# The Worldradio News

Vol. IV, No. 3 September 1974 50¢

# License Fees may go down

The Federal Communications Commission has proposed that the fee schedule for Amateur Radio licenses be reduced.

In Docket No. 19658 the FCC proposed to lower the charge on new and renewal licenses from nine dollars to six dollars and modification without renewal would be five dollars. Special calls would remain at $25.

There would continue to be no fee for Novice Class, applications for amateur stations under military auspices, and applications filed in the Radio Amateur Civil Emergency Services (RACES).

The FCC move came in an effort to conform to a Supreme Court decision. To boil down the legal complexities -- it appears the Court has rejected the idea that the Commission's fees should approximate its budget.

Prior to 1970, the Commission's fees had produced about 25 percent of its annual budget. The fee schedule adopted in 1970 was designed to collect about 26 million dollars each year. That sum represented the FCC's budget at the time.

This new fee schedule is designed to cover the costs basically associated with processing of applications. The Court, in its decision, mentioned "to the benefit of the public" and "value to the recipient".

Amateurs with commercial licenses will be pleased to note that the proposed fees for new licenses will drop to five dollars and renewals will be two dollars. The amateur fees would still remain higher than commercial operator fees, which is a puzzlement to many.

The Festival of American Folklife was recently held on the Mall in Washington, D.C. Participating was the Foundation for Amateur Radio, a council of clubs in the greater Washington, D.C. area.

The foundation took advantage of the excellent visibility for Amateur Radio to make the official presentation to the new ARRL Foundation of their donation.

From left to right: Hugh Turnbull, W3ABC, President of the Foundation for Amateur Radio; Robert York Chapman, W1QV, President, ARRL Foundation, Inc. and Peter Schenck, WA4GFY, Vice-President, ARRL Foundation, Inc. (de Harry Mc Conaghy, W3SW, Director, ARRL Atlantic Division)

## Repeater control

In the Matter of

Amendment of Part 97 regarding the automatic control of repeater stations in the Amateur Radio Service.

NOTICE OF PROPOSED RULE MAKING
By the Commission: Commissioners Washburn and Robinson not participating.

1. Notice of Proposed Rule Making is hereby given in the above entitled matter.

2. The Commission is considering amendments to the rules for the Amateur Radio Service to provide for automatic control of repeater stations. Every amateur radio station, including all repeater stations, has always been required to have a control operator at an authorized control point when in operation. In the Report and Order, in Docket 18803, 37 FCC 2d 225 (1972), we predicted advancements in amateur remote control and automatic control would necessitate further rule making in the matter of repeater control. Interested parties having information and suggestions in these areas were urged to submit them to us for consideration. We are appreciative for the helpful response from those amateurs and organizations doing so. In particular, we are grateful to several amateur licensees for their experiments in semi-automatic repeater control, and to the American Radio Relay League for their suggestions. This information, together with our awareness of the vast improvement in the amateur remote control methods in recent months, leads us to believe there is an appropriate basis for moving forward in this area.

3. By the term control, as used herein, we mean the techniques for accomplishing the prerequisite responsibility for the proper operation of an amateur radio station in compliance with the rules. A control operator, whether or not the station licensee, at a control point located adjacent to the station transmitter, in the classic concept of amateur radio operation is performing local control. If he is at a distant control point, he is performing his functions by remote control through a control link. When some means other than having the control operator on duty at all times is used to control a station, we consider this to be automatic control. Only repeater stations and auxiliary link stations used in repeater systems are being proposed for automatic control in the Amateur Radio Service.

4. Because of the unique privileges authorized, there are special responsibilities incumbent upon the licensee and the control operator of remotely controlled stations and repeater stations. Unlike most other radio services, we do not assign specific
(please turn to page 2)

James Maxwell W6CUF
Box 473
Redwood Estates CA 95044

## Crossband repeaters

In the Matter of

Amendment of Part 97 of the Commission's Rules to permit crossband operation of repeater stations.

NOTICE OF PROPOSED RULE MAKING

By the Commission: Commissioners Washburn and Robinson not participating.

1. Notice of Proposed Rule Making in the above-entitled matter is hereby given:

2. The Commission has under consideration a petition (RM-2337) filed by the American Radio Relay League (ARRL). Petitioner requests the Commission to issue an Order modifying the second sentence of Sec. 97.111 (c) so as to permit repeater stations to be operated crossband, i.e., permit a repeater station to utilize an output (transmitter) frequency within a different frequency band than the input (receiving) frequency. The present rule requires both the input and output be within the same frequency band.

3. The ARRL suggests that a formal rule making procedure is unnecessary for the proposed amendment since it would provide a relief from a present restriction. Although no specific statutory authority is cited, petitioner must rely upon Sec. 553 (b) of the Adminsitrative Procedure Act, U.S.C., and Sec. 1.412 (c) of the Commission's Rules as authority to support his position. Pursuant to those subsections, general notice of proposed rule making must be published except in certain limited instances. Petitioner does not show that the proposed rule modification comes within those exceptions, and we do not believe any such exception could apply. Moreover, even if we put aside the requirements of the Sec. 553 (b) and further assume arguendo that every amateur licensee who operates or is interested in amateur repeater stations favors this proposed rule amendment, it is possible that this change will adversely affect the interests of other amateur operators, and they should be allowed to comment and express their views.
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## Fred, P29FH, returns

One of the world's best known and most respected amateurs is returning home to the United States after several years in New Guinea.

Fred Hargesheimer, WØEBG, also VK9FH and lately P29FH, is known among the natives of New Britain island as "the man who kept his promise".

During World War II, Fred a P-38 pilot was shot down 80 miles south of Rabaul. He wandered alone in the jungle for 30 days. The natives who found him nursed him back to health and hid him from enemy forces for eight months. When he was evacuated by submarine he told the people "One day I will come back and thank you properly for what you have done".

It was not an easy road back for Fred. He was hospitalized several times at Walter Reed Army Hospital and at the Mayo Clinic. But, in 1960 he returned to the village people who had saved his life.

They were thrilled to see him. He was saddened, though, to see that they were as they had always been. The progress of the world had passed them by. He vowed to do something about it.

Returning home to White Bear, Minnesota, Fred started a non-profit foundation to help the people of Ewassee village. Many ex-fliers and others got involved in the project. In 1963 Fred returned to help build the first school for the children of Ewasse. The school goes to the sixth grade. Children who do well are sent to other towns to continue their education.

Every few years Fred would return to check on the progress of the school. In 1969 Fred returned to dedicate the first medical clinic for the areas five thousand people.

While licensed since 1934, this was the first time that Fred operated amateur radio from VK9. He was accompanied by "Worldradio" editor Armond Noble, WB6AUH, who also operated as VK9AM. Armond was there to make a documentary film about Fred and the school.
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# newsfront

## FCC

## control

(continued from page 1)

operational frequencies to amateur stations. All amateur frequencies are available, depending upon one's operator license class, on a first come, first served basis. Most of these frequencies must be shared by amateurs throughout the world, using all types of emissions, for a variety of amateur purposes. Moreover, some frequencies must be shared with non-amateur stations. The fundamental means for making such a system practical is that the control operator of each amateur station selects any specific operating frequency by first determining there are no communications already thereon. In the event there are, he either waits for that frequency to clear, or moves to an unoccupied frequency. Indiscriminate frequency selection can result in non-compliance with Sec. 97.125 which prohibits deliberate interference. While there may be some advantages in discontinuing this system in favor of frequency assignments for repeaters, and possibly other kinds of amateur stations, we believe the traditional method continues to be the best one for the Amateur Radio Service. Coordination of operating frequencies among amateurs is necessary, however, to make the most effective use of the allocated bands. Licensing a station for remote control does not imply any less control is required. The basic premise for permitting remote control of an amateur radio station is that amateur technology is adequate to provide the same degree of control over a remotely controlled station, in so far as compliance with the rules is concerned, as does local control.

5. In most amateur repeater stations which have come to our attention, efficient operation has been achieved through persistent self-enforcement efforts by the amateurs involved. Unfortunately, for a few stations this is not the situation. The control operator of a repeater station has additional responsibilities even beyond those incumbent upon the control operator of a non-repeater station. He has the job of screening out prohibited practices, such as music, broadcasting, commercial traffic, etc. While the repeater may not be the originator of these types of transmissions, the repeater station licensee and control operator are nonetheless responsible for the proper operation of the station. They must receive a high degree of cooperation from other amateurs making use of the station, in order to make repeater stations in the Amateur Radio Service practical. While the control operator must make certain that other radio signals, either amateur or non-amateur, not intended for retransmission are not repeated, it should be obvious to all amateurs that transmissions in the repeater segments of the amateur frequency bands should be limited to those intended to be retransmitted. This is particularly true for transmissions in the frequency regions where the generally accepted repeater input channels are situated, such as 146.01-146.46 MHz and 147.60-147.99 MHz. Stations conducting simplex communications on these frequencies in areas where their transmission could be repeated should expect them to be repeated.

6. Some amateurs have developed a number of techniques to relieve the control operator from personally performing many routine control functions. For instance, several remotely controlled repeater stations use devices to disable the repeater transmitter in order to prevent interference

(continued next column)

to other stations already transmitting on the frequency. Other repeaters use secondary control systems, ranging from simple to complex, to limit access to the repeater to users of their choice. Still others use devices to monitor the technical performance of the station, which automatically shuts down the station if it is not within the desired standards. An automatic recorder is often used for logging third party traffic activity. The use of such techniques appear to make automatic control of an amateur repeater station practical. This is being demonstrated under Special Temporary Authorization by several amateur repeater stations.

7. In some, if not most, amateur repeater stations, where full cooperation by the users is obtained, the control operator's function is usually completely passive. He only needs to monitor the communications to verify the continuing proper operation of the station. We suspect, in such instances, the necessity for real time monitoring by a control operator may be unnecessary. These stations can operate properly under automatic control, with the monitoring accomplished on a delayed basis. Regrettably, from the types of problems encountered by some repeater stations that have come to our attention, it is apparent that not all repeater stations would be able to operate by automatic control at all times. Where the equipment is not sufficiently reliable to leave unattended, or where the necessary automatic functions are not incorporated, or where full cooperation by the users is not obtained, automatic control is not practical. For these stations, operation by local control or remote control is the only practical means, at least during certain time periods when the violations would otherwise occur.

8. Therefore, we are proposing to expand the definitions in Sec. 97.3(n), as shown in the Appendix, to include automatic control, in addition to local and remote control. Automatic control would only apply to repeater stations as described in the foregoing, and to certain auxiliary link stations used in conjunction with repeater stations under this type of control. New Sec. 97.

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## ARRL

8 August

The ARRL Intruder Watch is celebrating its tenth anniversary with a drive for more volunteers to help in the aggressive preparations for the World Administrative Radio Conference to be held in 1979. Reporting cases of harmful interference from stations of other services operating in the amateur bands and developing related statistics will be useful ammunition during the upcoming WARC. If you can spend an hour or so a week helping to defend the amateur radio service, write for detailed instructions to ARRL Intruder Watch, 225 Main Street, Newington, CT 06111.

22 August

The 1974-75 ARRL Net Directory, listing over 500 public service nets registered by June 1, is now available. Once again this year the directory has been produced in booklet form, similar to the format of the Repeater Directory. To receive your copy by first class mail please send an addressed envelope six and a half by nine and a half inches or larger with 30 cents U.S. postage to ARRL, 225 Main Street, Newington, Connecticut 06111.

## Events

MIDWEST DIVISION CONVENTION

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

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

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

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

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

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Mix a lot of pleasure with your fun. Combine a vacation in Canada's beautiful Rocky Mountains with your 1975 Ham Convention plans. The Calgary Amateur Radio Association will host an international meeting on Friday, Saturday, and Sunday, August 1, 2, and 3, 1975 - Calgary's Centennial Year. It will include a Canadian Division ARRL meeting.

## around the world

CLARK AND GOLDWATER TO PHOENIX IN SEPTEMBER

The 16th Annual Sister Cities International Convention is to be held in Phoenix, Arizona, Sept. 18-21 of this year. The Sister City program matches up U.S. and foreign (DX!) cities - Sister Cities - and through this match encourages various educational and cultural exchanges between them. The Sister Cities program has been in operation since the end of WW II, and has been responsible for thousands upon thousands of person-to-person contacts between representatives of the various Sister Cities worldwide.

Communications between peoples is an aim of the Town Affiliation Association (parent body of the Sister Cities Program). The Sister Cities people have been so taken by amateur DX communications that the theme of the convention has been taken to be "Communications for World Peace".

Fully eight hours of workshops have been set aside for discussion of Amateur Radio. We have here an unprecedented opportunity to gain friends for Amateur Radio of hundreds of overseas civic-minded, influential individuals. And with the WARC coming up in 1979, we need all the friends we can get! Already firm on the convention agenda is a major address by Senator Barry Goldwater, K7UGA. The ARRL Executive Vice President Vic Clark, W4KFC, will be a participant.

Led by NCDXC (Northern California DX Club) President Jack Troster, W6ISQ, several Northern California DXers will also be on hand. MARCO (Medical Amateur Radio Council) will be represented by Bill Sprague, WA6CRN, and Bob Smithwick, W6JZU.

The whole project is the brainchild of Chuck Towns, K6LFH, president of project OSCAR. The Northern California DX Foundation is also watching developments with interest. Towns was recently authorized to place a transceiver with a suitable African Sister City, the rig courtesy of the NCDXF (Northern California DX Foundation). Additional details may be found in QST for September, which will carry a lead article describing the program and how it may be of great mutual benefit to Amateur Radio, DXing, and the Sister City program.

