. As reported in the "Calls Heard" section of old QSTs and recorded in our records, during 1920 we worked about 90 stations from Canada to Los Angeles while using the call 7CU and we were heard in Alaska - all on 200 meters.

In 1921 and 1922 we operated 7ZJ on both 200 meters and 375 meters. (The Z calls and 375 meter privileges were given to amateurs who passed the commercial license examination.) This station too used a rotary spark gap. We were heard in Hawaii and Chicago and we worked into Texas before we finally closed down. Our contact with 5XB in Texas was pos-

sibly a record long distance QSO for two amateur radio stations that used rotary spark gap rigs. As announced in the September 1921 QST, 7ZJ (in competing against the upcoming CW rigs) held the honor position for handling the most messages in the nation (324) during the month of July of that year. In all, we worked over 180 different stations when we were 7CU and 7ZJ. One of our 500-mile QSOs took place while we were receiving with a crystal detector. We are now continuously on the lookout for radio amateurs that we knew and worked in those days. A few have been located.

In those days, about half of the radio hams sooner or later would get the urge to "go to sea". Royal, the oldest brother (now W3CU), was a radio operator on the "Walter A. Luckenbach" during World War I, making a trip to South America and France. Later, in 1923, he made a trip to the Orient as the radio operator on the "West Niger KOZJ". Also about then, Bill, the youngest brother (now W2CU), served as an operator on the Coast Guard Cutter, "Algonquin NRA", going to Alaska and coastal points; and I (now W6CU) made a trip to the Orient on the "West Kader KOSL".

While attending Willamette University in Salem, Oregon, and for a period of time after graduation, we were non-hams. About 1933 though, Royal, who was a high school teacher at the time, got on the air in McMinnville, Oregon as W7AZX. Then in 1939, Bill (an engineer with Bell Laboratories), and in 1940 I (a chemist with Colgate-Palmolive Peet Co.) got on the air with the calls W2DIH and W6FAR respectively. We three enjoyed many CW contacts from then until December 7, 1941.

Royal taught radar at Annapolis during and after World War II, retired as a Navy commander, and then worked for Westinghouse for a while. Bill and I remained with our companies during and after World War II. All three of us are now retired.

When each of us applied separately for two-letter calls, we were granted CU suffixes because we had operated 7CU for those many years ago. Now we are enjoying almost daily half-hour QSOs. Besides talking about our rigs, recent events, our grandchildren, etc., we talk about what happened about 50 or more years ago. At last count, we had recalled 589 different events that took place in our lives between 1905 and 1925, with more events still unfolding as we continue our daily QSOs.

Sometimes a station will break us, asking why we happen to have CU calls. At other times, we purposely work an unsuspecting station one after another. We have a special "triple CU" QSL card that we mail to hams who work all three of us and since May 1968 have given out 186 of these cards (as of March 3, 1973). Besides belonging to the American Radio Relay League and our local radio clubs, we are members of the Quarter Century Wireless Association, the Old Old Timers Club, the Society of Wireless Pioneers, and AMSAT.

Currently, besides our other ham radio contacts, we are on the extra portion of the 15 meter phone band transcontinentally Tuesday to Friday inclusive between 2030 GMT and 2100 GMT. On Mondays we are on 21,365 kHz (General phone) and on Saturdays we are on 21,115 kHz (Novice). If 15 meters is dead, we try 14,015 kHz. After our transcontinental QSOs, Bill and Royal go to the extra portion of the 80 meter phone band, except that on Mondays they are on 3917 kHz (General phone) and on Saturdays they are on 3615 kHz (General CW). Our skeds are an hour earlier (GMT-wise) when there is daylight saving, and sometimes of course, one (or more) of us may travel or something and miss a few skeds.

We welcome all breakers, whether they worked us before or not. Any time you hear us and can do so, please say hello.

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		Boom length 30 ft. 3" OD .065 wall. (w/re-enforcing kit)	\$159.60
M320	3 ELE.	20 METER BEAM	\$ 99.95
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M810	8 ELE.	10 METER BEAM —	—	Boom length 40 ft. 3" OD .065 wall \$178.45
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		Boom length 40 ft. 3" OD .200 wall to .065 wall. w/re-enforcing kit)	\$460.95
DB54	5 ELE. 20 & 4 ELE. 15	INTERLACED BEAM	\$241.45
		Boom length 40 ft. 3" OD .065 wall. (w/re-enforcing kit)	\$257.25
DB43	4 ELE. 20 & 3 ELE. 15	INTERLACED BEAM	\$188.95
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		Boom length 40 ft. 3" OD .065 wall.	\$230.95
DB65	6 ELE. 15 & 5 ELE. 10	INTERLACED BEAM	\$230.95
		Boom length 32 ft. 3" OD .065 wall.	\$115.45
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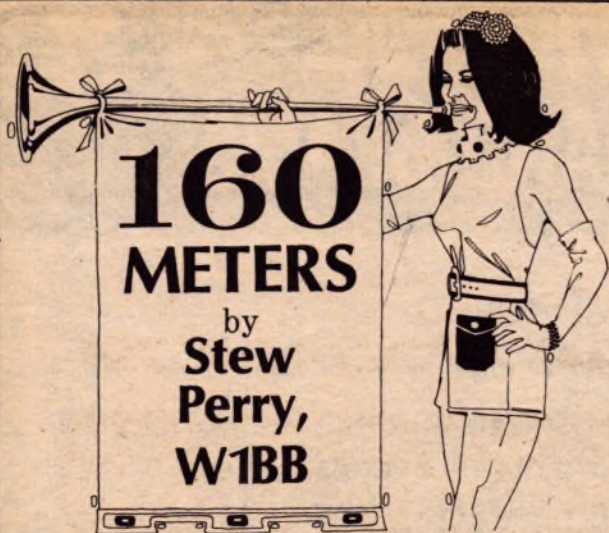
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6th Annual Transpacific 73/74 160 Meter DX Tests. (Embracing the whole WESTERN Hemisphere):

Dates: Nov. 17; Dec. 22; Jan. 12; Feb. 9.

Times: 1330-1600 GMT Saturday Mornings.

FYs: W/VEs - 1800-1807. JAs - 1907.5-1912.5
VKs - 1800-1805 ALSO 1825-1830

"DX WINDOW"

ZLs - 1875 kHz KH6 - 1995-2000

OTHERS - 1800-1805.

PROCEDURE:

CALLS: "CQ DX TEST" First 2-1/2 minutes of alternate 5 min. periods, listening between. W/VEs lead off first 5 min. period, then alternate 5 min. periods thereafter. DX follows, first 2-1/2 Min. of SECOND 5 Min. Period, then alternate 5 min. periods. THUS, each CQs one-half of their respective 5 min. period, and listens for answers the other half. Set Clocks Accurately by WWV. Keep to 2-1/2 and 5 min. periods accurately - this is IMPORTANT. Unless in QSO.

REPORTS:

TO: WIBB, and/or your favorite NEWS MEDIA.

CONDITIONS:

EXPECTED: This 73/74 season to be the best for many years because of the low sunspot numbers. An opportunity to roll-up some unusual accomplishments on L. F. with lots of fun doing it.

GREETINGS:

TO: ALL interested in 160 - "Regulars", "Old Timers", "Neophytes", and SWLs, Wishing you "Fun and Satisfaction" in the 73/74 tests.

Transatlantic and Transpacific 160-Meter DX Tests.

While there has been some talk of discontinuing these special tests, because 160 DX has become more common with improved conditions, and equipment, based on a survey made in the fraternity, many do not want to see these tests discontinued, and so for another season they will be continued. Held since 1932, they are symbolic and reminiscent of the original crossings of the Atlantic by the radio signals of Marconi, Deloy, Schnell, and Godley 1901-1924 and are lots of fun. Additionally, the propagation information that is developed is adding to and developing the technique of communication on these low frequencies and makes a very worth-while contribution to the art of LF radio. Many amateurs make their "FIRST EVER" Transatlantic/DX 160 QSOs during these tests whom they are especially for. It is hoped that the "Old Timers", and "Regulars", will QRX when advisable, and do everything possible to help the newcomers.

41st Annual Transatlantic 73/74 160 Meter DX Tests. (Embracing the whole EASTERN Hemisphere):

Dates: Nov. 18; Dec. 23; Jan. 13; Feb. 10.

Times: 0500 - 0730 GMT Sunday Mornings

FYs: W/VEs - 1800-1807

DX - 1825-1830 (In the "DX-Window")

Hong Kong

by Henry Martin, WA6JDS

The bright lights of Kowloon and Hong Kong were our first glimpse of the Orient at 10:30 p. m.

Hong Kong, as you know, is a British Colony although the population is 99% Chinese. It is a hilly, rocky island and the city, in need of more space, leased a part of the mainland from China for 99 years. This was in 1898. This leased part is called the New Territories and includes some of Kowloon and several villages and some farm land.

Since the airport is on the mainland in Kowloon, it seemed easy to decide on a Kowloon hotel - the Miramar. We found that we had made a good choice and so did hordes of tourists from Europe and the Orient. The number of people coming and going was tremendous.

We were aware of the fact that Hong Kong is a long way away but after being on a plane 18 hours we were impressed by the good food we found and the distance away.

Although the population is mostly Chinese we found the people friendly, helpful and cheerful. We didn't realize that the Chinese were among the world's best cooks.

Hong Kong is a shopper's paradise, but it was hard to get used to their bargaining technique. Very few places had firm prices on the items, but the supermarkets and the stores of China and of Taiwan do have a pricing system like ours. Personally, when shopping in a bargaining situation, I had the feeling of being "taken".

We saw a lot of elementary school pupils - all dressed in school uniforms similar to those of our private or parochial schools.

We went on all the guided tours offered to acquaint ourselves with the area. Actually, I thought a Chinese farmer plowing with water buffalo power was a little old-fashioned; still it is the accepted practice there. I never thought I'd see it with my own eyes, but there it was.

I made inquiries about radio amateurs on several occasions but was not able to make any contacts. I hope that next time I go there I will be more prepared by looking up the local boys in the call book before I start out!

One day we ran across a store sign: AMATEUR RADIO ELECTRONICS LABORATORY, LTD. When I went in, thinking I had finally made contact, I found it was only a store that sold radios and had no amateur equipment whatsoever!

(From "Overmodulation", Poinsettia Radio Club, Ventura, CA)

IRELAND

During the Christmas and New Year season of 1972-73, I was in County Kerry, Ireland, on a month's vacation, and had the opportunity to visit some Irish "Hams".

On New Year's Day, January 1, 1973, I was the guest at the home of Mr. and Mrs. Michael Crowley, Listowel, County Kerry, and from his Amateur Radio station, EI4R, I made my first Amateur Radio contact.