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OVERSEAS STUDY COMPETITION

About 570 awards to 50 countries will be available for 1975-76 for graduate study and research abroad, and for professional training in the creative and performing arts. Handled by the Institute of International Education, the purpose of these grants is to increase mutual understanding between the peoples of the United States and other countries through an exchange of persons, knowledge and skills. The grants are provided by the 1961 Fulbright-Hays Act, and by foreign governments, universities and private donors.

Applicants must be U.S. citizens at the time of application, who will generally hold a Bachelor's degree or its equivalent before the beginning date of the grant. In most cases, the applicant must also speak the language of the host country. Creative artists need not have a degree, but must

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# action in amateur radio

## tornadoes

by David Mann
Suburban Trends

The early morning ether crackles with activity; many amateur radio operators are sacrificing their nightly slumber, for catastrophe has struck once more. A large section of the South and Middle West, sometimes called "Tornado Alley," has been devastated by a series of savage twisters, and the death toll is mounting into the hundreds. In the time honored tradition of amateur radio, scores of hams are burning the midnight oil, attempting to assist in the mammoth job of emergency communications.

Several area residents have requested local hams to confirm that their relatives in the affected states are safe. Although the American Red Cross is on the job, their telephone lines are so jammed that it is impossible to get through to them. The hams, well schooled in this type of operation, are equipped to handle it with speed and efficiency.

To the uninitiated person, it all sounds like bedlam, but there is a highly coordinated system at work here.

"W8ICY, this is K2AGZ at Morris County, New Jersey, with a health and welfare query. Over."

"Acknowledge K2AGZ, Morris County, New Jersey. Your query, please, Over."

"I have a request for information on two individuals in Tennessee. Is there a specific frequency for the Chattanooga area? Also the Nashville area? Over."

"K2AGZ from W8ICY. The Kentucky Emergency Sideband Net is handling that area. The frequency is 14.328, up ten kilohertz. Over."

"Thank you for the information, old man. K2AGZ out."

After changing my frequency (QSY), I called in to the Net Control Station (NCS), was recognized, requested the information on the two missing persons, and was informed that when located they would telephone the party in New Jersey who had initiated the request. (If Mrs. Duncan of Pompton Lakes happens to read this, she may expect phone calls from her son and her sister as soon as they are located.)

A worried woman called to ask if I would try to help locate her husband, a traveling salesman who was enroute to Columbus, Ohio. She had heard nothing for three days. He was located in Pittsburgh within three hours.

Two college girls, missing for several hours, were found at a Red Cross depot in the Xenia, Ohio area. They had been evacuated in time, but had not been able to phone their distraught parents in Toms River.

An elderly man was located in a temporary shelter where neighbors had taken him. His son in Cliffside Park was reassured within minutes after he requested assistance from a ham in Leonia.


**identification**
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## storms

"You might say I'm a popular guy in town when a storm comes through" says Mike DeRosa. He attributes his popularity to his talent in operating an "amateur" radio.

DeRosa's use of electronic equipment and radios began in the early 1950's when he was employed as a news reporter for WSJV-TV and WTRC radio. He now lives in Mason, Ohio, with his wife and two daughters. He is an electronics technician in Norwood.

DeRosa's talents have proven very useful in time of emergency. During the storm which raked the Tri-State area with tornadoes, DeRosa set up station in his neighbor's cellar.

During the tornado, his neighbor's house was swept away above his head. DeRosa and his family were secure in the cellar of their home, just as they were during the storm.

During both storms, DeRosa had a portable two-meter FM radio by his side, a valuable source of information for his neighbors in Mason.

"Because of all the contacts I have on my radio, I know more details about a storm than even a commercial radio or TV station can give out," he said.

DeRosa was among many amateur radio operators who played a big part in spotting tornadoes and coordinating salvage operations during the tornado. He has attended seminars about tornadoes and procedures to take during storms.

People needed help and Mike DeRosa provided it.

"About 5 p.m. someone screamed into the radio — to this day I don't know who — 'Mike, It's coming your way!'," DeRosa said. "I went through the neighborhood as fast as I could telling people to make calls and get to a safe place."

It turned out to be none too soon. The storm hit a short time later.

After conditions improved, neighbors were out into the neighborhood to survey the damage. He again got word that another tornado was headed their way. As it turned out, there wasn't one, "...but if there had been..."

Because of the number of concerned men like DeRosa, the Hamilton County, Ohio, Tornado Preparedness Plan was organized to help during emergencies.

"A lot of people think that Amateur Radio is just a good time, and in a lot of cases I guess they're right," DeRosa says. "Some are in it for the electronics, some because they can talk across the world with it, and some just because it's a pleasant diversion."

"But I'll tell you, there was nobody having a good time the day the tornadoes hit. It was strictly business and that's where the value of Amateur Radio lies — emergency and rescue use."

(Elkhart, IN "Truth")

## commendation

Jim Pugsley (K8AES), Rocky River, Ohio recently received commendation from the Cleveland Police Department for promptly notifying police of a traffic fatality on Memorial Shoreway NW. Pugsley operated through the Lake Erie Amateur Radio Association repeater station.

The launch of OSCAR 7 is slated for October. Full details will be in the next issue of this newspaper. OSCAR 7 promises to be even better than OSCAR 6.

## retrospect

Actions of the Central Ohio AREC in the Xenia Tornado

by Robert Dixon, W8ERD

On Wednesday, April 3, 1974, the most widespread disaster (according to press reports) ever to strike the USA occurred.

Tornadoes struck major areas, with Xenia, Ohio, being hardest hit. Hundreds of homes and buildings were destroyed. All power and telephone lines were disrupted.

While Central Ohio AREC members were on their way home from work, about 5 P.M., the news was announced. Immediately a Yellow Alert was issued from W8ERD/M via John Feazell, WB8GVI, at his home station. All AREC members were apprised of the situation and plans were made. At 7:30 PM, the State DSA station W8SGT, was activated by Stephen Moore, WA8LUR, Ralph Rickett, W8BTW, and Robert Wilkey, W8VMS. At 8:30, the Columbus Red Cross Station K8DDG, was activated by Richard Kerns, WB8LBC, and WA8LUR. The AREC two and ten-meter nets were in full operation.

The Red Cross formed a caravan of relief vehicles and requested an AREC communications team to accompany them to Xenia. The first wave of amateurs included George Morris, WA8RUT, John Chapman, WB8INY, Gary Grebus, WB8IBZ, Thomas Lusch, WA8ZTV, Terry Douds, WB8CKI, Dennis Mueller, WB9EBU, WB8RDY, and Victor Kean, WB8OSC. They arrived in Xenia at 2 a.m. on Thursday, and immediately set up at the Red Cross organizing center in the downtown Xenia YMCA. Communications between the AREC team and Columbus was via the W8ERD kilowatt station on 2-meter FM, using both 146.460 simplex and the .130/.730 repeater in Springfield, located about 2/3 of the way from Columbus to Xenia. Local communications in Columbus were via the AREC nets on 50.540 AM, 29.000 SSB and 146.46 FM. Red Cross administrative traffic continued throughout the night, to coordinate a continuing stream of relief supplies such as food, water, cots, portable toilets, clothes and bandages.

Early Thursday morning, the AREC field team put an outbound message service into operation, sending ARL ONE type messages from local residents. This was done via the Ohio SSB net on 3.9725 MHz. The message service was announced on the YMCA P.A. system to inform residents of its availability.

The AREC field team operated from their gasoline generator, and also supplied power to two broadcast station remote origination units and to other amateur groups who arrived later. A relief crew was dispatched Thursday afternoon, consisting of William Clausen, W8IMI, Klaus Ziermaier, W8CRX, John Richards, WB8NNK, Jeffrey Maass, WB8JXS, Jack Shepherd, W8OMY, and Ralph Rickett, W8BTW. In addition to providing the needed Red Cross administrative messages, the AREC field team fanned out in the area, and assisted in many other ways. Walkie-talkie units assisted Dayton Rescue Squad workers in digging victims out of the debris. A water truck was obtained and dispatched to where it was needed. A nurses corps was assisted in their house-to-house visitation and inspection tours. WB8CKI helped the Red Cross make sandwiches while he provided communications from their mobile canteen. WB8OSC rode in a National Guard helicopter with Red Cross officials to provide communications as they surveyed the damage from the air.

Meanwhile, back in Columbus, inbound query traffic was being telephoned into Red Cross at a great rate from Columbus area friends and relatives. This was sent via 75 meters to William Shaeffer, WA8-MCR, in Dayton, or was hand-carried by the relief crews to the Miami Valley FM Club, who was handling the people-finding service. Eventually about 1500 inquiries were handled.

Various state agencies in Columbus began to hear that the Columbus AREC could provide communications into Xenia and began telephoning W8ERD to originate traffic. Some of the more interesting messages included:

1. The physicians and nurses group in Xenia requested advice from Columbus Red Cross concerning typhoid vaccine, which they immediately administered.

2. The Ohio Department of Education and the President of Central State University (largely destroyed) exchanged messages about what to do with the students and what technical assistance was needed. The assistance was then dispatched.

3. The Greene County Memorial Hospital and the Columbus Blood Bank coordinated blood supplies.

4. The Ohio Associated Press inquired about a fire at Central State and stated they had a 1/2 hour press deadline. We got their reply in time for the deadline.

5. An emergency message from Columbus Red Cross to Xenia Red Cross to find one of the victims who was known to require special medication, but local doctors did not realize it.

The operation continued around the clock until Sunday, April 7, with daily relief crews and supplies. On the third day, a high-speed CW link was established on 80 meter CW, and it proved to be the most reliable link of all. On Sunday afternoon the AREC field team returned to Columbus. NTS activity continued for several more days, carrying replies to earlier inquiries. The activities during the height of the operation were so many that we lost track of exactly who did what, but many AREC members operated from Xenia, from Columbus Red Cross, from W8ERD, from the OSU Club station, W8LT, and from their homes.

The good news and the bad news:
As always after a major event, one can look back and pick out the good and bad points.
These are the major outstanding things I feel we did well:

1. Handle all communications needs of Columbus Red Cross.

2. Handle communications needs of many other organizations

3. Establish the outbound message service.

4. Supplied power to broadcast stations and others in addition to ourselves.

5. Used diverse bands and modes: 2 FM simplex, 2 FM repeater, 6 AM, 10 SSB, 75 SSB and 80 CW.

6. The high-speed CW link deserves special praise.

7. The full capacity of Central Ohio AREC was not taxed. The 40 or so "active" members were so interested and willing to work that it was never necessary to call up the additional 40 "reserves" we have in the "inactive" members. Despite maintaining a large field team in a distant city for five days, we simultaneously pulled off the previously scheduled Cancer Society fund drive on Saturday, having a full quota of 10 mobiles to carry out our committment to that organization. Think about that one.

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## 7-SEGMENT READOUT
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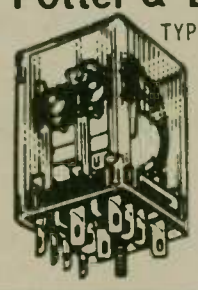

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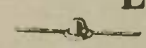

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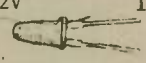

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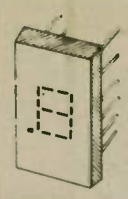
## MAN 1



7-Segment, 0-9 plus letters. Snaps in 14-pin DIP socket or Molex. Operates with IC voltage requirements. Long operating life.

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| 74H01 | .35 | 7454 | .25 |
| 7402 | .35 | 74L54 | .35 |
| 7403 | .30 | 74L55 | .35 |
| 7404 | .28 | 7460 | .20 |
| 74H04 | .35 | 74L71 | .30 |
| 7405 | .28 | 7472 | .40 |
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| 7410 | .25 | 7474 | .65 |
| 74H11 | .35 | 74H74 | .80 |
| 7413 | 1.25 | 7475 | 1.40 |
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| 7430 | .25 | 7490 | 1.20 |
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| 7440 | .25 | 7495 | 1.15 |
| 74H40 | .35 | 74L95 | 2.00 |
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| 7442 | 1.20 | 74121 | 1.25 |
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| 7447 | 1.50 | 74193 | 1.50 |
| 7448 | 1.50 | 74195 | 1.00 |
| 7450 | .25 | | |
| 74H50 | .35 | | |
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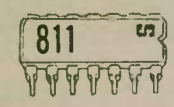


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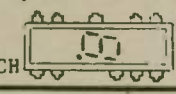

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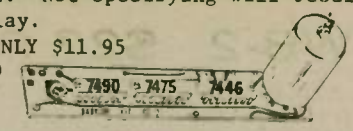
COMPLETE KIT, ONLY $11.95
FULLY-ASSEMBLED UNIT $15.00

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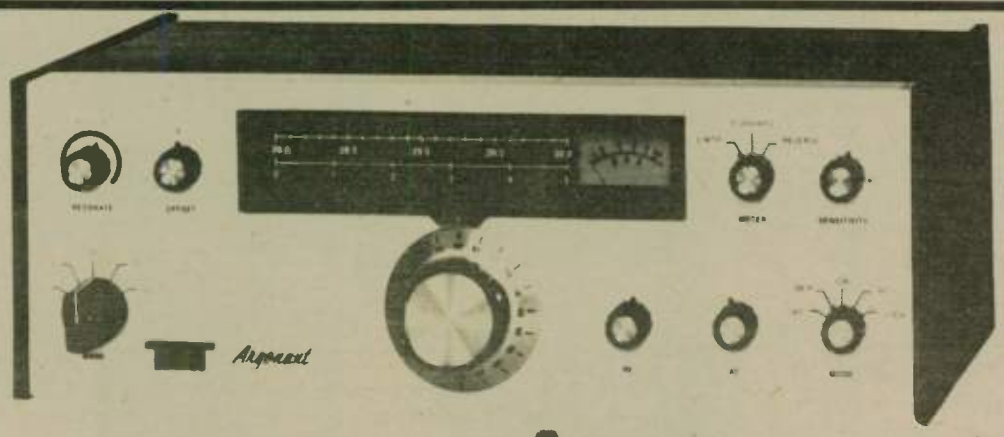



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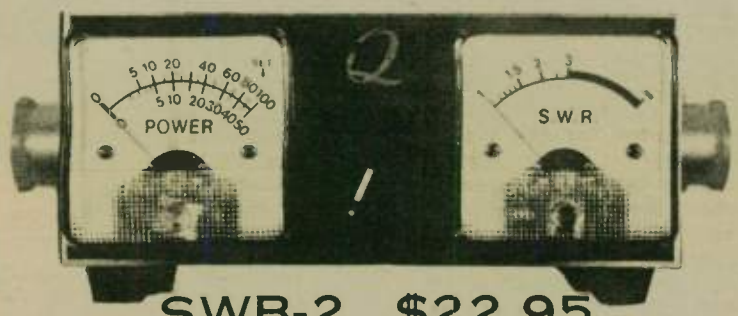


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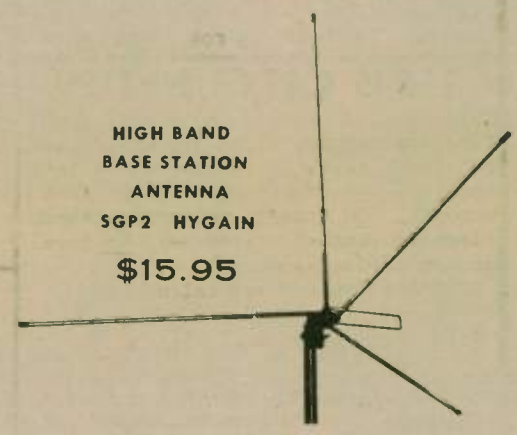

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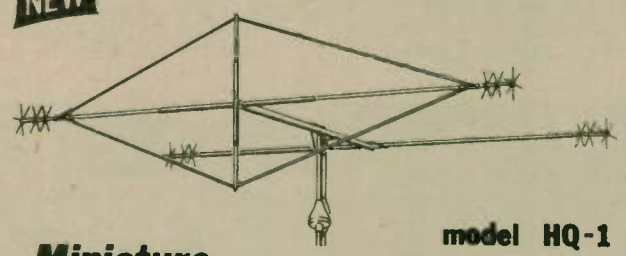

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# international friendship in amateur radio

# AP2AD

by Armond M. Noble, WB6AUH

"If everybody in the world was a radio amateur, you wouldn't need the United Nations," is the opinion of one of the world's most popular amateurs, Ahmed Ebrahim, AP2AD, of Lyallpur, Pakistan.

Ahmed recently completed a two-month tour throughout the United States. Asked why he decided to spend his vacation in the U.S. he replied, "The U.S. went to the moon. I wanted to see the people that made it possible. Operating amateur radio, I have come to know the Americans better than most other amateurs - they seem so friendly."

Ahmed's trip through the U.S. to meet fellow amateurs started on June 16, when he landed in Boston and was met by Jack Rosiello, K1KNQ. It was a reciprocal "ham-hop" hosting--Jack had stayed in Ahmed's home in 1969. Jack had been stationed in Pakistan in the U.S. Air Force, but they did not meet then. Only later, when Jack was back home, did they start working on the air. When Jack and his Pakistan-born wife went to Lahore to visit her family, they finally met.

Ahmed is the vice-president of the Pakistan Amateur Radio Society, which is about to join the IARU. He paid a visit to ARRL headquarters in Newington, Conn. He also attended the ARRL National Convention in New York City.

Ahmed was impressed by the shopping centers, "even bigger than I thought they would be, and the surprisingly warm weather."

Many amateurs came to visit Ahmed while he was staying with Jack, K1KNQ, in Shrewsbury, Mass. He had worked many of them on the air — Roger Prince, K1KDP; Norman Young, W1HX; Jay Chesler, W1SEB; Joel Peisach, WA1HFN; and Charles Mellen, W1FH, who brought an AP2AD QSL from 1957. Then, Ahmed says, "so many others came I just couldn't name them all".

Next it was Chicago, Ill. where Ahmed's host was Brian Miller, WA9ILW, took Ahmed (who is communications superintendent with a natural gas company) to see communications facilities of an Illinois natural gas pipeline company.

Ahmed's other hosts were Gerald Swetsky, WB9EBO, and Ralph Napolitano, W9LKJ. They showed off the sights of Chicago, including the Science and Industry Museum and the Sears building, world's tallest.

The Northern Illinois DX Association held a banquet with Ahmed as guest of honor. "I met quite a lot of people I'd worked over the years. While back home, I said on the air that I'd like to meet my friend "VW. So, Harold Brooks, W9VW, whom I've known for many years, came all the way from Indiana to the banquet."

Ahmed made a side trip to Leland, Ill. to "tie the ribbons" on an incident of a few years ago. At that time, a young missionary nurse from Leland had gone to a remote part of Pakistan. For several weeks after her arrival no word was received by her parents. Roger Benson, K9GZS, worked Ahmed, who was able to get in touch with the nurse by telephone.

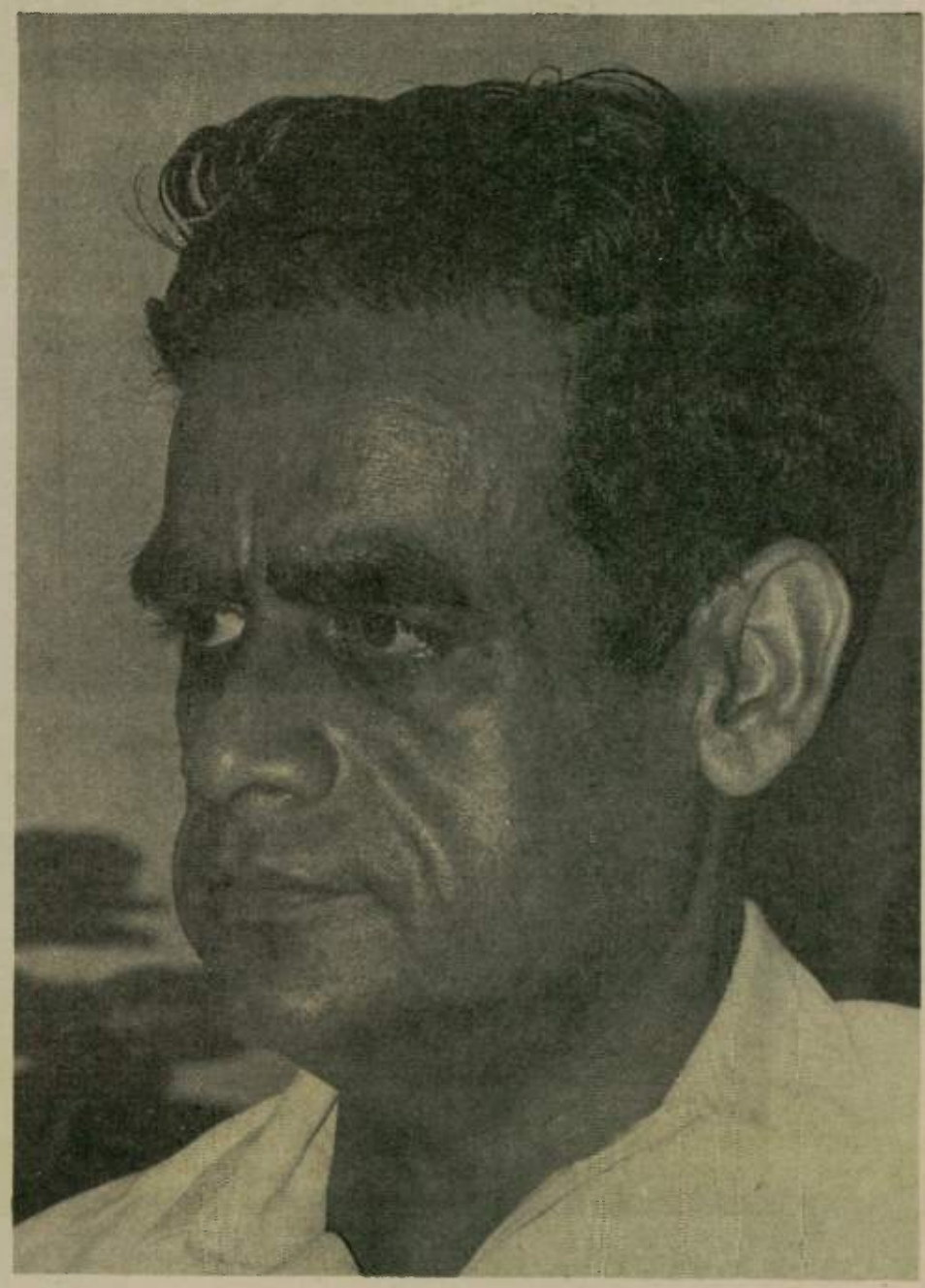
The next day, Ahmed worked Roger and sent word to the worried parents that their daughter was fine. During Ahmed's trip, Roger took him to meet the nurse's parents. "They were just thrilled," Ahmed said, "I brought them photographs of the area where their daughter is stationed. They hadn't known much about Amateur Radio, but this taught them something." For Ahmed, "It was interesting to see a little town after all the big cities."

Then to Indianapolis, Indiana where "I have several good friends that I have spoken to over the years. John McNutt, K9OTB, came to Chicago and drove me to Indianapolis. I stayed one day with John and one day each with David Zeph, W9ZRX, and Leslie Bannon, W9ZTD. Les had an open-house get together, and Charles Collingwood, WB9BUV; Mike O'Cull, WA9NPM; John McNutt, K9OTB; Steve Hritsko, W9SFR; Michael Wetzel, WA9BWY; Michael Hunter, WA9EED; Leslie de Voe, W9LQ; John Watson, WA9EQG; Claude Richie, W9TKV, and Merrill Price, W9HZ, were there."

In Fort Wayne, Indiana, Ahmed's host was Don Wible, K9ECE. Don, too, threw open house, with Fort Wayne DXers attending.

St. Louis, Missouri's Lawrence Robinson, KØSGJ, provided housing there with the local DX gang again invited over.

Ahmed, Dorothy Schoenfeld, Clyde Schoenfeld, W6KNH; and Wes Louden, WB6UJO.



Ahmed Ebrahim, AP2AD

Then Ben Tomlinson, WA5QYR, flew his plane from Little Rock, Arkansas to pick up Ahmed. Along for the flight were Bob Rose, WA5BID, and Randy Griffin, K5BOC. While in Little Rock, Ahmed's host was Warren Dunhaver, W5WZN. At Warren's open house, Ahmed met many members of the Little Rock DX Association.

Also at the gathering were Norma and Lenny Mendel, W2OVC, who are fighting a one-million dollar anti-amateur radio lawsuit. (See "Worldradio" June 1974, Page 1 and July 1974, Page 23 and August 1974, Page 23).

At Hot Springs, Arkansas, the host was Albert Sprague, W5QKZ. At Fort Smith, Arkansas, it was Bob Rose, WA5BID, and Ahmed said, "after all that had happened I had to stop and rest for three days."

In New Orleans, Louisiana, Ahmed was taken care of by Roger Burt, W5UDK, ex-W4SYL. And Ahmed said "Others I should mention are Clifton Ryan, WA5WEY; Louis Muhleisen, K5FVA; Frank Sicuro, W5KKZ; Lowell Otto, W5NOP; Howard de Laneuville, WA5AWF, and many more.

"And how can I thank Joe Canizaro, W5WQI, who gave me a Kenwood TS-511 with vfo to help make Pakistan more available on the air?"

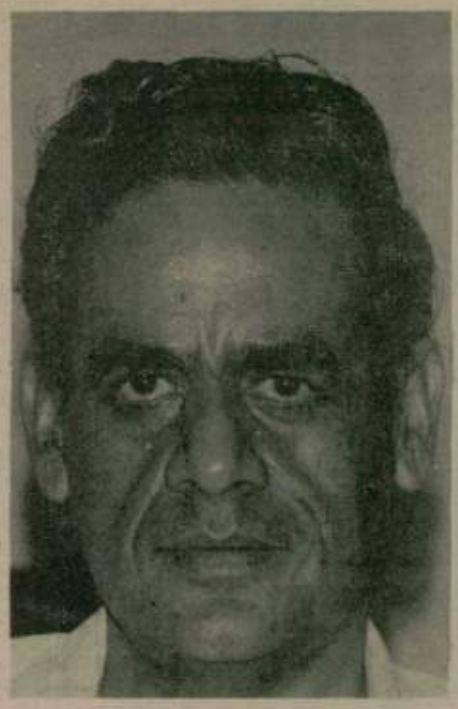
Ahmed had been running a Drake 2-A receiver and a homemade SSB transmitter. His antenna is a two-element quad up 65 feet. With the new rig he will be doing more work on CW. Twenty meters is his favorite band but he also gets on 80 meters. Ahmed has worked W's on 80, and will be making a serious effort on 80 this winter. Up to now he had been using a ground-plane but will go to a sloping dipole. From his location, he says, W6's are the hardest to get.