The station contacted was A. J. Stokes, G3ZRH, Lancashire, England.

The equipment in Ireland is the same as used in the United States, and the unit I operated was a Yaesu FT101, with a trap dipole antenna.

On another occasion, I visited Mr. L. Harrington, of Station EI8BN, Tralee, County Kerry.

There are just over 300 "Ham" Operators in Eire (Republic of Ireland) and about the same number in Ulster (Northern Ireland).

During my stay in Ireland, I read an advertisement in a Limerick newspaper regarding evening classes on Amateur Radio Theory and Practice to be given at a Limerick City college.

With the rapid development of new industries in Ireland and the ever increasing number of automobiles on the roads, I am sure that Amateur Radio will become more popular, as it can serve as a good means of communication, especially in remote areas.

Shortly after my return home about mid-January, 1973, I received my Novice license, WN6UWB.

Having received my license, I applied for membership in the Irish Radio Transmitter's Society, and was elected a member of the Society on March 31, 1973.

Amateur Radio knows no borders that are created by man, and as Amateur Radio can cross the artificial border created between North and South Ireland, I am sure it will go a long way in helping to solve the present troubles in Ireland.

One day, I hope to be able to make radio contact with my friends in Ireland.

73,
William Davis, WN6UWB.

Musicians

The International Music-Hams Club (IMHC) was started two years ago by Torben Elmoe, OZ5LZ, solo trombonist with the Sjellen Symphony Orchestra (Denmark) and Jan Williams, K2PLT, percussionist and member of the faculty of the State University of New York at Buffalo.

The membership is open to any musician who is a licensed ham and at present has a membership of 60. The majority are from the U. S., but several European countries, Canada, and South Africa are also represented. The membership fee is \$2.00 (US).

A Newsletter is sent out several times a year which lists all members and tells of some of their activities as well as the IMHC activities, which include nets and an award.

Interested hams can write to Jan Williams, K2PLT, 63 Anderson Pl., Buffalo, NY 14222 for further details.

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FL-2000 B	Linear Amp with tubes	339.00	SP-401	Speaker	19.00
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YC-355D	Digital Counter	289.00	MMB-1	Mobile bracket	9.00
FTV-650	Transverter	149.00	MIR-1	Modification kit for FT101	40.00



Club Motivation

by Elwood Thompson, WA8ZUQ

There is one problem in every organization regardless of how many members the organization has in it. This problem is motivation of the group and individuals. In DARA's case, it is club motivation. How do the officers of the club get the members motivated? First: each officer should look at himself, the job he is doing, and the influence he carries with other members. Secondly: he should then analyze what he has found, and examine closely to see if he has given himself the right objectives for his office. Each officer should do this in a detailed manner.

After examining himself, each officer should learn to be a critic when necessary. This means not only telling someone when he is letting up on his job, but praising members who carry out a duty efficiently and effectively. This is brotherhood. If this is put into effect with the officers, the spirit will carry through to the members. Sometimes it means "stepping on someone's toes", but remember, when one member doesn't do his job satisfactorily, he is hurting the membership as a whole.

The officers, as a group, should continually work together, not carry the whole load, but making sure that the membership is carrying it's share of the task. The main reason that a member develops a poor attitude is that he has nothing to do. Every member should have a job. He should be assigned a job at the start of the year and made responsible. When he is given a job of which he is thought to be capable, ... he should be told what needs to be done and then drop the subject. If he needs help, he should get it. Don't do the other member's job unless he asks for help. If help is needed, the members as well as the officers should be more than ready to jump in and help. This is brotherhood.

Along these same lines, remember that if one member has too much to do, there is a distinct possibility that another member doesn't have enough to do. Having too many responsibilities causes the same effect as nothing to do. Too many duties on one member puts that member under strain and pressure. If the situation continues, he may break, and will no longer help the club. Also, remember that one member's poor attitude and motivation can influence other members.

Club motivation cannot be given by one or two members; it must be earned through the efforts of every member. Each must use his potential to the utmost. Helping to develop this potential must be an objective of the executive committee and put into progress. This takes club organization, direct lines of authority and responsibility, and a unified goal of brotherhood.

(From Dayton (Ohio), Amateur Radio Association publication)

The Southwest Ohio Amateur Radio Emergency Corps, for the second consecutive year, had an operating exhibit at the Carthage Fair. Free radiograms were sent by fair goers who stopped by the booth. In addition, ham radio-teletype, FM, CW and DX stations were in operation. Booth Chairman was Tom Forde, WB8LNM. Tom was assisted in organizing the exhibit by several of his fellow teenage AREC members.

CLUBS: please send your bulletin to:
Worldradio - 2509 Donner Way, Sacramento, CA 95818
"We want to be good citizens in our community. We believe the future belongs to youth. Therefore, we have established Boy Scout Explorer Post No. 6, the first Scout Explorer group with a specialty in ham radio and electronics." Speaking those words was Frank Denes, W8ELG, as he talked about a new ham club in the Cleveland, Ohio area. This is quite a club; we quote from Eunice Bernon's (K8ONA) column in the "Cleveland Plain Dealer"...

"Excitement prevails among the 45 ham radio operators employed at the Ocean Systems Division of Gould, Inc., Euclid.

"Gould's vice-president and general manager, Raymond Tieger, told them: 'Go ahead and form the ham radio club of your dreams. We will provide expenses for your new ham shack and equipment.'

"Club founder and management liaison officer, Mark Phillips, WB8ETH, said, 'All I could answer was "Yes, sir," and I hurried to tell Frank Denes, W8ELG. Then our organization committee ironed out all of the details for an initial general meeting, temporary officers and ratification of the constitution.'

"Co-founders are Denes, Robert Brewster, W8HSK; Laurin Kline, K8MKU; Ray Heimberger, W8VRZ; and Harold Camlin, WB8LRR.

"Members of this area's newest ham radio club have decided to perform a community service, in co-operation with Gould, Inc. Their aim is to develop interest and skills in the area of ham radio and electronics.

"Club meetings with young adults, ages 14 through 21, are held the second and fourth Tuesdays of each month, from 7 to 8:30 p. m. Boy Scouts are given associate club memberships.

"New officers are Gerald Scanlan, WN8PSS, control officer; Robert Murray, WA8KRT, assistant control officer; Ray Heimberger, W8VRZ, station trustee. Gould Amateur Radio Club plans to become affiliated with the American Radio Relay League, Newington, Conn."

The Dayton (Ohio) Amateur Radio Association has a most interesting assistance program for Novices. Here's how it works, as told in their publication, "RF-Carrier": "The DARA has a Novice station (Drake 2C and 2NT) available on a loan basis to assist the new Novices in getting on the air. All that is necessary is: that you have an antenna installed at your home so the units are ready to go. The loan charge (to take care of maintenance) is fifty cents per week with a maximum loan time of two months. If you are interested, call Jack Ohmart, K8UCA, Novice Custodian, telephone 299-6988 and reserve a time for operation. It's on a first-come, first-out basis." (See page 43.)



you are invited to

Send news to "Worldradio/NEWS" and thus to your fellow amateur. Send it to: News Desk, Worldradio, 2509 Donner Way, Sacramento, CA 95818. We are interested in every aspect of Amateur Radio News, international friendship, emergency communications, local public service, QSL managers, hamfests, DX, human interest, etc.

FIELD DAY 1984

by Les Cobb, W6TEE

This is the final report from your Field Day Committee. After three months of continuous work, we managed to get the application package for our Field Day station authorization in to the Commission by the December 31 deadline. The package ran 148 pages this year, six more than last year, because of the new requirement for character references.

The committee took a trip to Flake Lake, the site chosen for Field Day this year, to dig down through the snow to survey the exact location for each band to be operated. Distances between band positions were accurately measured for the System Network Diagram and each spot was marked on the USGS map for calculation of height above average terrain. Unfortunately, this is a better site than the one we had last year, and so we will only be allowed to compete in class G-5 under FCC regulations (25 watts ERP).

We want to thank those who signed up as Field Day operators at the November meeting so that we could get the applications for modifications to your licenses for operating a Field Day station in the package. It is unfortunate that regulations limit us to six operators. We hope that some of you will still be available by June.

We are still undecided about the Field Day message. Everyone is quite shook up over Pete, our former trustee, having his license revoked because of last year's message. It told the SCM that we were at Finagle's Campground, which of course is a commercial business, which of course made the message illegal.

Joe offered us the use of his three element beam for 20 meters, but we had to turn it down. The manufacturer does not have the radiation patterns for this antenna on file with the Commission. We will get by with the vertical we used last year.

The hardest part of the application was the hourly tabulation of frequencies to be used. We were lucky to get a six month advance propagation forecast. We used this to rough out our operating schedule. Final co-ordination of frequencies was made through the State Council of Field Day Clubs to minimize QRM.

Each operating position this year will be equipped with a computer terminal for instant reference to all 20 volumes of the FCC Amateur Rules and Regulations. Remember, the commission has warned us that if ham citations do not go down, they will give the amateur bands to the Cbers, since they already use them more than we do.



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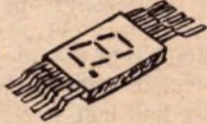
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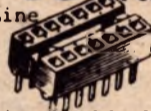
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MC1039 ECL-TTL interface 2.00
8850, 9601-one shot multivibrator 1.00

741 SPECIAL

fully compensated operational amplifier with data sheet and page of application notes covering the basic circuits for op-amps.



each \$.45
ten for 3.75

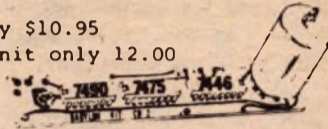
All IC's are new and fully tested leads are plated with gold or solder. Orders for \$5 or more will be shipped prepaid. Add 35¢ for handling and postage for smaller orders, residents in California add sales tax. IC orders are shipped within two workdays of receipt of order--kits are shipped within ten days of receipt of order. \$10.00 minimum on C.O.D.'s (phone in). (916) 9662111

Babylon Electronics
PO Box "J"
Carmichael, CA 95608

CD-2 Counter Kit

This kit provides a highly sophisticated display section module for clocks, counter or other numerical display needs. The unit is .8" wide and 4 3/8" long. A single 5 volt power source powers both the IC's and the display tube. It can attain typical count rates of up to 30 MHz and also has a lamp test, causing all seven segments to light. Kit includes a two sided (with plated through holes) fiberglass printed circuit board, a 7490, a 7475, a 7447, a DR2010 RCA Numitron display tube, complete instructions, and enough Molex pins for the IC's.....NOTE, boards can be supplied in a single panel of up to ten digits (with all interconnects) therefore, when ordering please specify whether you want them in single panels or in one multiple digit board. Not specifying will result in shipping delay.

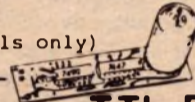
Complete kit, only \$10.95
Fully assembled unit only 12.00



CD-3 Counter Kit

Can be programmed to count to any modulus--2-9 for one kit, 2-99 for two kits, etc. Includes everything as in CD-2, two resistors, three diodes, but is without the 7475 quad latch. Full instructions included---perfect for displaying seconds, minutes, hours, etc.

Complete kit, only \$9.95
(supplied in single panels only)



8000 series

Part No.	Description	Price
8200	4 bit comparator	\$1.60
8210	8 line to 1 line selector	1.40
8220	parity generator/checker	1.00
8223	256 bit programmable ROM	7.50
8230	8 input multiplexer	2.00
8233	2 input 4 bit multiplexer	1.75
8242	4 bit comparator	1.15
8251	BCD to decimal decoder	1.00
8261	fast carry extender	2.00
8266	2 input 4 bit multiplexer	1.50
8270	4 bit PI, SI, SO	2.00
8271	4 bit shift register	2.00
8274	10 bit PI, SO register	3.00
8280	45MC presetable decade counter	1.35
8281	45MC presetable binary counter	1.15
8290	presetable decade counter 75MC	3.50
8292	presetable decade counter 10MC	1.15
8520	25MC divide by "N" 2 to 15	2.00
8551	tri state quad latch	2.50
8570	8 bit SI, PO	3.00
8590	8 bit PI, SO	2.00
8275	quad bistable latch	.90

TTL DIP

LINEARS

NE531	op amp TO-5	\$2.00
NE560	phase lock loop DIP	3.25
NE561	phase lock loop DIP	3.25
NE565	phase lock loop TO-5	3.25
NE566	function generator TO-5	4.00
NE567	tone decoder TO-5	4.00
NE5556	op amp DIP	1.00
709	popular op amp DIP	.45
710	voltage comparator DIP	.50
711	dual comparator DIP	.40
723	precision voltage regulator DIP	1.00
747	dual 741 op amp DIP	1.00
748	op amp TO-5	1.00
LM100	positive DC regulator TO-5	1.00
LM302	op amp voltage follower TO-5	1.25
LM308	op amp TO-5	2.00
LM311	comparator TO-5	1.75
LM380	2W audio amp DIP	1.75
LM703	RF-IF amp epoxy TO-5	1.00
LM309H	5V-200ma power supply TO-5	1.00
LM309K	5V-1A power supply module TO-3	2.00

Silicon diodes (signal) only,
1 foot (60) diodes \$2.50

EPOXY TRANSISTORS

TO-5 and TO-18 mixed 1 ounce (40+)-----\$1.00

1 amp Silicon Rectifier
minimum 200 PIV many much higher, comes in unbranded epoxy case (fully tested)
15 for \$1.00

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Dynamic shift registers TO-5 only				
MM502	dual	50	BIT	\$1.25
MM506	dual	100	BIT	1.75
MM5006	dual	100	BIT	1.50
MM5013		1024	BIT	2.25
MM5016		512	BIT	1.50
Static shift registers				
MM504	dual	16	BIT	1.50
MM505	dual	32	BIT	1.75
MM550	dual differential analog switch			2.50

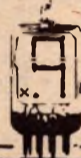
CMOS

CD4001	quad 2-input	\$.75
CD4002	quad 4-input	.75
CD4012	dual 4-input	.75
CD4023	triple 3-input	.75

DR2010 by RCA

A popular Numitron digital display tube. This incandescent five volt seven segment device provides .6" high numeral which can be seen at a distance of 30 feet. The tube has a standard nine pin base (solderable) and a left hand decimal point.

\$5.00 each
\$4.00 each for 5 or more



7400 series

Part No.	Price	Part No.	Price
7400	\$.35	74H53	.50
74H00	.50	7454	.35
7401	.35	74L54	.50
74H01	.50	74L55	.50
7403	.35	7460	.35
7404	.35	74L71	.30
74L04	.50	7472	.50
74H04	.50	74L72	.60
7405	.35	7473	.65
74H05	.50	74L73	.90
74H08	.50	7474	.65
7410	.35	74L74	.90
74L10	.50	74H74	.90
74H11	.60	7476	.70
7413	1.15	74L78	1.00
7420	.35	7480	.65
74L20	.50	7483	1.30
74H20	.50	7486	.80
74H22	.60	7489 (8599)	3.50
7430	.35	7490	1.50
74L30	.50	7491	1.15
7440	.35	7492	1.15
74H40	.50	7493	1.15
7441	1.60	7495	1.25
7442	1.30	74L95	2.00
7446	1.75	74107	.70
7447	1.75	74121	1.60
7448	1.15	74123	2.00
7450	.35	74153	2.00
74H50	.50	74181	3.75
7451	.35	74192	2.50
74L51	.50	74193	1.50
74H51	.50	74195	1.10
7453	.35		

DIP

LED's

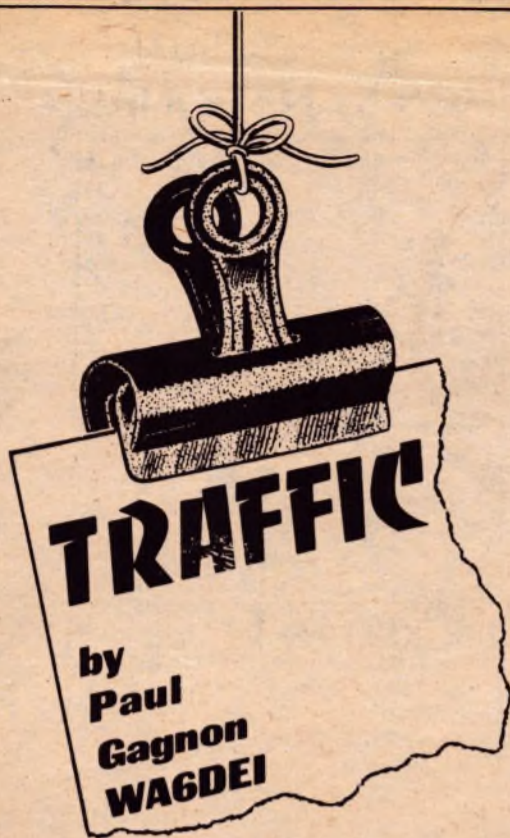
MV-50 red emitting 10-40ma @ 2V \$.39

MV5020 red LED  .45

MV-10B Visible red 5-70ma @ 2V .45
3.5 amp 400V rectifier \$1.25
8 amp 400V SCR IR 122D 1.00

Precision resistors--high quality parts manufactured by Dale, Cerning Pyro film, Etc. These are all brand new with full length leads.

82	5% Dale 6.5W WW	\$.15
18.2K	1%	.05
20.5K	1%	.05
22.5K	1%	.05
26.1K	1%	.05
36.1K	1%	.05
36.5K	1%	.05
40.2K	1%	.05
49.9K	.05%	.10



Greetings. This is the first installment of what I hope is a long run for the "Worldradio" Traffic Column. The purpose of this column is to fill a long-existing void in the recruiting and education of amateurs to the world of traffic handling.

Traffic handling can be a very rewarding experience. It is one of the best ways we have as amateurs to make contact with the public and perform a service for them.

We hope to discuss the many "whys" of traffic handling. Why do so many hams across the country keep net schedules every day of the year, year after year? There must be a good reason. Why is traffic handling so vital to the very existence of Amateur Radio? Why is it important to each licensed amateur to do his part?

We will discuss also the "hows" of traffic handling. Both phone and CW operations (and RTTY also). Which is the best mode to use? How do you check into a net? How do you become a net control station? How do you act as a liaison station? How do you join a net?

The ARRL has had a national traffic system for many years, yet many hams do not know what NTS is. What is the DNTS? What is the organization of the NTS and DNTS which allows several complete traffic cycles each day? What is a traffic cycle? What is the Transcontinental Corps? What is the Brass Pounders League?

Many people are involved in traffic handling, both in actual brass pounding and in the planning of the many nets that exist. Who comprises the Eastern Area Staff? Who is responsible for keeping a net operating smoothly?

Traffic handling is basic to the organization and operation of the entire Amateur Radio Emergency Corps (AREC). Why?

If you do not know the answers to these questions, you should be a regular reader of this column. If you know them, you should read regularly in order to catch my errors. I may throw in a controversial item now and then to see if you are reading... and to stimulate some discussion.

We would also like to list the various nets and news items that you may have. Is your net changing frequency or time? Let us know and we will print it for the information of others. Please feel free to comment at any time. Hopefully we can have some interesting discussions on the items appearing in the column. Address all letters to:

D. Paul Gagnon, WA6DEI
1791 Hedon Circle
Camarillo, CA 93010

Recently overheard on a local repeater was the question, "How do I belong to a net?" All of you have tuned across a net at one time or another. Many keep tuning past while grumbling about wasted frequency space and QRM. A lot of folks stop and listen to what the net is about and wonder if they could check in.

There are basically three types of nets: closed, open, and open with roll call. The closed nets are very few in number, usually a group of people who know each other and just chat, or an organizational net which requires you to be a member of the organization to participate. Higher level nets of the National Traffic System have what may appear to be a closed net. Usually on CW, the net control calls for various stations to

check in in a pre-arranged order (QNA). This is done to expedite the flow of traffic when it is heavy and time is of importance. We will discuss the matter of checking into this type of net in a later article. Suffice it to say that they also give you the opportunity to check in at the end of the pre-arranged roll call if you wish.

The open nets which call a list of members may scare some people off. Especially if they get the idea they must be on the list to participate. This is not the case. This type of net welcomes visitors to check in and usually says so at the end of roll call. When roll call is over and the net control station calls for late check ins--you can do just that. The roll calls tend to cause people to think it is a closed net. Roll calls are generally a list of the members of the net. They have these to publish a monthly paper, have officers and a board of directors, and/or to be incorporated. Whether you actually pay dues and get on the roll call list has no bearing on whether you can check in and handle traffic.

The completely open nets are those at the section level of the NTS and nets such as the various monitoring services (WCARS, MIDCARS, ECARS, WPSS, NAMS, etc.). The section level nets of the NTS meet daily at the same time all year round. Anyone can check into them at any time. In fact, everyone is encouraged to do so. Liaison stations from higher level nets are there with traffic to pass and they need all the stations they can get to deliver the messages. The monitoring nets operate most of the daytime hours and provide phone patches and emergency services for mobile stations. You can check into these quite freely.

Every amateur should have a copy of the ARRL's Net Directory. This is an annual publication consisting of all the nets in the country which care to register. The listings are by frequency and geographic area, with lots of other useful information. They are free from:

ARRL
225 Main St.
Newington, Conn. 06111

for a self-addressed stamped envelope. Get yours now and look for the nets available in your area. Remember, the important thing is not to belong to a net, but to check in and handle the traffic you can deliver or relay.