Ahmed tells a story illustrating the oddities and coincidences that occur on the amateur bands. One morning before Michael Grossman, K2JWM, went to work he was talking to Ahmed on 20 meters. A K9 kept trying to break in. Later that morning Mike flew from New York to Chicago to participate in some broadcast negotiations. During a coffee break he mentioned he was an amateur. So was the person he brought it up to. Mike mentioned he worked Ahmed that morning. Turned out he was talking to the K9 who'd been trying to break in. Small world. Mike wrote Ahmed a letter about that one.

At Atlanta, Georgia, William Jordan, W4DJD, and Robert Hudson, W4MCM, met Ahmed at the airport. He says William Donovan, WB4WMG, and many others were most hospitable. The Southeastern DX Association arranged for all hotel accommodations.

Near Greenville, North Carolina, Ahmed was the guest of John Williams, K4MSK, at Lake Toxaway. He also met Arthur Balz, K4YYL; Michael Boling, K4VWR; and Robert Dixon, K4MQG. Then it was off to Burlington, North Carolina, where Ahmed stayed with "a very old friend, Bob Moren, K4CX."

(please turn to page 8)



# AP2AD

(continued from page 6)

Back in Indianapolis, Ahmed was given a key to the city by the mayor, and also attended the Indianapolis Hamfest. Ahmed said that he "is disappointed to see so little home construction of amateur gear. It appears to be a dying art".

The next stop was Washington, D.C., where he stayed with Pete Huber, W3KSQ. Ahmed operated W3USS, the station in the Senate Office Building. He was given the grand tour of the White House, Arlington National Cemetery, and the memorials. At the home of George Grant, WA3MBQ, a party was held where Ahmed met Washington area hams. He attended a meeting of the Potomac Valley DX Club meeting Fred Laun, LU5HFI (See "Worldradio" June 1974, Page 1), and Dr. Ted Cohen, W4UMF. Ted will conduct the Propagation Forum at DXPO 74 to be held at the Sheraton Inn, Reston, VA on 28 Sept. 1974. He is a member of the ARRL Interference Task Group, editor of Worldradio's "interference" column, and will be banquet speaker at DXPO 74.

Up to New York to the ARRL National Convention at the Waldorf-Astoria. Ahmed met with Noel Eaton, VE3CJ, IARU President and discussed the Pakistan membership. Ahmed also talked with Ambassador Armin Meyer, W3ACE, banquet speaker on the topic of "International Friendship through Amateur Radio.

Then back to Boston and the home of Jack Rosiello, where Ahmed says he "recuperated".

In Detroit, Michigan, Ahmed's host was Ralph Dage, W8PHZ, "a communications engineer with Detroit Edison. We have similar jobs and Ralph has sent me lots of information that's been of help on the job. We have been corresponding for many years". While in Detroit, Ahmed saw the Ford Motor assembly plants, the Ford Museum and a steel mill.

Donald Mac Kenzie, W8RLH; Alexander Auda, W8EQY; and Robert Van Dyke, W8NGH, took Ahmed on a tour of Detroit Edison Communications facilities.

Gary Vrooman, W8ARH, took Ahmed to his home to see his homebuilt Slow Scan TV equipment. Ahmed wants to build a SSTV monitor for, as he puts it, "An old Arab proverb says one picture is worth a thousand words."

Ahmed stayed with Roger Medlin, WØHLU, in Manhattan, Kans. Roger was a visiting professor at the university at Hyderderabad, India, for two years. As VU2HLU, Rober talked to Ahmed just about every morning before work. As a surprise for Ahmed Roger's wife prepared some South Indian curry which Ahmed was happy to get. When asked what he thought of food in the U.S., he said, "It seems to be spiceless". (Editor's note: For those who haven't eaten Indian curry, if you aren't conditioned to it, it will bring tears to your eyes, blow your head off, and clear your sinuses. Everything else in the world is "spiceless" compared to curry.)

In Denver, Colorado, Ahmed stayed with Dick Lanz, WØGAA. Dick showed him the microwave relay systems used by the electric company in Colorado.

In Salt Lake City, Utah, Ahmed was hosted by Steve Salmon, K7OXB, and Ahmed says, "I didn't recognize Steve. He walked past me at the bus station. After a while I called his home and a friend of his, Leigh Sedwick, WA7BPI, described Steve.

"I met a lot of the DXers there including Gerald Peterson, W7LEB; Lawrence Etherington, WA7SYV, and John Lloyd, WA7GWU." Ahmed was shown the many canyons and the Mormon Temple.

It was 22 hours on the bus to Portland, Oregon. The Northwest DX Convention, which, Ahmed says, he thoroughly enjoyed. He was taken in tow by Clyde Sylvester, W7KSA; Elwood Johns, W7QK, and George Wise, W7MB, and was voted an honorary member of the Willamette Valley DX Club.

"I particularly enjoyed seeing Reg Beck, VE7IG. He and his wife stayed at our home in Pakistan. Paul Wolf, W7QNI, an old friend, took me to the Cascade range near his Redmond, Ore. home. The mountains are beautiful."

On Aug. 6, Ahmed arrived at the San Francisco Airport, was met by Steve Cerwin, K6OJO, and his wife Jean. "It was nice to have cool weather again after the Midwest. But I shouldn't complain, it hits 118 degrees at home in the summer, with the average 105; at night it gets down to 85-90. In the winter it will be about 65 in the day and 40 at night and the winter is too short for us."

The Cerwins took Ahmed to a Mexican restaurant where he "put on all the sauce .... it was still too mild".

Ahmed was taken to Ham Radio Outlet, where every Tuesday noon there's a big get-together. He met Jack Troster, W6ISQ, "I remember him from his articles in QST", and Bill Orr, W6SAI, "I knew him from all his articles". Also at the store were three of the Kingman Reef DXpedition group, Rusty Epps, W6OAT; Pete Grabosky, WB6OOL, and Bob Ferrero, K6AHV, owner of Ham Radio Outlet. On hand were two who were most instrumental in the Kingman effort, Bob Thompson, K6SSJ, and Merle Parten, K6DC. Other DXers at the Tuesday get-together were Sam Kanter, W6TSQ; William Cryer, W6RCC; Pat Bacon, W7NIN, and Phil Wight, VS6DR.

Steve Cerwin, with whom Ahmed stayed, threw an open-house at his Mill Valley home which was attended by many of the Northern California DX group. It was there we interviewed him.

Ahmed had planned on going to Phoenix, Dallas, Houston, and Tulsa, where he would have been staying with James George, W7AWH; John Adel, W5RR; Stuart Bonney, W5PAQ; George Maczali, K5STR, and Gerald Tankersly, WB5EAZ, but lack of time prevented the trip. "I didn't reckon with the size of the United States." Ahmed said ruefully.

He left San Francisco for Buffalo, New York, where he was hosted by John Diehl, W2QWS. Then returned to Boston and flew to Germany "to meet some of my amateur friends," down to Switzerland, and home.

Who is this Ahmed Ebrahim, AP2AD, for whom US amateurs opened their homes and their hearts?

He's 43, born in South Africa, son of a businessman who had emigrated there at the turn of the century. His early education was in ZS land and he graduated with a Bachelor of Science degree in Electrical Engineering from the University of Karachi. He worked in Pakistan, for the German company Siemens in electronics and communications, then for two years worked for Siemens at laboratories in Berlin and Munich, and learned fluent German. Returning to Pakistan, he went to work for the gas pipeline company. As communications superintendent he is involved in UHF voice radio, teletype and telemetry.

He started building radio sets at age 12, he got started in Amateur Radio when he

Ahmed, Iris Colvin, W6DOD; Wes Louden, WB6UJO; Lloyd Colvin, W6KG, and Paul Wolf, W6RLP.

Ahmed and his California host, Steve Cerwin, K6OJO.

saw an amateur antenna in Karachi. He went up to the house and introduced himself to the amateur who lived there. He says it was a thrill to build his first oscillator, with which he loaded up a lightbulb. He was licensed in 1956.

Ahmed has worked well over 250 countries and has worked every state for WAS, but "I never sent in the cards. I just like to make the fellows happy by giving them AP. I get a thrill out of that."

"Using a QSL manager," Ahmed says, "is too impersonal. I like to do it myself. I don't have much of a backlog right now." He averages about 200 cards a month (he asked we give the address of the Pakistan QSL Bureau, PARS, PO Box 65, Lahore, Pakistan). He said he appreciates those who include IRC's and those who make up self-addressed stamped envelopes with Pakistan stamps already affixed. Those without, go out via the bureau.

Ahmed is a great advocate for Amateur Radio. He calls it a "wonderful activity". "Being able to communicate with people you find out that they're people just like you. The same things make them happy. With Amateur Radio one's horizons are so much bigger - you get away from the mystery and suspicion.

The Pakistan Amateur Radio Society, of which Ahmed is vice president, is trying to encourage the government to issue more amateur licenses. Up to now, the qualifications have been a 12-word-a-minute code test and a theory test which is the same as for commercial operators or possessing an engineering degree. Currently there are 40 licenses in Pakistan, with about 12 active. There has been a big increase in the past year. The technical level in Pakistan is rather high according to Ahmed. All the telephone switching and multiplex equipment is manufactured there as, are most of the television sets (625 line). In fact, many Pakistani technicians go to other Middle East countries to work.

Ahmed conducts Morse code classes for potential amateurs. The PARS is working on a project to build 80 meter solid-state, phasing type, SSB exciters. He says 90 percent of the parts are manufactured in Pakistan and the rest are easily available. They feel this will make possible starting out with a basic building block for a transmitter. On the drawing board is a 100 watt tube-type linear using TV sweep tubes available in Pakistan.

They are also working on a solid-state receiver design, but there is some difficulty getting crystals for the receiver front end and mechanical filters.

Ahmed says they need trained operators "because we have floods fairly frequently. These disrupt power and communications, and amateurs could assist during these times. We want to show the government this is a hobby which is not too expensive, will increase technical skill and know-how, and render public service when necessary." As you can see, Ahmed is a well-rounded amateur.

But a biography doesn't tell the whole story. When we were writing this story, we called around the country to get more facts. Amateurs Ahmed stayed with were quick to say, like Bob Rose, WB5BID, "What a great guy." And they're so right.

What were Ahmed's impressions of the U.S.? He was surprised at the size and "how homogeneous the people are, 3,000 miles across and they all speak the same language. I knew they were friendly from talking to them on the air but they were even more friendly than I had imagined, extremely helpful. I would like to see more visitors to my home so I could repay the hospitality." And he give amateur radio the credit, saying, "There is nothing else that can accomplish the spirit that exists."

When Ahmed was planning his trip to the States some of his Pakistani friends feared he would not "fit in" in the U.S. because,

as a Moslem, he does not eat pork or drink alcoholic beverages.

They needn't have worried. Ahmed is the kind of guy any amateur radio club would be tickled pink to have--he would probably be voted "most popular member" and/or "most valuable". Any company would be pleased to have such a good-spirited fellow working for them. In fact, one amateur described Ahmed with, "He's brilliant."

He reminds one of the story when an American government official said to Mrs. Golda Meir, then Prime Minister of Israel, "both our countries have Jewish Secretaries of State," and Mrs. Meir, referring to Abba Eban, said, "Yes, but ours speaks better English."

Ahmed speaks in a beautiful manner, with a wide ranging, expressive vocabulary. He is quick to smile and laugh and is easy to talk with.

It was Ahmed who said if everybody in the world was an amateur, you wouldn't need the U.N. We'll go one further--if everyone in the world was like Ahmed, it would truly be a delightful place.

---

The amateurs mentioned in the above article are to be commended and thanked. Amateur Radio is fortunate to have so many individuals who reach out the hand of friendship. Next month's issue will have a new and major idea regarding the hosting of overseas amateurs. The article is by Gil Baker, W5QPX, who has travelled extensively and has received and dispensed Amateur Radio hospitality.