OSCAR (Continued from page 28)

bility of building AMSAT payloads for synchronous, near-synchronous and synchronous-transfer orbits. The funding for these projects, estimated to require nearly \$100,000 per year, will necessitate additional donations from individuals, as well as contributions from other sources. Assisting with the fund-raising efforts will be the new ARRL Foundation recently established by the League Board of Directors. One of the first functions of this foundation will be to obtain donations for satellite projects. The directions future AMSAT projects take, and the overall level of amateur satellite activity in the years to come will be dependent upon the degree of financial support obtained by the new foundation.

WPSS (Continued from page 20)

SPECIAL SITUATIONS:

It is impossible to have a written procedure for every occasion--there will always be the unusual and unexpected. Therefore, the Net Control at the time of such an unprecedented situation shall handle it in the manner he sees fit. He has complete authority at that time, though he may solicit advice or recommendations from any Net Officer he knows to be on frequency.

Emergency

by Alex Burr, W5QNG, Las Cruces, N. M.

Shortly after 1 p. m. Saturday, Sept. 22, Raymond Jeffcoat, WA5RWO, of Irving, Texas, called in a report of a multi-car accident on Interstate 35, about 20 miles south of Austin, Texas.

His request for two ambulances and police was efficiently relayed by Michael Rea, WB5GPO, of Austin, and the police were soon there.

Another amateur at the scene, Leaman Vincent, W5LMH, of Irving, then relayed a message on the condition of one of the victims. After two telephone calls, Rea was able to report that help was on the way.

During this traffic, other regular users of the repeater smoothly switched to other frequencies to handle their routine communications needs.

Wide-area coverage repeater WA5YTO is located on a 300-foot microwave tower north of Austin, and is maintained by the Austin Repeater Organization, Tom Griffy, WA5YAN, president.

BONANZA!

RARE COLLECTORS' ITEMS DISCOVERED

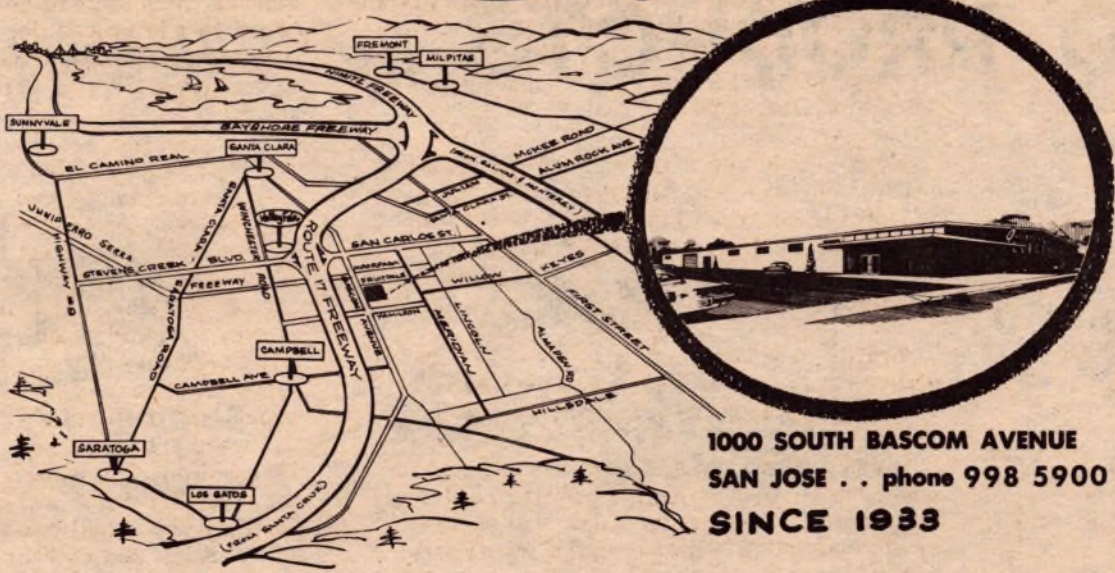
Just uncovered in a Tibetan monastery - historical, in-demand back copies of, yep - you guessed it - WORLD RADIO. Your opportunity to see a publication grow from a scrawny 16 pages to a mighty 48 right before your very eyes. Relive that exciting every-continent ham odyssey of Darleen, WA6FSC (now HC2YL). Read of the amateur role in the Rapid City flood, and more.

Send a paltry five dollars and you will get TEN, that's right-TEN, back issues of WORLD-RADIO. Who knows what they will be worth in time to come. (Interesting reading at least.)

You will receive: August, 1971; October, 1971; November, 1971; December, 1971; January, 1972; February, 1972; April, 1972; June, 1972; August, 1972 and September, 1972.

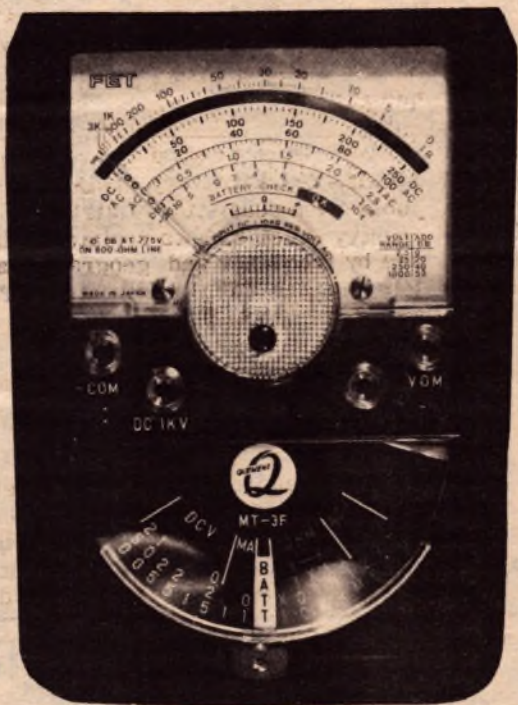
Send your order and five dollars to:
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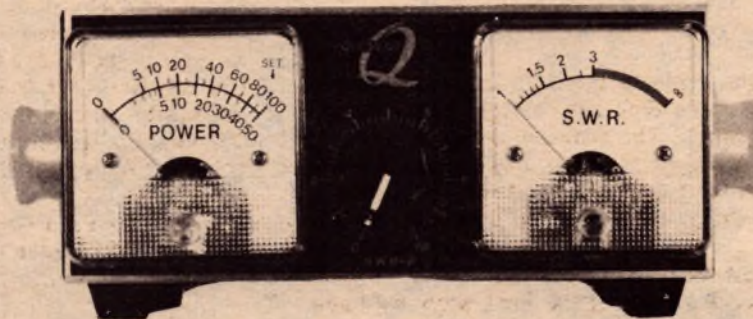
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MT-3F \$49.95



SWB-2 \$19.95
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SIMULTANEOUSLY 'EASY READ' METERS
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MAY BE LEFT IN LINE UP TO 2,000 WATTS'
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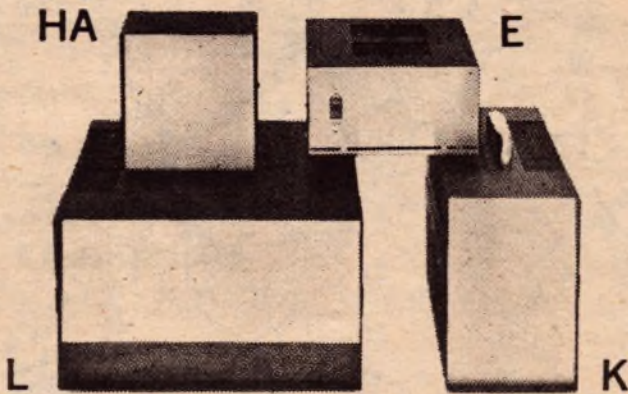


1500X-2

Rotary Antenna Switch

Single pole, 3 position Antenna Switch. Low SWR. Use up to 30 MHz. 500 Watt handling capacity. Sloping Front Console Cab.

\$12.95



Model	Dimensions	Resale Net
"E"	6 1/2 x 3 15/32 x 7 1/16	8.25
"HA"	5 1/8 x 5 1/2 x 4 (Blank Panel)	8.95
"K"	4 3/4 x 7 3/8 x 11 W/Handle	13.50
"L"	11 1/8 x 6 1/8 x 12 3/4	20.50



**2100X-2
SWR
Bridge**
Large
Meter -

Sloping Panel Cabinet - Rubber Feet - Keep in Antenna Line up to 1 Kilowatt

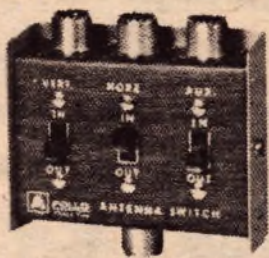
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**900X-2
Wattmeter**

Measures RF in 2 ranges 25 and 250 watts. 52 Ohm input.

\$29.95



450X-S Antenna Switch

3-Position Slide Switch Low Loss - Walnut-grain Finish Chassis - Gold Cover

\$5.95



"L"

package enclosure "Shadow Box" machined with: 2-SO239, 1 - Pilot Light, 3 - Rocker Switches, and 2 - Knobs
pkg. 29.95

1700X-2 Vertical/Horizontal Antenna Switch

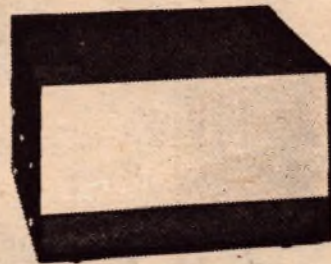
Allows operator to select any one of 3 antennas or dummy load. Two Antennas can be switched in simultaneously. New Sloping Front Console Cab.

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700X-2 KW Wattmeter

Dummy Load Wattmeter for 52 Ohm Input. Measures RF in 4 ranges to 1000 watts. Measures modulation percentage on calibrated scale.

Portable.
\$124.50



"LITTLE GIANT"

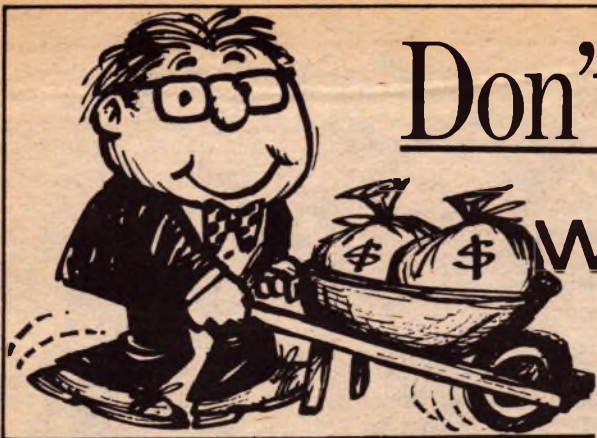
Vacation or Occasional Miniature Antenna. Measures 27" high, 22" wide, 4" thick! 7 MHz antenna 40 meters. Ideal for apartment motel, hotel, trailer camper, travel use. 1973 production, if demand warrants.

Meter 0-1 MA to fit "L" box
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2 meter FM radio
(144-148 MHz) by
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Norm Lehman, WB6SBR NO ONE ANYWHERE BEATS OUR DEAL!

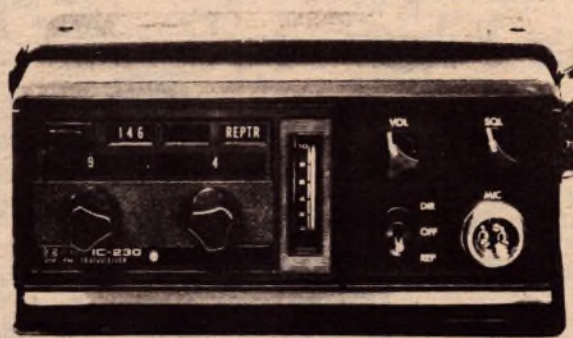
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IC-21



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The Nobility Net

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

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

There is no initiation fee nor are there any dues. All that a Noble or Mason need do is check into the Nobility Net which meets each Saturday at 1700 GMT, on 14. 310.

(de International Coordinator, W3FQT)



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Their lifetime subscriptions have made it easier for us to put out this publication. It assures them of receiving **WORLDRADIO** forevermore.

They also have the satisfaction of being part of "something that counts."

We publicly express our gratitude to:

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Phil Pector, W9LDX
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Warren Bermann, WØTDR
Roy Tucker, W6UZB
Kathryn Tucker, WN6SXG
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Sybil Allbright, W6GIC
Richard Schaak, K7GGD



The International Mission Radio Association is a group of Amateur Radio Operators and associates dedicated to providing communication facilities and to help in providing equipment, to those engaged in Missionary or volunteer services. It is a non-denominational, non-profit organization with a rapidly expanding membership of men and women from all walks of life throughout the world.

People Helping People
by Sister Mary, WA5VBM



vice plaque for providing communications for an isolated LORAN station. The servicemen on Baffin Island sent her a polar bear (not alive) as a memento for her help there.

Shirley Bouquin has many interests. She plays the organ, works with the handicapped, and is a crossword puzzle nut. She crochets, does textile painting and makes wax candles.

She found out about the IMRA when she was trying to help a missionary get in touch with his family in Oil City, Pa. She soon became a regular check-in, learned the art of net controlling and now can be found every Saturday afternoon lending her tact and charm to a very hard job. One that is much appreciated by all those in the mission field.

IMRA Newsnotes

Brother Joe Tortorici, WB2WNZ, spent ten days in Florida during the month of August. He visited relatives in Miami and then paid a visit to the Salesian School in Tampa. While he was in the Miami area, he visited Francis Healy, WA4VWJ; John Mc Namara, WB4SFG; and Elmer Lunt, W4SFD, in Ft. Lauderdale and Dr. John Schindler, W4RFA, with wife and daughter; and Joseph Lanno, WB4JOB, in Miami.

Father Phil Pick, HR2FP, is back on the Mission in El Progreso, Honduras. His antenna is down for repairs, so he cannot check in from his own station. He is trying to keep in touch from a neighboring station.

Elmer Lunt, W4SFD, spent part of August and September on vacation in Massachusetts.

Willy Muldoon, K1EUD, is now permanently ashore at Hampton, New Hampshire, and will not be checking in maritime mobile any more.

Father Joe Moran, HR5JDC, had lightning damage to his antenna. If he can find a way to get on, he will. Perhaps he can string a dipole from the tower to the papaya tree.

Marie Sutter, OA4CYC, is grateful for all the help she has been receiving on the IMRA nets. With a dipole only 10 feet off the ground and low power, there hasn't been much of a signal coming from her station in Lima, Peru, but each day during the 1800-1900 GMT session, when conditions to South America are the poorest on 20 meters, "I have been picked up and my traffic has been relayed in. Thanks to all. Hooray for the IMRA."

Marie has been up to her neck in a "missing persons" case. She finally found the missing person, but the party was in critical condition with a skull fracture, unconscious in a hospital in Cochabamba, Bolivia. Marie handled all the initial traffic between the American Consul in La Paz and the injured lady's family in New York. Assisting in this priority medical traffic were Malcolm Chris Jensen, CP1DN; Jose Grosberger, CP5CY; Jaime Vargas, CP5AR; Rev. Leo Sommer, CP5AJ; M. Emmanuel Goike, WA5VBM; OA4CYC; and WA2IPM.

Dr. John Schindler, W4RFA, made a quick one day trip to New Orleans for a physical check-up. He got a clean bill of health and will be around for a while longer. QRMing us for a few more years. Hi!

Warren Mulhall, WA2BPV, will be gone for the entire month of October. He will be in Thailand for two weeks, Okinawa for one week and will meet his wife in Hawaii where they will spend a week before returning to New Jersey. Warren said it was a business trip.

Father Joe Panizzo, WB8NGW, has gone home to Italy for a month. He will be back October 20.

Chuck Leyen, W0MDY, was in the Mayo Clinic in Rochester, Minnesota. He will not be on the air any more because he has let his license lapse... doctor's orders. But he wanted everyone to know that "I am still alive and kicking."

The Hunt

by Charles Cotterell, W0SIN

While Amateur Radio is a public service-oriented type of radio service, it does have many aspects of a hobby. One of these "fun-type" activities is "transmitter hunting".

This author used to engage in this activity every Friday evening for several years and we used the 10-meter band. Today's amateur, uses the 2-meter band more frequently because there are more amateurs who have equipment for this band now. The object of the "game" for those participating, is to find an amateur mobile unit that is transmitting on a predetermined frequency. This "hunted" transmitter must be within the preselected range of a starting point and can be in any direction from that point.

The "hunting" amateur who locates and parks beside the hunted transmitter with the least mileage is the winner. With that in mind, the hidden transmitter rarely selects a site where one can drive up to the transmitter directly although it may be just across an irrigation ditch, fence or other object that cannot be driven through or across. This makes the hunter drive in an aroundabout way to get to the hidden transmitter and thus adds mileage.

Of course, the first object is to start out in the correct direction, then to proceed in a manner to get there with as few miles as possible. With this in mind, amateurs have developed simple but very excellent direction-finding equipment.

If the station moves or transmits only intermittently, it takes more time and is more likely to fool the hunters. Since the regular transmitter hunt is a sort of a training exercise, moving isn't generally allowed. It's a rare occurrence when it is necessary to "find" someone on the amateur bands. Illegal operation on the amateur bands isn't unknown, but it is very infrequent and those who do so know that amateurs can locate anyone very shortly if the transmissions are of any length. So even this fun type of operation has a serious side.

Commercial operations in direction finding are much more complicated and efficient. Most generally this is done by law-enforcement agencies. Another type of "direction finding" is for ships at sea and this is a bit different. The ship wishes to know its own location. Thus it will tune in and note the direction of at least two stations of a known fixed location. By triangulation the ship can then pinpoint its own location. Amateurs and a navigational system known as "LORAN" both share the same frequencies in the 160-meter band and have done so for several decades. Today with the new highly developed VHF LORAN that uses satellites, amateurs are hopeful that this band may be returned to the amateur service exclusively one of these days.

(From the Denver, CO "Post")



Every Saturday the melodious voice of IMRA Net Control is that of Shirley Bouquin (pronounced Bo-qwin), WA3RXQ. Shirley is not a woman who fears a tough assignment and the excitement and challenges she receives every Saturday has certainly made an A-1 operator out of her even though she has only been licensed since December 1971.

Shirley was born in Oil City, Pennsylvania, on July 24, 1930. She has lived in Western Pennsylvania all her life, attending high school in Franklin, Pa. and returned to Oil City after graduation from high school to attend beauty school. Shirley is a licensed beautician and has also worked as a ward secretary at the hospital. She gives as her present occupation: housewife.

Robert and Shirley Bouquin were married in 1953 and they have one son, Robert, Jr., who is 17 years old. Robert, Sr. is foreman of the Bouquin Construction Company and neither he nor Robert, Jr. have been bitten by the ham bug.

Shirley is 5 feet tall, has blue eyes and light brown hair. She comes from a German and Pennsylvania Dutch heritage.

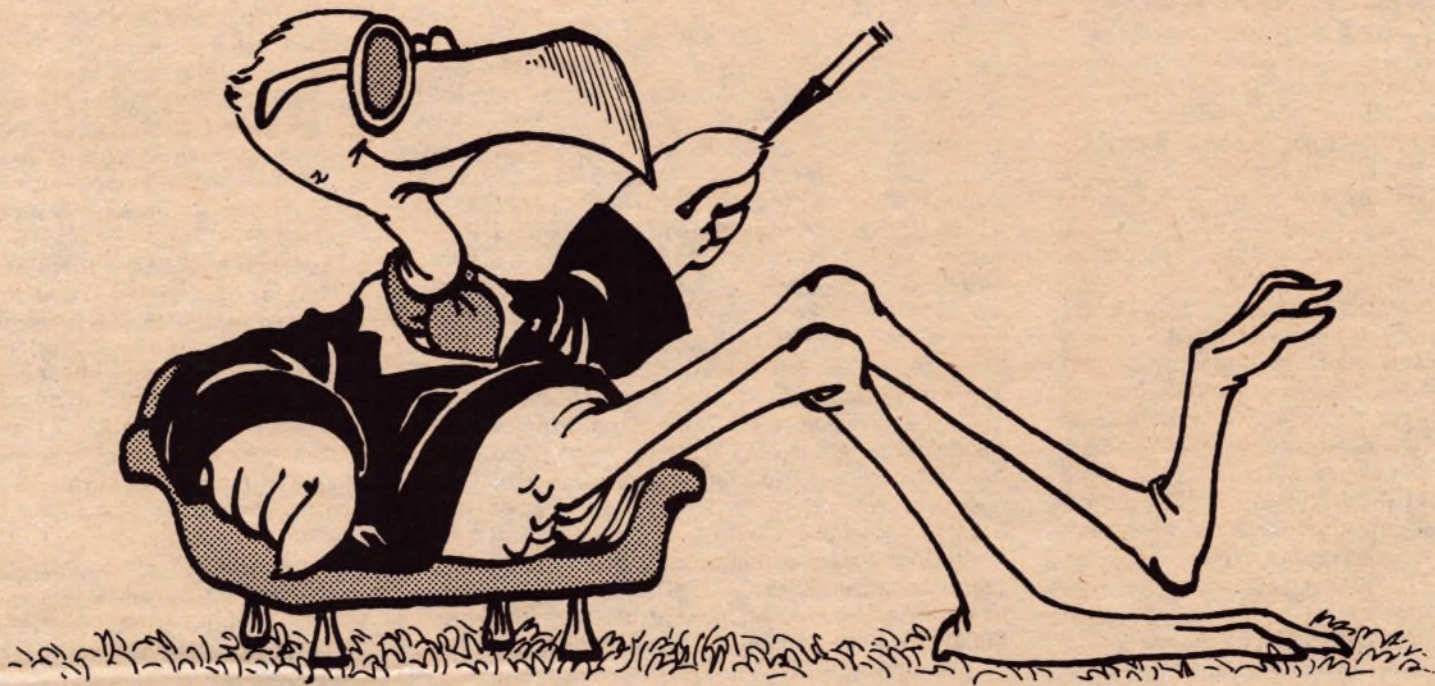
Mrs. Bouquin first became interested in Amateur Radio through her CB operation. She had a Citizen's Band license, but quickly became disenchanted with that type of communication. Shirley was one of several CBers who got together to study for their Amateur licenses. She went straight for the General ticket (skipping the Novice exam) and passed the examination. Six months later she passed the Advanced exam.