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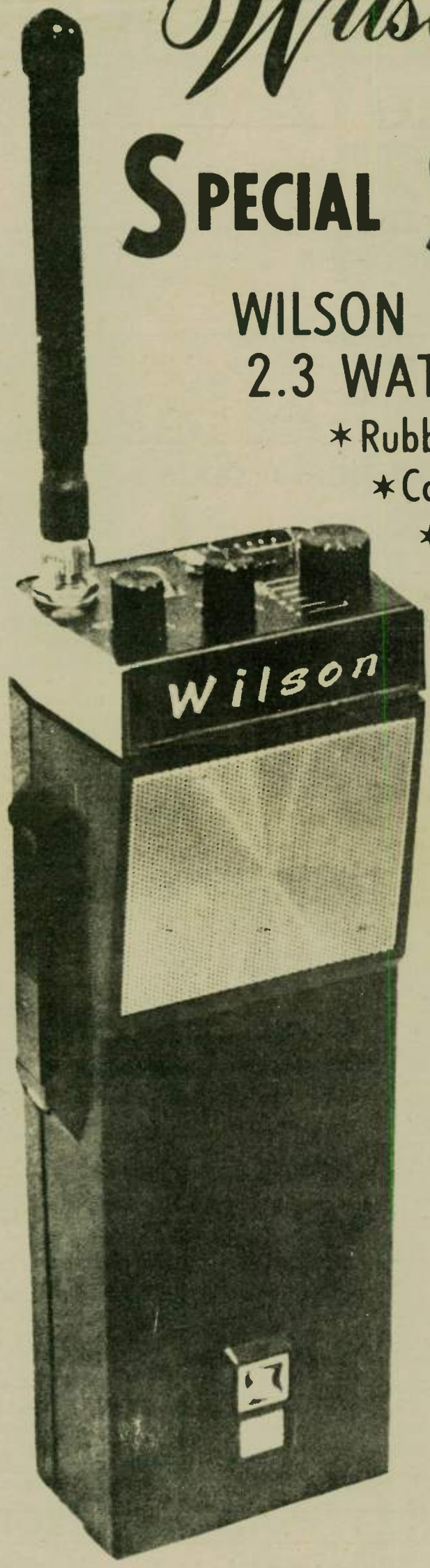


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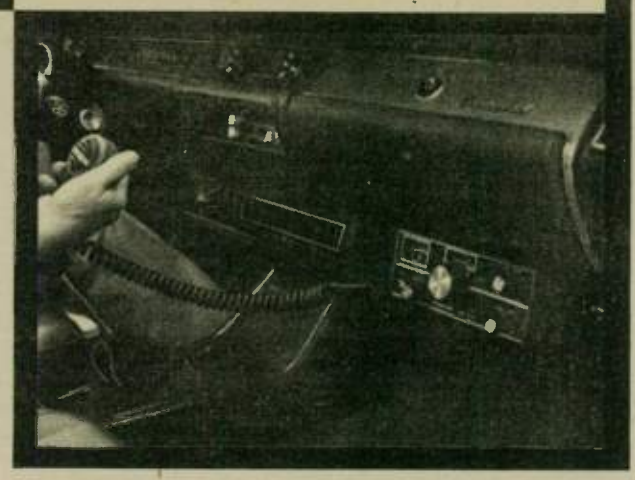

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# EMERGENCY COMMUNICATIONS

## by Art Smith, W6INI

ARRL Emergency Communication Advisory Committee Member

Introduction. At the January 1973 meeting of the ARRL Board of Directors, President Dannals set certain goals for the League. One was to "Develop emergency communication technology." The formation of the Emergency Communications Advisory Committee was a step in this direction. But other, and perhaps drastic, actions seem advisable to put our "emergency house" in order.

The Amateur Radio Service doesn't begin to approach its maximum potential to provide emergency communications to the public as the Federal Communications Commission specifically charges it to do. Of about 280,000 licensed amateurs only an estimated 30,000 are AREC members and a much smaller figure is active. We have no way of knowing the extent of amateur participation or effectiveness in the many small, independent organizations. The League is the only organization which can be eminently effective in this area, but not without some changes in the purpose and policy.

The Need. In paragraph 97.k (basis and purpose), the FCC underscores only one of the several purposes of the Amateur Radio Service. Thus, a "voluntary non-commercial communication service, particularly with respect to providing emergency communications", in my opinion should receive commensurate emphasis in the League's purpose and structure.

Although in February 1964, Herbert Hoover Jr., W6ZH, then president of ARRL, signed a cooperative agreement with the American National Red Cross which provided for certain steps to be taken by both organizations, 10 years later it appears that full implementation of the plan is still not a reality. The existing ARPSC does not seem to have the needed organization, flexibility, coordination, and leadership to achieve the desired end.

Similarly, the present organizational structure fails to provide much-needed liaison and coordination with all levels of federal and state agencies. This is particularly so with the Federal Disaster Assistance Administration (FDAA) and the Defense Civil Preparedness Agency (DCPA) with their respective peacetime and wartime roles.

The state of California exemplifies the need for liaison and coordination with state agencies since the ARRL field organization splits the state into nine sections and two divisions, with no officially-assigned responsibility for state-level nor state-wide liaison and coordination.

Doctrine for inter-section coordination does not exist, nor for inter-division, inter-state, or inter-region. In the System Development Corporation Final Report on "The Emergency Role of Amateur Radio" (15 December 1972), page VI-16 states "We have reviewed the use made of the Amateur Radio Service of ARPSC and found many problems in mission, organization, and control. We believe that these problems can and should be solved and that ARPSC should be considered for an ongoing role even during national emergencies."

Much is said in some amateur radio circles that AREC/NTS should assume the mission now in the hands of RACES. We should forget that possibility until we have at least made the blueprints for an effective, flexible emergency organization that will be capable of assuming peacetime disaster missions. Such an organization does not now exist!

Recommendations. It is suggested that the Board of Directors take such action on the following recommendations as they deem appropriate and place a high priority their accomplishment:

1. Change Article 2 of the Articles of Association to specifically mention "Emergency communications" as the primary purpose of the League.
2. Appoint ad hoc committees, one per division, to thoroughly investigate potential needs for emergency communications within their respective divisions to include the inter-section and inter-division requirements of agencies, and recommend a suitable ARRL structure and emergency organization to meet their needs.
3. Establish, on an interim basis, a separate "Emergency Communications Division" with a "Director of Emergency Communications" reporting directly to the General Manager.
4. Provide for interim liaison and coordination with the American National Red Cross at National, Area, Division and Chapter levels with agencies.
5. Provide for official, effective ARRL participation in disaster-oriented studies, and for representation on disaster councils, advisory boards and at conferences at National, regional, state and local levels of agencies concerned with disaster relief.
6. Re-vamp the present emergency organization to improve its effectiveness.
7. Provide adequate funding for accomplishment of these purposes.

Discussion of Recommendations.

1. Change Article 2. It is commonly stated in the amateur press that "amateur radio exists because it qualifies as a service." This would be more properly stated as "amateur radio exists primarily to provide emergency communications", the latter being the words of the FCC. I feel that this emphasis should be reflected in the purposes for which the League exists and with emphasis commensurate with the Commissions basis and purpose. This might be accomplished in Article 2 of the Articles of Association by modifying the first sentence as follows:

"The purposes for which our corporation is formed are the following: the fostering and promotion of an emergency communications organization as a primary objective, the promotion of interest in amateur radio communication.... etc", or words to that effect.

2. Ad hoc committees. The magnitude and urgency of this subject warrants, I believe, an extensive investigation by ad hoc committees of "blue ribbon" caliber in keeping with the priority attached to emergency communications, on as wide a base as possible.

Composition of each committee might consist of the Director (or Vice Director) as Chairman with Section Communication Managers as members to be appointed by the Board or the President. Committee augmentation might include Director-appointments to include Section Emergency Coordinations, selected Emergency Coordinators, members of the Emergency Communications Advisory Committee and the VHF Repeater Advisory Committee if residing within the Division, and other knowledgeable amateurs. Perhaps the Pacific and Southwestern Divisions could be combined into one committee since the approach to California's problems is of common interest.

These committees should be given at least a year to complete their work so that they could take advantage of conventions and hamfests to conduct symposia as well as make contact with clubs and knowledgeable individuals.

Each ad hoc committee might be charged with any or all of the following tasks:

a. Determine the extent of emergency communications support presently given by amateur radio to the American National Red Cross at its National, Area, Division, and Chapter levels; Federal agencies such as DCPA, FDAA, GSA, DHEW, Post Office Dept., etc. at their various administrative levels; State agencies at the state, intermediate, and local levels.. Information should be included as to what organizations and/or individuals provide support.

b. Where no present support exists, or is inadequate, determine potential needs particularly where requirements transcend section, division, and/or state boundaries.

c. Determine extent of amateur radio representation on disaster councils.

d. Recommend ways to integrate nets, such as "instant service nets" and others whose membership scope transcends section, division and/or state boundaries, into an emergency organization.

e. Recommend ways in which clubs and repeater organizations may be integrated into an emergency organization.

f. Recommend events for which an emergency organization might provide public service communications.

g. Recommend ways by which more interest in emergency communications might be created among amateurs.

h. Recommend ways by which amateurs with good leadership potential might be involved in an emergency organization.

i. Recommend changes in the existing ARRL organizational structure to place greater emphasis on emergency communications.

j. Recommend the mission and organizational and leadership structure of an ARRL-sponsored emergency organization having the flexibility to meet the variety of present day and anticipated future communications requirements in support of disaster relief agencies and supporting organizations at all levels.

k. Recommend how ARRL can be an active participant, at the headquarters level, in the emergency organization.

3. Separate Emergency Communications Division. To implement a policy of greater emphasis on emergency communications, and until a permanent organizational change can be investigated, an interim, independent department seems indicated. This would expedite the implementation of new ideas. Closer attention could be paid to the needs of an emergency communication organization without the distractions of the multitudinous non-emergency tasks associated with the present Communications Department.

Its purpose and objective could be: The organization of members (or all amateurs) for practical communication, with particular attention to emergency preparedness and communications service in the public interest; the promotion and sponsorship of emergency networks and systems.

In general, the present field organization would have to be put under the supervision of this department as well as responsibility for the present ARPSC.

4. Interim liaison. A significant failure in the present organization for emergency communications is the lack of official liaison beyond the ARRL section and its internal requirements. While "Operating an Amateur Radio Station", on page 23 specifies that EC's coordinate and cooperate with EC's in adjacent areas of jurisdiction, no such policies are evident for the SCM in respect to adjacent sections or between divisions, states or higher levels.

This gap in responsibility is particularly significant in California with its nine sections and two divisions. In one-section states the problem does not exist since it is logical to assume that the SCM will insure liaison with state-level officials as he has definite responsibility for the entire state.

Lack of official liaison at the National, Area and Division levels of the Red Cross probably accounts for only partial implementation of the cooperative agreement. The Red Cross Western Area headquarters in San Francisco has an area of responsibility which embraces 12 states - 20 ARRL sections and 4 ARRL divisions with no provisions in the present ARRL emergency organization for official liaison responsibility.

Also within the San Francisco area are the Regional headquarters for FDAA, GSA, and DCPA with areas of responsibility extending to 4 states, 12 ARRL sections and 2 divisions. Again no official liaison.

A stop-gap measure might be taken, pending further study, by assigning responsibility to SCM's in general for coordination and cooperation with adjacent sections. In the case of the Red Cross, state and federal agencies, the SCM in whose section the agency headquarters is domiciled can be given liaison responsibility. One SCM in each Division might be named to act as a division emergency coordinator.

In each section, an Assistant SCM might be given responsibility for assisting and advising the SCM on matters involving communications external to the section just as the SEC now does for internal emergency communications.

5. Official representation. Some states require the establishment of disaster councils "structured to provide representation from all segments of the local jurisdiction which represent major potential sources of emergency resources." Here the league should take leadership in providing official representation.

FDAA Region IX headquarters, in San Francisco, will soon form its own "Disaster Communication Council" which should have official league representation. However, present machinery does not provide for this. A recommendation of the Systems Development Corp. study provides for amateur radio representation on National, Regional, and State RACES councils.

In California, a $200,000 federally-funded earthquake response study has been made recently for the FDAA. Its thrust is an earthquake situation in the San Francisco area equal to the 1906 earthquake. Amateur radio was ignored in this study. (Letter from Weber to Hart, dated 1-22-74). A similar study for the Los Angeles area is planned for the near future.

A policy must be implemented to provide for effective representation by a League official in these matters. Directors might be delegated authority to appoint suitably-qualified League members within their respective divisions.

6. Re-vamp emergency organization. Much of what has been said hertofore points to the need for re-vamping the AARL organizational structure and the ARPSC. While the chart on page 4 of "Public Service Communications" shows NTS as the "traffic" division and AREC as the "emergency" division of ARPSC, both will be treated here as the League's emergency communications organization.

According to the SDC study (page VI-16 ARPSC "has many problems in mission; organization, and control". The objective of NTS, as stated on page 10 of "Public Service Communications" are (1) rapid movement of traffic from origin to destination, and (2) training of amateur operators in handling written traffic and participation in directed nets. (Note absence of an emergency mission.) There appears to be no concisely stated mission in AREC other than "the 'emergency' division of ARPSC". (Page 5, Public Service Communications.)

NTS. While the NTS does train a few amateurs in handling written traffic, its second objective of "rapid movement" is not achieved if present day technology is considered. This can be attributed to two factors: a cumbersome maze of nets, and reliance on CW.

To send a message from San Diego to Newington requires that a message be relayed about eight or nine times if prescribed net organization is followed. " "Public Service Communications", page 14 devotes an entire paragraph to reasons why "Deviation from Normal Routing" is undesirable. This inflexibility contributes to the unsuitability of NTS to support the Red Cross, Federal and perhaps state disaster agencies in a written-message handling role.

A state-of-the-art emergency communications system must be capable of handling high-volume traffic with a minimum number of relays (and preferably no relays), with delivery time and reply time measured in minutes, using the mode best suited to the situation (voice, CW, teletype, facsimile). Stations should be located on the premises of agencies being served. Additionally, there must be provisions for person-to-person voice communications by agency staff members.

For daily, routine operations a system is needed which can effectively handle traffic by CW, voice, teletype, and facsimile. It should operate 24 hours a day, with an "instant service net" format so that anyone can tune to an established frequency and find a taker for his traffic, at or near its destination, whether it is for short- or long-haul transmission. A reply within an hour or two should be expected. A somewhat similar concept was suggested in the August 1960 CQ, page 45 by Ralph J. Erwin, W5JFW, and is worthy of review AREC. In its present configuration, AREC, is not "an" organization but a conglomeration of local organizations, with no cohesiveness above the section level. There is, in effect, no nationwide AREC! No one is charged with coordination responsibility between sections, states, ARRL division, federal regions, et al. No one is charged with the responsibility of working out plans with the Red Cross at the Division, Area, and National levels. A similar situation exists for federal agencies at Regional and National levels. The California problem, previously mentioned, is particularly noteworthy with its nine, independent, uncoordinated sections. To establish an emergency network today to support the Highway Patrol, National Guard, or the California portion of the Red Cross Western Area, would take the cooperative effort of nine SCM's, some of whom might not accept this as their responsibility.