The station at WA3RXQ features the Heathline SB-102 exciter with external VFO, SB-640, and the SB-220 amplifier. Shirley covers 80-40 meters with an inverted vee trap doublet and 20-15-10 meters with Moseley's Classic 33.

In 1972, Shirley took part in the Western Pennsylvania Area Civil Defense Net (RACES) helping out the flood victims after Hurricane Agnes went through the East.

42 The Coast Guard awarded her a special ser-

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7. Ticket for admission to cocktail party hosted by SAROC and HAM RADIO MAGAZINE, Friday.
8. Ladies who register will receive admission ticket for their program on Saturday.
9. Ticket for admission to cocktail party hosted by SAROC and SWAN ELECTRONICS, Saturday.
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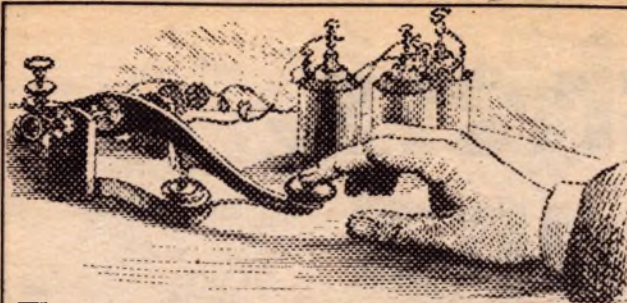
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by Clinton B. DeSoto

courtesy of ARRL

Two Hundred Meters and Down

(First published in 1936, "Two Hundred Meters and Down" is reprinted here, in serial form, 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.)

Continued from last issue

Part I - Pioneers

Chapter Five. . . Adjustment and Development

. . . But as it turned out, amateurs continued to do their operating as they had always done it -- with the exception of showing a little consideration toward the Navy and commercial stations so that these achieved, in part at least, their objective of reduced interference - and by the time enforcement became sufficiently rigid to actually restrict them to two hundred meters, new technique and new apparatus had been developed to make the situation tenable.

The most important step in this technical progress was the general adoption of the audion bulb, or vacuum tube. As has been previously stated, during the seven-year period between 1905, when deForest invented the audion, and 1912, when its full potentialities were first realized, the audion did not receive much attention among amateurs because of its comparatively high cost and the fact that in ordinary detector hook-ups its performance was not sufficiently better to justify its replacing the inexpensive and quite satisfactory crystal detector.

Further discoveries, beginning in 1912, brought the tube to its full usefulness. Eminent scientists all over the world were working on the problem - Lee deForest, with C. V. Logwood and Van Etten, and Irving Langmuir, in America; C. S. Franklin and H. J. Round, in England; A. Meissner and G. von Arco, in Germany; and S. von Strauss, in Austria. Yet it remained for an American amateur to discover the secret.

In 1905, in Yonkers, N. Y., a fifteen-year-old lad had plunged into the fascinating new game of wireless. His name was Edwin H. Armstrong. He was typical of the amateurs of his time - an eager, independent spirit, who refused to conform to rote and rule. He was fired from his job on one occasion, in fact, for refusing to punch a time clock. But when he entered Columbia University, under the wise and understanding guidance of Professor Michael L. Pupin, he achieved his element.

Shortly after his entry into radio a neighbor of his, an electrical engineer named Charles I. Underhill, loaned him a Fleming valve for experimental use in his amateur station. This was in 1908. Two or three years later he procured a deForest audion. It was in 1912 that his great discovery was made.

In his attic laboratory, Armstrong conceived the idea of using the tube not only to amplify the signal once by a factor of a few hundred per cent but of using it over and over by "feeding back to the input a portion of the signal energy from the output circuit of the tube, to be re-amplified. First he tuned the plate circuit of his tube to the same frequency as the grid. Then he placed the two coils in close con-

junction, producing regeneration, which greatly increased the sensitivity of the detector to the incoming signal and gave a far greater volume of sound in the head telephones. Instead of being content with amplification factors of five, he was now getting many times that. It was beyond doubt the most important discovery in radio since the invention of the vacuum tube itself.

The twenty-two year old experimenter was for a long time the only one who realized the significance of his feed-back or regenerative circuit, however. He approached his father with a request for financial backing, but in those days many fathers were being besieged by many sanguine youths who had "discovered" new hook-ups which they hoped would bring them fame and fortune; and a considerable skepticism had resulted after so many of these "inventions" proved to have been merely the result of freak performance in the transmission medium. Probably his father had heard of such tales before. Anyway, young Armstrong found the elder Armstrong's purse strings firmly tied. He next approached an uncle, but possibly the uncle had been forewarned, for this avenue was also found to be closed.

Conjecture for a moment, if you will, as to their thoughts fifteen years later, when this invention had earned millions of dollars and had become the foundation for a great industry.

Armstrong's next step was to draw up layout plans and diagrams of his new circuit and have them witnessed before a notary public. This was in January, 1913. Around that piece of paper, and similar sketches made by Lee deForest somewhat before that time, has been waged one of the bitterest, most spectacular, and the most protracted battle of litigation known to the radio and allied industries. A long succession of reversed decisions by courts of law as to the priority of conception, or more correctly the validity of Dr. deForest's conception, ended recently in the Supreme Court of the United States with a decision favoring deForest. Even now, though, many of the leading engineers in radio will wag graying heads and suggest that the Supreme Court does not thoroughly understand all the intricacies of radio.

But that is of no concern to the history of amateur radio. The significant thing is that a young 22-year-old amateur should have made the discovery that was to revolutionize the entire art of radio, a discovery long sought by the leading contemporary scientists of this country and Europe; for the one certain fact is that Armstrong was the first to realize the importance of his discovery, and to benefit by it in actual receiving practice. And that is what the radio art was looking for in those days.

Armstrong's discovery was of significance not only in its application of the regenerative principle to receivers: it led to the discovery that vacuum tubes could be made to oscillate, and from that discovery grew the entire post-war structure of radio, both transmitting and receiving.

Only one can lead; the rest, perforce, must follow. The rest of the amateur world went to work putting the fruits of Armstrong's research and that of many others, now historic in importance, into practice.

By this time the experimentally inclined were greatly outnumbered by those who found the predominant *raison d'être* for amateur radio to be commercial attributes in the handling of messages.

Soon they were not only holding personal conversations but they were sending friendly messages, and even occasionally handling traffic for other persons. The whole character of the busy air lanes was changing.

In March, 1913, a possible new activity for amateur radio made itself apparent when amateur stations successfully bridged the communications gap surrounding a large isolated area left by a severe wind-storm in the Middle West. Amateur stations at the University of Michigan at Ann Arbor, and at Ohio State University, in conjunction with numerous individual amateurs in and around the stricken area, handled widespread communications from March 24th to 31st.

Message handling - for pleasure, for friends, in time of emergency - was rapidly becoming the predominant theme in amateur radio. It was shortly to assume a position of dominant importance in the development of an amateur radio organization of truly national character.

Chapter Six. . . The American Radio Relay League

In January, 1914, the scene of Destiny in amateur radio shifted to Hartford, Connecticut. On January 14th there was held the first meeting of the Radio Club of Hartford, at that time just another of the large group of radio clubs that had been springing up throughout the country for the past four years. In the chair at this first meeting was Hiram Percy Maxim, the brilliant engineer who had already achieved lasting fame through his pioneer work in the development of the automobile, and for his invention of the Maxim silencer. He had become interested in amateur radio through the activities of his son in 1907, and soon developed one of the dominant stations of all New England.

Temporary secretary of this first meeting of the Radio Club of Hartford was an eighteen-year-old Hartford amateur named Clarence D. Tuska. Before the meeting was over, David L. Moore had been elected president of the club, while Tuska continued as secretary. Bi-monthly meetings were scheduled. A constitution was drawn up and adopted at the next meeting. Twenty-three charter members were on the rolls. By March 9th the attendance had mounted to 35.

Then Destiny encamped. At that time, the demand for vacuum tubes had reached a peak as a result of publication of the wonderful Armstrong regenerative circuit. Production could not keep up with the demand. No longer was it possible to go up to the Metropolitan Tower in New York, leave five dollars with the deForest Radio Telephone Co., and depart with the precious audion. H. P. Maxim was very anxious to secure one of these vacuum tubes, but he had been unsuccessful in his attempts to purchase one. Sometime during the four-week period between March 9th and April 6th, however, he learned that an amateur in Springfield, Mass., had an audion for sale. That night he sat down at his transmitter and attempted to send a message to Springfield opening negotiations for its purchase.

Maxim's one-kilowatt station, 1WH, at that time had a maximum sending range of about 100 miles under favorable conditions. Springfield was only thirty miles north of Hartford. Yet it so happens that from time immemorial right up to the present day some peculiar transmission condition has made direct ground-wave radio communication between Springfield and Hartford difficult if not an impossibility. Maxim could not "raise" Springfield.

(Continued in next issue of WORLD RADIO.)

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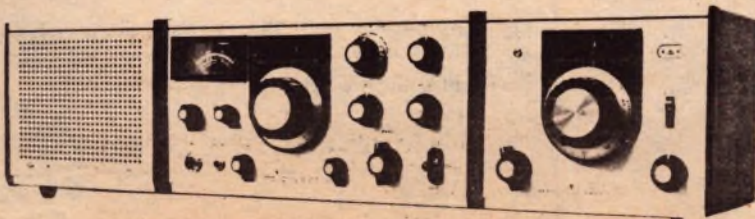
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Letters

As a post-script to my article "Ireland or Bust" (WORLD RADIO, July, 1973) - I have received a permanent license in the Republic of Ireland. I would like to publically thank the Government of Ireland for this privilege. Those of you planning a trip to Ireland - and doing some operating from there - can write to: Dept. of Posts and Telegraphs, General Post Office, Dublin 1, Ireland, for an application. I would suggest doing this at least four or five months before your departure (don't do like I did last time). Hope to work you all from EI land sometime... Bob Williams, K6EMN/EI2CM

Worldradio/NEWS fills an important need. September issue especially excellent. All best wishes for continued success... F. E. Handy, W1BDI

I genuinely enjoy reading WORLD RADIO - keep up the good work... Pete Hoover, W6APW

Keep up the work on the most unique and interesting publication... Dick Ehrhorn, W4ETO

Congratulations on a very fine paper... Stan Byquist, K8VRM

Fine paper... Robert Brown, W2EDN

If I was within 500 miles of you, I would now be on my way to your office to give you a big "pat on the back" for one of the finest editorials I have ever read, which appeared in the July 1973 issue of "Worldradio". I am glad to see someone finally analyze the facts and come out with a viewpoint. We amateurs must speak up loud and clear; not with abusive and "hot-headed" voices, but with facts and a calm voice. More power to you. And, while I am writing, let me just say that I think WORLD RADIO is the finest publication on the market today... Bill Hayes, W4AFM

Just a big pat on the back for your editorial. I hope it sinks in and we really become aware of what you are conveying to us. I sure hope that we can be heard; I believe any further awareness of our situation and its seriousness should not be let up by you or any other

publication. So please keep up the good work, because so few (FCC) can sure hurt so many of us. A delayed Happy Birthday. I'm pleased to be one of your original subscribers... Jules Wenglare, W6YO

Everyone with whom I have shared Worldradio/NEWS has agreed that it is a much-needed magazine for hams... Clarence Wright, K4CDP

Larry Higgins, W5QMU, showed me your newspaper and I'd say you're really filling a needed service. Besides my own subscription, please enter a gift subscription for Sen. John Tower... Robert Wheaton, W5PKK

On behalf of our club, please accept our subscription to WORLD RADIO. We think it's the greatest yet on Public Relations, Emergency Operations and the real aspect of Amateur Radio... Stan Rogacki, WA2EXX, Don Bosco High School A. R. C.

Your July issue convinced me that I must join with you by subscribing for your active organization truly reflects what Amateur Radio is all about... J. W. Shrimpton, VE7AZL

Excellent paper... Kem Hopkins, WA9WCP

Participants Communicate



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(Continued from last month's issue.)

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Doc Gmelin, W6ZRJ, Cupertino, CA
Carl Smith, W0BWJ, Denver, CO
Albert Gaetano, W6VZT, Los Gatos, CA
Cophorne Macdonald, W0ORX, Rochester, MN
Rusty Epps, W6OAT, San Francisco, CA
Theodore Cohen, W4UMF, Alexandria, VA
Don Dezarn, WB6BGQ, Vallejo, CA
Karl and Gitta Geng, DL2AA and DK6CX, Medway, MA
Mike Fern, WA6OWJ, Los Angeles, CA
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Wilbur Proffitt, WB8FDX, Goshen, OH
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Jim Lane, WA5LMG, Dallas, TX
Warren Gilleran, WA6QQB, Santa Clara, CA
Francis Duffy, W9TV/7, Portland, OR
Roy Horne, K6EDB, Chico, CA
George and Vi Lehtinen, W8ICC and W8JXJ, Ishpeming, MI
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Robert Peavler, W0BV, Kirksville, MO
Carl Vidnic, W6WRM, Long Beach, CA
(Continued in next month's issue.)



An International Newspaper
Third Year of Publication

Worldradio
"the people paper"

* GLARE-FREE

information

WORLD RADIO is published monthly by Worldradio Associates. Offices are at 2509 Donner Way, Sacramento, California 95818, USA. Telephone: (916) 456-6725

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WORLD RADIO is two-way communication. Send in Amateur Radio news and information. Share your knowledge and experience 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 club bulletins.

Article contributions, advertising inquiries, comments and suggestions are invited.

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

Advertising rates

CLASSIFIED:-The Mart

From private individuals - 3 cents a word.
Business firms remit - 6 cents a word.
Non-profit organizations - 2 cents a word.

DISPLAY:

Full page - \$62.00 Half page - \$37.20

Quarter page - \$22.32 Eighth page - \$13.39

Sixteenth page - \$8.03

Guaranteed distribution: 6,200 active hams
Subscribers in all 50 states and 60 countries. Quotes are for camera ready advertisements. If we make up your ad there is, naturally, a charge for time and materials.



Teletype fans-Read RTTY Journal, now in 18th year. Exclusively RTTY-Technical-Operation-DX-VHF-etc. Sample 30 cents-\$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. Subscriptions \$3.00 a year, sample copies 25 cents. Address: AUTO-CALL, 2012 Rockingham, McLean, Virginia 22101.

MEDICAL: Any licensed amateur radio operator in the medical or paramedical field should join MARCO (Medical Amateur Radio Council). Contact: Stan Carp, M.D., KLEEG, 44 Main St., Saugus, MA 01906. (617) 233-1234.

The SOCIETY OF WIRELESS PIONEERS invites all professional operators, active or retired to join the world's largest organization of its kind. Active nets. Write Box 530, Santa Rosa, CA. 95402 for details.

GLOBAL RESEARCH and Supplies. Amateur equipment and service. Dycomm, Galaxy, Tempo, Kenwood, Inoue, B and W, SBE, Hy-Gain, Cush-Craft, Larson. (312) 279-4658. P. O. box 271, Lombard, IL 60148

FREE-Free-Free--Homebrew power supply for my HW12 if you buy the rig. Have HW12 in fair-to-good operating shape (may need a little re-alignment) with mobile mike included. Asking \$68. K8IQB, Howard St., Bellevue, OH 44811.

BALUN COILS - 2 KW-PEP 3 to 52 mc. Save by installing in your own weather protector. 1:1 or 4:1 ratio, \$2.95 plus postage. Engineered Products Co., 9130 Yankee St., Miamisburg, Ohio 45342.

WONDER WHEEL. A Copyrighted Mathematical Tool for OHM's Law. Send \$1. cash and stamp to K4AQT, J. T. Beck, 3810 Leila Av., Tampa, FL 33616 USA

Editing a Club Paper? Need some help? Amateur Radio News Service would like to hear from you. For info, write: Rosemary Willis, Sec'y, 9276 Borden Ave., Sun Valley, CA 91352.

For Sale or trade: Duplicates of QST from 1916. CQ from '45. Handbooks from 1930. Books of Radio and Wireless. Want old radio receivers, wireless, etc. List for stamp. Erv Rasmussen, 164 Lowell, Redwood City, CA 94062.

Tired, Aching Feet? Wear comfortable Knapp, Hanover shoes. Write for brochure. Steven Kullmer, Dysart, Iowa 52224.

HAMS-EXPERIMENTERS: Send SASE for list of the lowest prices on electronic goodies of all kinds. Get on our mailing list now! New catalog going to print soon! Aksarben Electronics, 5535 Fremont, Lincoln, NB 68504.

CASH: For your solid state devices, SCR's, transistors, rect. and diodes, IC's, and electronic or related components. John Lou-denback, 5535 Fremont, Lincoln, NB 68504.

Collins 30L1 linear amplifier \$325, Trio Transceiver 144-146 MHz. AM Model TR-2 with mike and AC-DC power plugs - built in V. F. O. \$100, AMECO R5A solid state receiver 540 kHz to 54 MHz \$50, Heath AT-1 transmitter with VF-1 V. F. O. \$40. All in excellent condition W6NUE, 19641 Scotland Dr., Saratoga, CA 95070, (408) 867-5257.

ARE THE DEAD REALLY DEAD? Stamp appreciated. METHODS, Box 1263W, Mountain View, CA 94042.

100 kHz crystals, octal base, \$2.50 postpaid. Limited supply. Nat Stinnette Electronics, Tavares, FL 32778

Wanted: I need teletype parts for all model machines. Also Mite parts. Phil Rickson, K2HJC, Box 96, Morrisonville, NY 12962

CW OPS. RAZOR SHARP 30HZ RECEIVER SELECTIVITY puts QRM out of the picture. Works with any receiver or transceiver, including yours! You paid hundreds of dollars for your transceiver; why not give it the "ultimate" in selectivity? See large ad elsewhere this issue. AUTEK RESEARCH.

WYOMING RANCH LAND. Antelope, Deer, Wild Horses. Lots of room for antennas. 10 Acres \$25 down, \$25 month. Info, maps, photos FREE. Mike Gauthier, K6ICS, 9418 Florence, Downey, CA 90240

HEATHKIT AMATEUR EQUIPMENT - 5-band receiver, HR-10-B; crystal calibrator, HRA-10-1; superex headphones, GR-396; mobile speaker, HS-24; code practice oscillator, HD-16 - prime, recently assembled. Cost about \$125, asking \$75. Many extras. Kirsner, 1 Rose Lane, Yonkers, NY 10705.

GE POCKETMATE cases made of durable plastic with belt loop, brown, \$5./PP. WA4FTL, Rt. 11, Box 160, Greensboro, NC 27410.

CRYSTAL SET-Working replica circa 1916 as advertised Hugo Gernsback's "Electrical Experimenter". Beautifully reproduced. Conversation piece for shack or collection, \$20. Wireless Shop, 9130 Yankee St., Miamisburg, Ohio 45342.

GREAT CIRCLE BEARING CHARTS: Computer generated for your exact QTH. Bearings, distances, return bearings, for 660 worldwide locations. Price \$1. PP worldwide. See also Ham Radio Magazine April 1973, Radio Communication November 1972. (SASE for copies of these articles). Bill Johnston, 1808 Pomona Drive, Las Cruces, New Mexico 88001.

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

Picture QSL cards made from your photo of yourself, shack etc. 250 - \$8.50; 1000 - \$16. Full color from slide \$35. Samples free. Picturecards, Box 5471, Amarillo, TX 79107

Antique flameproof keys for sale-Type J-7-A, built for U. S. Govt. in 1921-original carton-\$12.95 ppd. Walt Jackson, W5ZYA, P. O. Box 19406, Dallas, Texas 75219.