It is vital to have a cohesive, flexible organization which is capable of supporting a nationwide Red Cross as well as the disaster agency of a small community. It must have effective leadership at local, section, division, state, regional and national levels. There must be provisions for moving operators and equipment, in organized teams, into a disaster area from nearby unaffected areas, or even from one coast to another, if needed.

The "span of control" of AREC is completely out of reason. One Communications Manager cannot effectively keep a close watch on, and regulate, activities of 74 sections, in 50 states and 7 provinces, in the detail required for efficiency. This is pointed out in the SDC report, pages VI-5 to VI-7, with emphasis on the "problem of control, which is probably the single most significant problem confronting AREC. An intermediate step, perhaps at the division level, seems indicated.

A high priority should be assigned to an in-depth study of ARPSC in order to structure a nation-wide emergency organization, in which the League can participate as well as sponsor, with flexibility to fill the communication needs of any agency at national, intermediate and local levels.

For maximum effectiveness provisions must be made, perhaps in the form of cooperative agreements, so that nets, clubs, and repeater organizations can be integral parts of the overall organization, with particular attention to those organizations whose membership transcends ARRL section/division/state boundaries.

Comments Relative to Support of the American National Red Cross.
Throughout this paper there have been references to the American National Red Cross and incomplete implementation of the 1964 agreement. Some recent events pointing out the seriousness of this area are cited below:
1. The August, 1973, issue of "The Good Neighbor", published by the Red Cross, contains an article by Robert Neubert concerning earthquake planning. It mentions that the San Francisco area was selected for a pilot program for earthquake response planning, and states "it will eventually be readily adaptable anywhere in the U.S...." As pointed out in a letter from Charles Weber, WB6RPK, SEC, East Bay Section, to George Hart, W1NJM, ARRL Communications Manager, dated 1-22-74, this study completely ignored amateur radio.

2. Consequently, recent plans of the Red Cross (Western Area, Northern California-Western Nevada Division) provide for teams of specialists to support chapters within the division. The "Communications Specialist" is a member of the local REACT.

3. Not having considered amateur radio the plan, in Annex III, relative to health and welfare inquiries, states that "Messengers will carry bundles of inquiries to ... the affected area and answers will be carried back..." This will be the case "where commercial communications into the affected area are temporarily inoperative."

4. Within the same Area/Division, they have discovered that CB'ers are ready, willing, and able to provide communications on the Red Cross frequency of 47.42 MHz and thus are issuing operating permits for that purpose. Some equipment is Red Cross owned and some individually owned. This is bound to open a second Pandora's Box in due time.

5. In a letter to Mr. C.W. Weber, dated August 6, 1973, Mr. W.W. Read of the Western Area, Northern California-Western Nevada Divison states "since Red Cross does have 47.42 MHz for emergency communications, we believe that with discipline and control this would be our primary intra-chapter and chapter-to-chapter line of communication in those areas covered by the net, such as the Bay Area. A fairly good test of this was made during the oil spill several years ago. Firm control could minimize 'saturation'."

6. Some of the above leads to the inevitable conclusion that the March 29, 1971 agreement with REACT, which is worded virtually identially to ours, is much more fully implemented than ours which has existed, in its present form, for more than 10 years.

7. The League's only written "doctrine" regarding the Red Cross is in "Operating an Amateur Radio Station", pages 22 and 23, under duties of the SEC and EC, wherein liaison with the local Red Cross is mentioned

8. A letter from Andrew C. Clark, W4IYT dated April 10, 1974, to the ECAC indicated the need for more effective liaison at the Red Cross National Headquarters. One of the recommendations contained therein was "Red Cross (on National level) re-affiliation forces with ARRL (on National level) as soon as possible."

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## control

(continued from page 2)

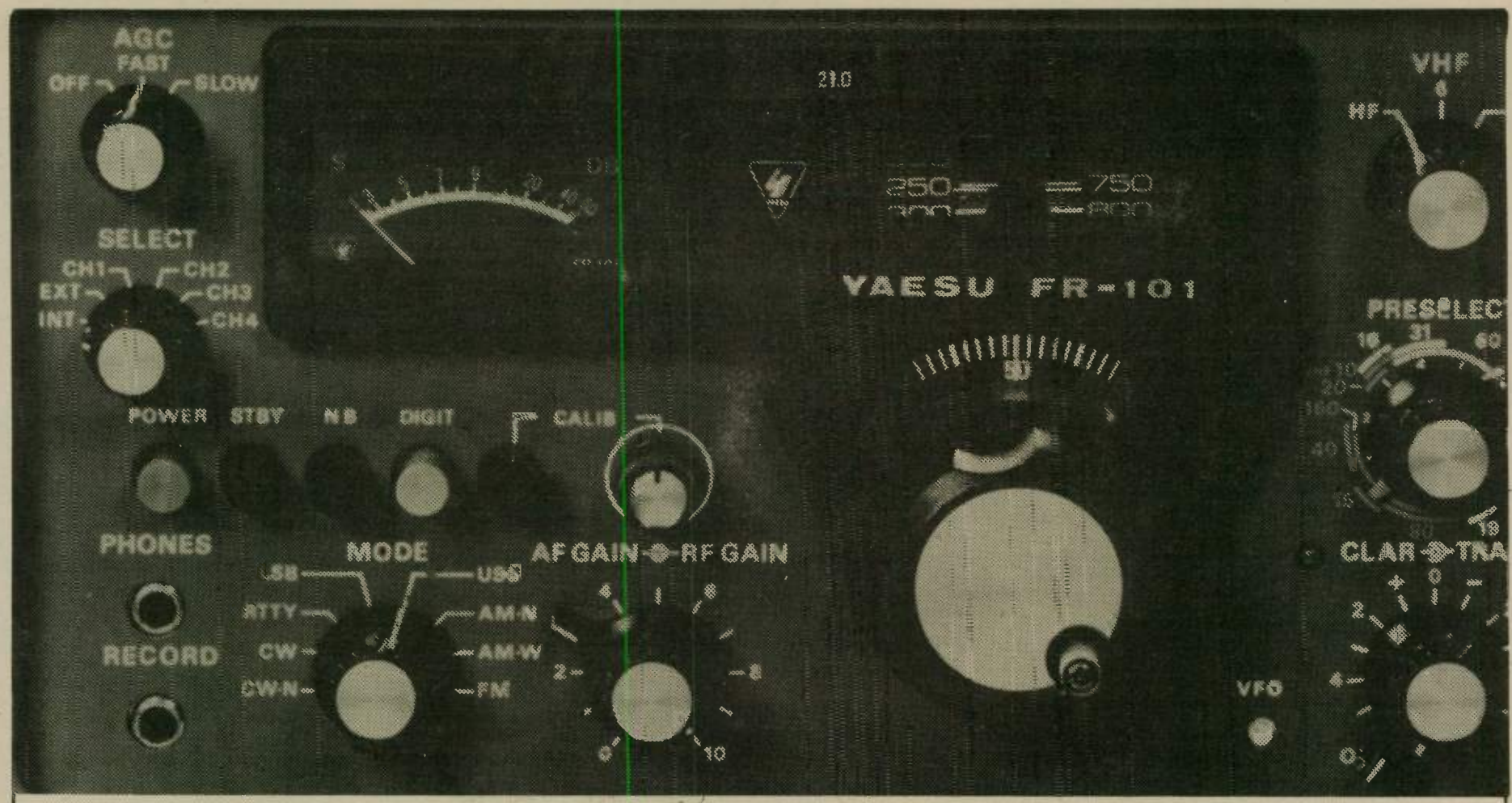
111 (c) and Sec. 97.111 (g) would be added to provide for these new types of control.

9. In order to operate a repeater station by automatic control, the station would first be licensed as a repeater station, in the conventional manner, for either local control or for remote control. Specific authorization for automatic control would not be required. However, certain provisions must be effected, as set forth in detail in the Appendix. These include a requirement that sufficient information must be filed with the Engineer in Charge to enable him to order a station shutdown should the need arise. The control operator designated by the repeater station licensee must be available on call at all times the station is under automatic control. All radio communications through an automatically controlled repeater must be recorded and reviewed within 72 hours by the control operator(s), for rule compliance. In the event violations did occur, the licensee would be obligated to take the steps necessary to prevent a recurrence, or else may only operate the station by local or remote control. Should the improper operation of a repeater station while under automatic control come to our attention, we would then impose restrictions against further automatic control of that station until such time as the licensee can show that future operation of the station by such control will result in compliance with the rules.

10. Depending upon the actual situation, there are several steps the licensee of a repeater station desiring to operate his station by automatic control can take to preclude many of the abuses encountered with amateur repeaters. For instance, if commercial third party traffic by automatic telephone system interconnect becomes a problem, this function could be discontinued during periods of automatic control. The repeater might have to be restricted to only emergency communications, if other means to secure the cooperation of all users are not successful. Possibly, the repeater could only be operated by automatic control during certain periods each day, such as during the late night hours. Another method is to employ a semi-automatic control system, where access to the repeater is only possible for those users selected by the station licensee. Undoubtedly, the imagination and ingenuity of amateurs can devise even more methods to solve these and other problems. However, proper operation of a repeater station by automatic control would always depend heavily upon cooperation from others. The self-policing claims and reputation long associated with amateurs would be thoroughly tested by this proposed method of repeater control.

11. The specific rule changes proposed herein are set forth in the attached Appendix. Authority for these proposed amendments is contained in Section 4(i) and 303 of the Communications Act of 1934, as amended.

12. Pursuant to applicable procedures set forth in Sec. 1.415 of the Commission's Rules, interested persons may file comments on or before October 30, 1974, and reply comments on or before November
(please turn to page 16)

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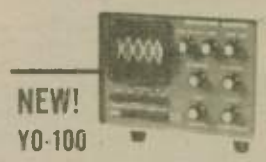

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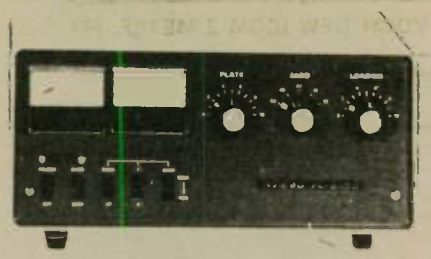

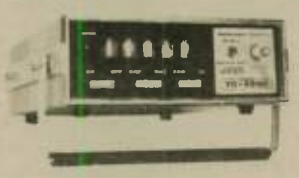

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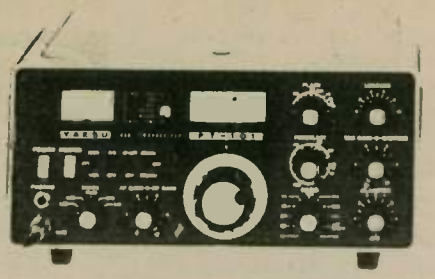

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Courtesy of ARRL

# Amateur Radio in our interdependent civilization

## by Armin H. Meyer, W3ACE

Former U. S. Ambassador to Lebanon, Iran, Japan. Also former: YI2AM, YA1AM, OD5AX, EP3AM, JH1YDR.

Banquet Address at the 1974 National ARRL Convention

Thumbing through an old YI2AM logbook of 1946, I was struck by the recollection that the first "C" in Bob White's DXCC meant what it said in those days. There were only 123 countries to be sought in the quest for a "Century Club" award. In 1974, there were, of course, nearly three times that number.

The explosion in rare amateur radio prefixes has, during the same period, been paralleled by an explosion of nations. The roster of the United Nations has expanded from 55 to 135. The latter figure, incidentally, does not include Kingman Reef whose candidacy will, no doubt, soon be sponsored by the Northern California DX Association!

How does one account for this Balkanization of the world? What does it mean for the future? What does it mean for radio amateurs?

The Shah of Iran once wryly suggested that the fragmentation of the world began with the dissolution of the Austro-Hungarian empire. More properly, the multiplication of nations has been traced by most observers to the potent political concepts unleashed by the American and the French revolutions. Unquestionably, the proliferation in recent decades has been stimulated by sensational advances in science and technology. Distances have been annihilated and political ferment accelerated.

But to understand the political fracturing of the human race we must delve deeper into history. Y1-land, the ancient Mesopotamia, is commonly termed "the cradle of civilization". It was at Sumer, in the Tigris and Euphrates valley, the legendary home of the Garden of Eden, where man 5,000 years ago transformed the food-gathering existence of his ancestors into a new social structure. There, in the rich alluvial soil where the climate permits four crops per year, canals were constructed for drainage and for irrigation. Agriculture became so efficient that for the first time a non-agricultural component of society made its appearance. Industries such as tool-making were developed. This led to commerce and administration, which in turn motivated the invention of cuneiform as a means of communication. History witnessed the emergence of its first city-states.

But with civilization's glories came its tribulations. In ancient Sumer, human beings not tilling the soil began having urban problems, including that of depersonalization. For the first time, there were rulers and the ruled. Rivalries among the new political communities produced tension and conflict. Tribalism emerged, transformed in the corridors of history to the nationalisms of our day. Attempts to achieve order became efforts by one regime to impose its will on others. Yet there was an eternal congenital yearning, reflected in the emergence of the world's religions, for all men to live with personal dignity as members of one human family.

That yearning still exists. It seethes in the struggle between nationalism and internationalism, between isolationism and interdependence.