Swan Cygnet-270B, mint condition with extra final. \$350 or best offer. WA5OCV, 2735 Hampton Ln., Port Neches, TX 77651

WESTERN UNION Desk-Fax Telefax Transceivers: Several extra machines (checked out), \$14. each, shipping collect. Western Union Desk-Fax Shop Manual, \$3.80 PP. Bill Johnston, 1808 Pomona Dr., Las Cruces, New Mexico 88001.

Wanted: Old radio receivers, wireless gear, msc. parts, etc., Circa 1920, regardless of condition. Joe Horvath, W6GPB, 522 Third St., San Rafael, CA 94901.

DX'ers - New Logarithmic Speech Processor. Nominal 8 db increase in average power. Less than 5% distortion at 1 KHz. L/C filter. Hi-Z. Meter. \$49.95. Also, Low Noise Dual Gate MOSFET receiver preamplifier. Nominal 20 db gain, 10-30 MHz. \$39.95. With Cabinets. Dynacomm, 1183 Wall Road, Webster, NY 14580.

WANTED FOR CASH\$\$\$ - airborne radio eqpt. headsets, microphones, Xmitters, antennas, receivers, ADF, TACAN, Commercial or military made by Collins, Bendix, RCA, Wilcox etc. Call ROBERT SANETT, 616 S. Holmby, Los Angeles, CA 90024. (213) 279-1275

TRAVEL-PAK QSL Kit. Send CALL and 10 cents; receive YOUR CALL sample kit in return. SAMCO, Box 203, Wynantskill, NY 12198

Toroids - 44 and 88 mhy 5/\$2.50 ppd. M. L. Buchanan, P.O. Box 74, Soquel, CA 95073

Ten lb. Electronic parts \$10, tubes for sale too. Williams, P. O. #7057, Norfolk, Va. 23509

GREAT NOSTALGIA ITEM. Two Old-time-radio-shows, "My Friend Irma" and "Our Miss Brooks," on one LP. \$6.45 postpaid. Catalog 25 cents. Records and Tapes, Box 724-WR, Redmond, Wash. 98052

TELETYPE, Kleinschmidt, Mite gears, ribbons, supplies, parts, manuals, tuning forks, motors, tape. SASE list. Typetronics, Box 8873, Ft. Lauderdale, FL 33310, W4NYF. WANTED: Northern Radio 107, Kleinschmidt series motors, teleprinter parts.

TELETYPE RIBBONS, 12 to box, heavy red or green ink, ONLY \$5. PP USA. A. Clark, W4IYT, 41 Lenape Dr., Miami Springs FL 33166 (305) 888-3874.

ELECTRONIC CALCULATOR HEADQUARTERS - Special purchase makes Commodore MM3 shirt-pocket calculators with constant available for a limited time at only \$49.95 plus \$1.00 shipping. Hurry! Electronic Distributors, Inc., 1960 Peck St., Muskegon, MI 49441.

\$\$\$CASH for Electronic tubes-receiving, power etc, what have you that is interesting? A R S ELECTRONICS, 616 S. Holmby Ave., Los Angeles, CA 90024. (213) 279-1275

Wanted: transceiver for mobile such as Swan Cygnet, 350, 500, Galaxy 550, etc., at reasonable price. WA6YBT, 5221 Callister Ave. Sacramento, CA 95819

Need parts?

We carry parts for R-388-390-390A-391-392-51S1-51J4-1051-Nems Clarke-Racal-Pack sets-PRC-25-41-47-62-70-71-73-74-77. We also buy these sets in any condition. If you need a part, check with us. If we don't have it, we will get it. Also we want to buy all aircraft communications; all ground communications; all plug-in modules. Any condition, bent, busted, okay. We have the following units for trade on aircraft or ground radio: R-388-390-390A-392-51S1-51J4-1051-Nems Clarke Rascals. Urgently need ARC-102-618-T-Arc-51 right now. D and R Electronics, R. D. #1, Box 56, Milton, PA 17847. Phone: 1 (717) 742-4604 after 6 p.m.



Worldnews ROUNDUP

Ham Aids Ecuador Girl

A Syracuse doctor attempted to save an Ecuadorian girl's life last night (Monday, Sept. 24) through a ham radio patch to Quito.

Ham operator Charles Piterno of Solvay (N. Y.) said he was monitoring the 20-meter band about 10:15 p. m. when he heard a call for any doctor in the U. S. His wife, Pat, after making several calls, got in contact with Dr. M. J. Stuart.

According to the doctor in Ecuador, the four-year-old girl is suffering from lymphatic leukemia and, because of a medicine shortage, he wanted to keep the girl alive until she can be taken to the U. S. next week.

Analyzing the situation, Stuart prescribed intravenous medicines and antibiotics for the girl, who was running a 104-degree fever.

When changes in the radio reception threatened to cut off communication, a second Solvay ham, Frank McElroy, who is on higher ground than the Piternos, continued the phone patch until the doctors finished talking.

The total conversation took more than an hour.

(From the Syracuse, N. Y., "Post-Standard")

Conn. Ham--England

(Continued from page 2)

Flaherty says there are about 350,000 hams throughout the world, in every country but China. Even the Soviet Union allows its citizens to be hams, "but I'm sure they're all good Communists," he said.

About 200,000 hams practice their hobby in the U. S. and all are licensed by the government and must know Morse code as well as technical details about the operation of their equipment. However, "most hams in other countries speak pretty good English," he said.

When Morse code is used, communication is achieved through the "Q" code, a series of three-letter groups. "QTH?" means, "Where are you?"

Many hams compete for prizes by requesting "QSL" cards from other Amateur Radio aficionados. These are post cards sent from all over the world upon request. Flaherty said a friend has over 300 "QSL" cards - for these purposes Alaska, Hawaii, non-self governing territories and even usually uninhabited islands are considered countries.

Local clubs include the Bristol Amateur Radio Club, with about 25 members, and the Forestville Club, with about 15. There is a serious side to the hobby: Flaherty belongs to the Bristol Emergency Network, which is prepared to take to the air for communication purposes in case of any type of emergency or disaster.

(From the Bristol, Conn., "Press")

SOS-Gribi (Continued from page 1)

This was organized by John Lunsford, W4EVG-XV5AC, and Fred Wagner, W7HSS-HS2AJG.

Gribi gives particular credit to net control stations; Travis Pederson, W5ZSX-HS4AGN, and Carl Reder, WB8JDR-VQ9R, "plus the multitude who remained silent and thereby displayed exemplary net discipline."

(See WORLD RADIO, September 1973 and May 1972 for earlier stories on Carl Reder, WB8JDR and VQ9R.)

FCC (Continued from page 2)

In rejecting the ARRL's request, Higginbotham noted the league had wanted additional time to complete work on proposals and suggestions regarding problems "currently being experienced in the Class D category."

He replied to this by observing that "in our notice we stated that the main thrust of this proceeding would be to determine whether additional frequencies are needed in the Citizens Radio Service and not to explore Class D enforcement problems."

ARRL (Continued from page 2)

W3SW; Atlantic vice director, Eieberman, W3KT, Lamb, W3BWZ, Smith, WA2KND, and van Dyke, W3HK; Dakota vice director, Gray, WA0CPX, and Kulas, WA0IAW; Delta vice director, Coffey, W5NCB, and Sanders, WB4ANX; Great Lakes vice director, Clausen, W8IML, and Zimmerman, K4FU; Midwest vice director, Miller, WA0KUH, and Pitner, W0FZO; Pacific director, Gmelin, W6ZRJ, and Wical, KH6BZF; Pacific vice director, Gaetano, W6VZT, and Stillwell, W6NJU; Southeastern vice director, Gauzens, W4WYR, Roux, K4THA, and Wayne, WB4CBP. As soon as ballot returns have been counted in late November, results of all these elections will be given in a further bulletin from this station.

Club Meetings

Los Altos Hills, CA - Third Monday at the Electronics Museum of Foothills College, 7:30 p. m.

Gainseville, FL - First Tuesday in the Civil Defense office at the county courthouse, 7:30 p. m.

Alexandria, MN - Third Thursday at the Alexandria Airport.

Souderton, PA - Last Thursday in the Community Room of Perkasio Federal Savings and Loan Assn., 8 p. m.

Apache Junction, AZ - Contact Ben Fidler, 982-3231.

Eustis, FL - Contact Gus Goings, 357-4221.

Erie, PA - First Thursday at the Red Cross Bldg., 8 p. m.

Inglewood, CA - Fourth Friday in the library of the Inglewood Recreation Center, 400 Beach Blvd., 8 p. m.

Monterey Park, CA - First Thursday in the Garvey Ranch Park clubhouse, 751 S. Orange Ave., 8 p. m.

Canoga Park, CA - Contact Mike Seedman, 346-8964.

(Send meeting notices to Worldradio)



contests MARAC

Third Annual County Hunters SSB Contest

Time and Date: 2200 GMT, Friday, April 12 to 0500 GMT, Monday, April 15, 1974.

Frequencies: Low end of the general phone sections of each band suggested. No credit for contacts on the 14.336, 7.243, or 3.943 Nets.

Rules: A fixed station may be worked only once during the contest. Portable stations that change counties during the contest may be worked again for point and multiplier credit from each new county. A mobile may be worked once from each new county or county line. Stations worked on a county line count for one contact but two or more multipliers. Portable stations are considered fixed for scoring purposes.

Exchange: Signal report, county and state. (country for DX). All US stations are encouraged to listen for the DX stations. Mixed mode contacts are permitted but one station must be on SSB.

Scoring: Contact with a fixed US station - one point. Contact with all DX stations (including KH6, KL7 and VE) - 5 points. Contact with any mobile station, 14 MHz and up - 5 points. Contact with any mobile station, 1.6, 3 and 7 MHz - 10 points.

Multiplier for fixed station scoring:
Total number of US counties worked.

Multiplier for mobile station scoring:
Total number of US counties worked plus number of counties given out.

Log Data: Date/Time, station worked, report exchanged, county, state, band, claimed points (1, 5, 10). Each new multiplier is to be numbered.

Certificates: Special plaques to the highest scoring fixed, mobile and DX station. Certificates to the top 10 mobile and fixed stations and to the highest scoring station in each DXCC country. Only single operator stations are eligible for these awards. Multi-operator certificates to be awarded as merited. A station may enter as both fixed and mobile but separate scores.

Log Sheets: Summary and log sheets are free for a #10 SASE or SAE and appropriate IRCs. Write to: James L. Willingham, KØARS, Route 2, Bevier, Missouri 63532.

Entries: Submit all entries to: James L. Willingham, KØARS, Route 2, Bevier, Missouri 63532.

Deadline: All entries must be received by June 1, 1974 to be eligible for awards. DX entries should use airmail. Winners will be announced in Kansas City, Missouri, at the 1974 ICHN Convention in July and in the MARAC News Letter.

Worldradio: Newsource