There are few observers who do not prophesy that unless mankind can pull itself together, we shall all be incinerated by A-bombs. On this point perhaps we need not be quite so apocalyptical. Those of us who grew up between the two World Wars remember dire predictions that if another conflict were to occur humanity would be doomed because of the lethality of chemical munitions. Conflict did occur, but no belligerent resorted to gas warfare for fear of retribution in kind. This argues, of course, for an adequate deterrent capability.

Less apocalypitic than nuclear suicide, but no less important, are other challenges facing our civilization. During the past year, all of us agonizingly waited in long lines before gasoline pumps. Washington's reaction was the proclamation of "Project Independence". Such rhetoric may win widespread applause in domestic politics, but its realism is dubious. Whatever the desirability, alternate energy resources will require at least a decade to develop. Meanwhile, the relentless increase in consumption in our country is such that there is little prospect of our being able to divorce ourselves completely from the import of petroleum. Thus, we cannot ignore the hard fact that from 2/3 to 3/4 of the world's petroleum reserves are in the Middle East. An average oil well in the United States yields 5 barrels per day. It is worth noting that during my Tehran assignment, America was being implored to buy Iran's oil, even to store it in empty coal mines. The cost would have been less than one-fifth what we are now being compelled to pay, but for domestic political reasons we steadfastly maintained our import quotas. Fate takes ironic twists.

The United States cannot build a wall around itself. This is the first lesson of the technological revolution. Such issues as harnessing the nuclear beast and assuring an equitable utilization of this planet's raw materials cannot be confined by geography or political barriers. Neither can such vital matters as the production and distribution of food, facilitating fair trade, curbing the contamination of the earth's atmosphere, regulating the exploitation of the vast resources of the oceans, exploring the universe, and limiting population growth to supportable dimensions. For such challenges, the best hope lies in a world-wide recognition of interdependence.

What does all this have to do with amateur radio? Obviously, I am a partisan, but I believe that in this modest way this great avocation of ours is assisting the caravan of civilization to travel in the right direction.

1. Personal Identity. No one likes to be a cog in a wheel or a statistic in a computer. Man's age-old desire to have an identity of his own is richly rewarded in the world of amateur radio. One's spirits can soar, across the Potomac or across the Pacific. Every QSO offers an opportunity for soul-satisfying responsiveness. It may be merely a signal report, an interest in the gear being used, or the final transmission by a Russian or others of our fraternity wishing 73 "to you and your family."

2. Social Equality. Trying to get in tune with human yearnings, a chap named Karl Marx invented an ideology which was designed to produce a "classless society", but which, according to one of his disciples, succeeded only in establishing a "New Class". Social stratification is not a problem in Amateur Radio. Social status does not prevail in a DX pile-up. Nothing more warms the cockles of my heart than to hear JY1, the King of Jordan who is normally addressed as "Your Majesty", tell another amateur with whom he is in communication that his handle is simply "Hussein".

3. World Community. Amateur radio is a tie that binds, regardless of race, creed, color, or nationality. In Tokyo one Sunday afternoon, a Toyota sidled alongside our Ambassadorial limousine. Its passengers, with beaming faces, flashed QSL cards to identify themselves as fellow amateurs. Political and economic problems between our countries became irrelevant. Such undisguised friendship and community of spirit were evident throughout Japan.... at the Sapporo Olympics' ham station, at the Mount Fuji Boy Scout world jamboree, at the JARL national convention, and in the enthusiasm of the Japanese amateurs who in securing arrangements for our JH1YDR club station, made possible the first operating authorization ever granted by Japan to a civilian foreigner. As one of them said, it was "like the opening of this country to the outer world."

4. Transnational Collaboration. Science is not the private preserve of only one nation. The fathers of the world's electronic revolution included Faraday, an Englishman; Maxwell, a Scotchman; Hertz, a German; Marconi, an Italian; and DeForest, an American. In the perspective of the 5,000 years of civilization, the technological miracles of the past century have been mind-boggling. They lend credence to Arnold Toynbee's theses that in the decades ahead nationalisms will be sublimated by technology in the interests of a re-united human family. Whether perfecting circuitry and antenna systems, bouncing signals off heavenly bodies, or merely improving operating skills, amateur radio is playing an indispensable technological role.

5. World Citizenship. Although from a technology standpoint the administrative capability exists, a world state is not in sight. It is too Utopian. Nevertheless, in certain functional areas, nations have had no choice but to relinquish small measures of sovereignty. In our own field of radio, men and nations, in order to avoid chaos, are abiding by rules, if not laws, for the utilization of the frequency spectrum. The success of such pioneering efforts offers hope that through an appropriate display of world citizenship, mankind will be able to cope with increasingly acute international challenges, including arms limitations, access to resources, and the adequate supply of food.

It is not likely that a Paradise will ever be fully achieved on this planet. But human satisfaction is derived by striving for it. That, in my view, is what amateur radio is all about.

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## control

(continued from page 13)

16, 1974. In accordance with the provisions of Sec. 1.419 (b) of the Commission's Rules, an original and fourteen copies of all statements, briefs, and comments filed shall be furnished the Commission. All relevant and timely comments and reply comments will be considered by the Commission before the final action is taken. The Commission may also take into account other relevant information before it, in addition to specific comments invited by this Notice. Responses will be available for public inspection during regular business hours in the Commission's Broadcast and Docket reference Room at its Headquarters in Washington, D.C.

Federal Communications Commission
Vincent J. Mullins
Secretary

APPENDIX

Part 97 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:
97.3 (n) Definitions

(n) Control. Techniques for accomplishing the prerequisite responsibilities in the immediate operation of an amateur radio station. Must be one or more of the following:

Local Control. - Manual control, with control operator monitoring the operation on duty at the control point located at the station transmitter(s), such that the associated operating adjustment are directly accessible. (Direct mechanical control, or direct wire control of a transmitter from a control point located on board any aircraft, vessel, or on the same premises on which the transmitter(s) is located, is also considered local control).

Remote Control. - Manual control, with the control operator monitoring the operation on duty at a control point located elsewhere than at the station transmitter(s), such that the associated operating adjustments are accessible through a control link.

Automatic Control. - The use of devices and procedures for control such that the duty control operator does not have to be present at the control point at all times. (Only rules for automatic control of repeater station systems have been adopted. Automatic control of all other types of amateur radio stations must be approved by the Commission on a case-by-case basis).

2. Sec. 97.79 (b) is amended to read as follows:

97.79 Control Operator Requirements

(b) Every amateur radio station, when in operation, shall have a control operator. The control operator shall be on duty at an authorized control point, except where the station is under automatic control. The control operator may be the station licensee, if a licensed amateur radio operator, or may be another amateur radio operator with the required class of license and designated by the station licensee. The control operator, when on duty, shall also be responsible, together with the station licensee, for the proper operation of the station.

3. Add new Sec. 97.110 (c) to read as follows:

97.110 Operation Of An Auxiliary Link Station

(c) An auxiliary link station(s) licensed either for local control or for remote control, may also be operated under automatic control when it is licensed in a repeater station system being operated under automatic control. Both the auxiliary link station(s) and the repeater station must

(please turn to page 30)

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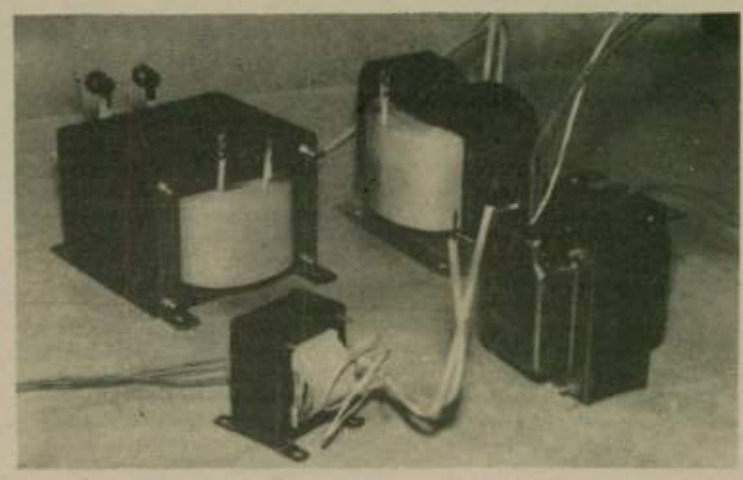

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# station appearance

The pictures on this page are answers to a previous article in which we asked for pictures of attractive looking amateur radio installations. They are presented to give others ideas on how to develop their radio room into something that helps the "image" of Amateur Radio.

We hope these pictures serve as an inspiration. A picture of your station, or that of a friend, is invited to be displayed on these pages.

Each of us is an "ambassador" for Amateur Radio. Do others judge our avocation from its appearance. Do we look like we take pride in this endeavor? Do we take pride in it?

A rather modest investment can result in a good looking station. Do you judge a store by the way it looks? Do you judge a company by the way its building looks? Do others judge Amateur Radio....and radio operators....by the way their stations look?

Should we make an effort to be the very best representative of Amateur Radio that is possible?

Remember, the way your station looks will have an effect and influence the opinion of a visitor.

Let's put our best foot forward.

Below is part of an article that appeared one year ago in "Worldradio".

"Many amateurs are concerned about the "image" that the general public has regarding Amateur Radio. The concerned feel that many laymen have a rather unflattering, and untrue, view of our avocation. The questions are: Have we brought it upon ourselves? and What can we do to improve our "image".

If a neighbor comes to the average amateur's home and is invited in to see "the station", what does he see?

Is it a radio, or a "radio station"? Is it just some equipment thrown on a workbench in the garage or is it an attractive installation? If the observer feels that we don't think very much of our interest (as evidenced by a slovenly appearance) why should he take it very seriously?

Before worrying about the image others have of us, we best, and first, concern ourselves with what image we are presenting.

What do we want others to see....some black boxes adjacent to the junk box in an atmosphere that looks like a greasy garage in which all the wiring appears to have been done by "Jack the Spider" or a well appointed den?

Very few of us would want to live in a house in which the other rooms looked like the "radio room". What does the visitor see, after walking through a nice home, when he gets to "the shack"? How often is it a maze of wires, trash all over the operating table, and a few QSL cards or certificates either thumb-tacked or scotch-taped to the wall?

Here is a question to ask. If I were the only ham that this person ever knew, what would he think of Amateur Radio? What would he tell others regarding his visit to "the ham in the neighborhood"?

Before we can expect others to think highly of what we do, we must (on the average) think more highly of it ourselves. First, we must objectively look at our own station. Try to see it as someone seeing it for the first time would. Would you want to work all day in an office that looked like that? Would anyone else want to?"

Worldradio would like to hear your opinions on this subject and descriptions of what you did to make your station look nice.


Alex Desmeules, VE2AFC


Edward Rothschild, WA6RAP


Winston Vargas, WB2SPQ

Wallace Leland, K7WL

Natan Sterental, OA4OS

# interference

**Dr. Theodore Cohen, W4UMF**

In the 10 March 1974 issue of the Washington Star-News, Miriam Ottenberg provided an overview of the RFI problem as it affects the consumer and the radio operator. Excerpts from Miss Ottenberg's copyrighted article, which will make interesting reading for you and your neighbors, are reprinted below with the permission of the Washington Star-News. A reprint of the entire article is included in the ARRL RFI Task Group's recently published "RFI Packet".

In the last three years, according to the FCC, the number of (RFI) complaints has doubled as the number of licensed citizen band operators has grown to 810,000 using three to five million transmitters, as a growing number of unlicensed operators have flooded the airwaves, and as more homes have acquired second TV sets and a wide range of other electronic entertainment devices.

Across the nation, about two-thirds of the complaints deal with interference to TV, but in the Washington area, more complaints center on interference to audio systems such as amplifiers, electric guitars and organs and, especially, hi-fis.

Although complainants regularly blame the ham operators or CBers for the interference that tears up their pictures and obliterates their sound, the FCC says that in nine out of 10 cases, the fault is in the receiver and not the sender.

"Those ham operators and the three to five million citizen band radios would not cause interference to television and other home entertainment devices if companies had considered interference problems when they manufactured the sets," said James C. McKinney, chief of FCC's enforcement division.

"I don't know of any sets being built with filtering devices adequate to screen out unwanted signals. Our present rules don't require manufacturers to do anything along these lines," he said.

"We tell them that the man next door is doing nothing wrong," McKinney said. "We gave him a license to transmit and he's doing it properly. We advise them to have a high-pass filter installed on their set to filter out the unwanted signals. But they argue that they don't see why they have to spend money to fix their set when it was all right until their neighbor started transmitting."

"We're left in the middle of an argument we can't win."

As the problems and the protests have mounted, ham operators--weary of being unfairly accused--have urged legislation to require TV sets to be built with adequate filters to reject unwanted signals. Thousands of supporting letters from across the country reached Rep. Charles M. Teague, R-Calif., after he introduced legislation to require that radio and television receivers meet FCC standards for filtering out interference.

Among enthusiastic supporters of the measure was the Prince Georges County Council, which had been told about interference problems during its hearings on antenna heights.

In a resolution sent to Teague and Maryland Congressmen, the council urged passage of the Teague measure to benefit TV owners by eliminating the possibility of interference and aiding the general public, "by allowing the full benefits of amateur radio to be realized in an atmosphere free of contention over alleged interference.

"It's just a coil device that could be installed easily in the sets," commented Council Chairman Francis B. Francois. "I think if people knew the truth, they'd demand that manufacturers design their sets to eliminate interference. Amateur operators are being unfairly blamed. The real cause is improper manufacture of the sets."

Dr. Theodore J. Cohen has spearheaded the campaign for legislation to guard against unwanted signals.

He has proposed legislation that goes beyond the Teague bill to give the FCC authority to regulate all audio and radio-frequency receiving devices so their susceptibility to interference is reduced.

Without that legislation, the FCC has no authority to deal with interference problems plaguing such home entertainment devices as stereos, electronic organs, hi-fis and tape recorders.

Currently, the FCC is trying to cope with interference problems by telling complainants, that their receivers are the source of their problems and supplying information they can give their TV or audio serviceman to get rid of interference.

"We seek ways to resolve these problems without sending out technicians we don't have," McKinney explained.

"I'm not making a plea for more men but for an end to what is probably our biggest problem--interference to home entertainment devices, unnecessary interference," he said.

•

## crossband (continued from page 1)

4. In support of the requested amendment, the ARRL offers the following claims and arguments:

A. Crossband operation of a repeater station having, for example, an input frequency in the 146-148 MHz band and an output frequency in the 222-225 MHz band, could reduce the costs of repeater stations and make more channels available. Repeaters using the wider frequency separation between the input and the output could benefit greatly through the alleviation of a receiver desensitization problem, a difficult one for amateurs to solve without considerable expense. Moreover, the present number of repeater input channels could be greatly expanded through the use of narrower channel spacing in the 146-148 MHz band, together with repeater input receivers with the necessary selectivity. Wider channel spacing of the repeater 222-225 MHz output channels would still permit the use of low-cost mobile and handheld units because of the relatively less selectivity required in the receiver section.

B. More efficient use of the spectrum could result. Crossband operation could make use of other bands more practical, particularly in the frequency band 1215-1300 MHz.

C. Crossband operation of repeaters would permit amateurs to experiment with more sophisticated communications and new control procedures.

5. The request presented by the ARRL may have some merit. Our reason for the adoption of the rule prohibiting crossbanding, as stated in the Report and Order in Docket 18803, was to conserve frequency spectrum. The ARRL scheme for repeater stations to crossband a single channel would still only require one frequency pair, the same as required for a repeater not crossbanded. Their plan to use crossbanding as a means to provide more repeater channels within the same frequency segments would be an improvement in terms of spectrum conservation insofar as repeaters are concerned. How widely this scheme will be accepted by amateurs remains to be seen, since it could require substantial modifications to existing equipment. Also, it would probably result in the discontinuation of simplex segments in the repeater bands, which would not be an improvement in spectrum conservation. Furthermore, it is doubtful whether the costs saved in duplexing equipment would even be offset by the costs required to retrofit all of the users' equipment. It would appear that (please turn to page 32)



# the Milliwatt: NATIONAL JOURNAL OF QRPp

DEVOTED EXCLUSIVELY TO UNDER FIVE-WATT AMATEUR RADIO

WORLD RADIO NEWS

Fellows:

Congrats on completing your third year of publication. WRN performs a very valuable and much needed service for ham radio. My wishes for many more years of successful service!

I'd like to introduce your readers to The Milliwatt in the hopes of arousing their latent interest in QRPp operation--and getting a few new subscribers, of course!

We're completing our fifth year of publication and in that time we've published more hardcore QRPp material than all the other mags together! It's a small mag--just 18 pages, except for an occasinal 32 pager--but no space is sacrificed for advertising. Our material includes construction projects, theory articles, stories of interesting QRPp experiences, and very important, the Operating News section where reports from QRPp operators the world over provide a goldmine of QRPp information. Here's a few things: "The Mark II 7MHz CW Transceiver," "An FET VFO Transmitter for 80-15M," "A Beginner's Transistor QRPp Rig," "Path Loss Figures and Nomograph for 14, 21, and 28Mhz," "A Variable Power QRPp Rig for 40M," "Antenna Height and 7MHz Propagation," "A Method of Short-Propagation Prediction," "W6OA to W1WML On Less Than One Milliwatt," "QRP In The Early Twenties," and many others. Send for a sample (50¢ to cover cost).

Subscriptions (six issues per year) - $3.75. Complete sets of back issues: Vol I - $4.00, II-III-IV - $3.50 each, $13.40 complete set. Hope to hear from some of you.

73 Ade K8EEG

ADRIAN WEISS K8EEG
EDITOR
213 FOREST AVENUE
VERMILLION, SD 57069

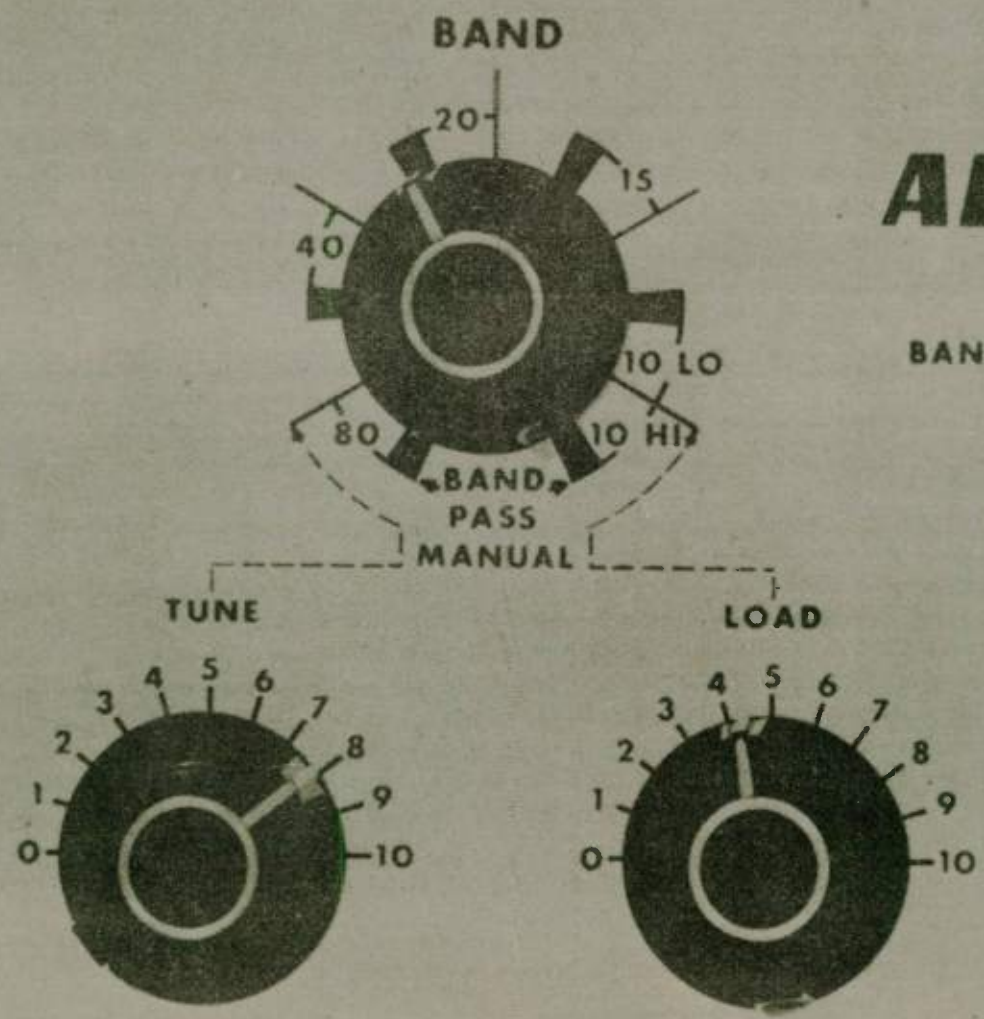
## P29FH (continued from page one)

Amateurs, hearing about the school, have become one of the supporting groups. Many individual amateurs have become involved as well as amateur organizations such as the Hong Kong group.

In 1971 Fred took a leave of absence from UNIVAC to return to the school on a full-time basis. He taught math and his wife, Dorothy, ran the school library.

As he was getting ready to return to the school for his stay, the DX group in the Twin Cities gave him a two-element tri-band quad. He was on the air quite a bit from Ewasse running his gear off the school generator.

Fred and Dorothy now feel it is time for the villagers to stand on their own. Native teachers have been trained. A man admired around the world is returning home.

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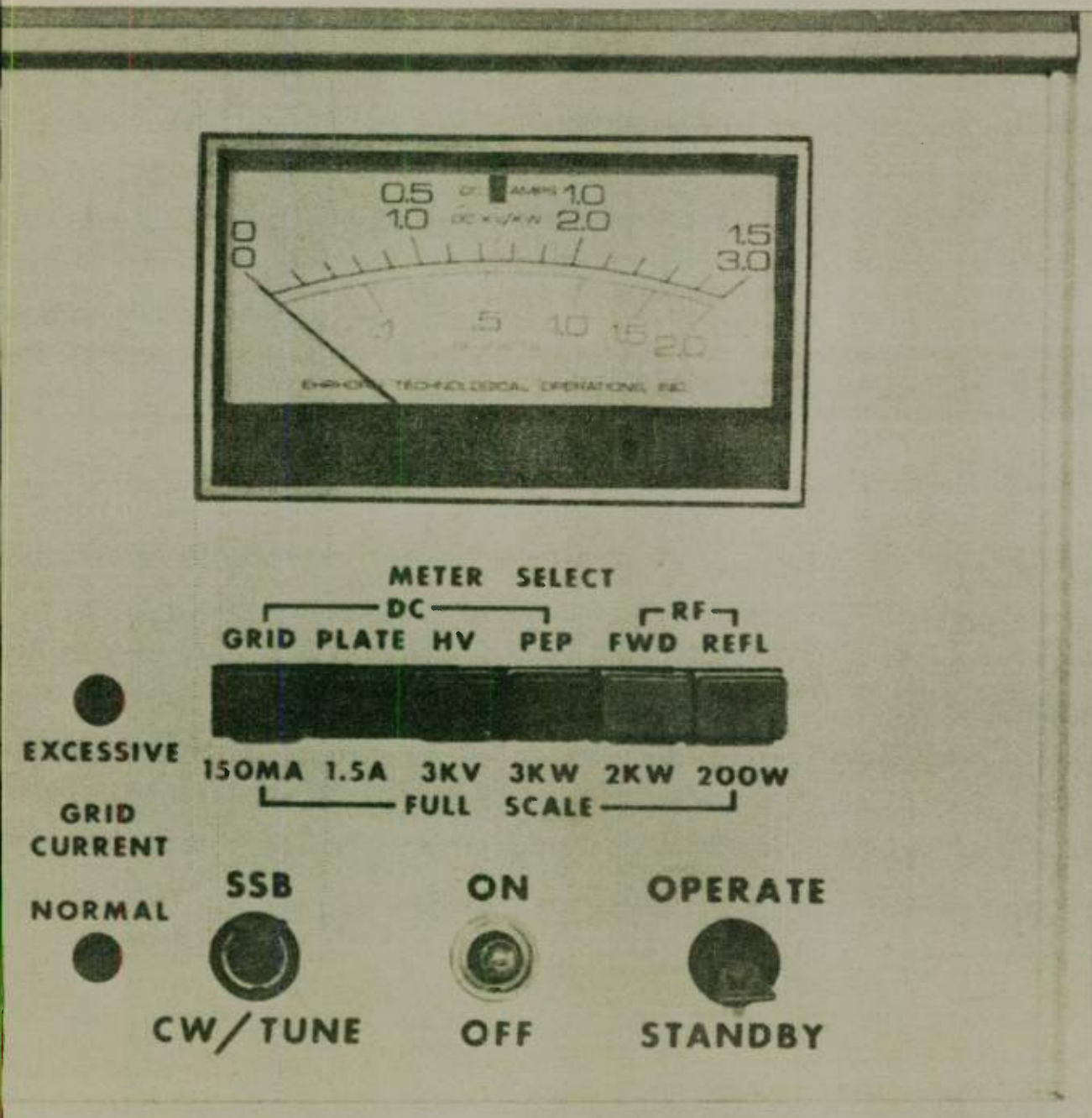
ALPHA 374 incorporates pretuned ou
put filters for each amateur band 8




# to ALPHA at M-TRON

## PHA 274 H-F LINEAR POWER AMPLIFIERS

through 10 meters; assuming that load impedance is reasonably close to 50 ohms resistive you simply flip the band-switch and transmit. Front panel manual controls are also available on each band so that mismatched loads can be handled without sacrifice of efficiency or power output.

ALPHA 274 is identical with the '374 in most respects, except that conventional front panel control of a band-switched full pi-L output network is combined with a pair of 8874 ceramic triodes to deliver continuous maximum legal power capability in all modes. The 274 thus offers maximum performance and economy to the operator who changes bands infrequently, commonly works on frequencies far outside the amateur bands — or who simply prefers to do his own tuning up. (Option PK-1 adds a third 8874 tube and increases power ratings to those of the ALPHA 374.)

Both of these superb amplifiers share a host of additional ETO quality and performance exclusives including simple-to-use excitation monitoring and control (ALC) circuits, thorough protection, and direct metering of **peak** d-c input.

# reach out

## amateur TV to aid the deaf

by Jane Seaberry
Washington Post Staff Writer

Public service-minded developers of the country's first amateur television repeater station are planning to expand their system from a home entertainment center to a medium of communication for the deaf.

The system plans to broadcast classes from Washington's Gallaudet College for the Deaf to the Washington deaf community through amateur repeater television station WR4AAG.

Television using a repeater is different from commercial television in a number of ways.

Not everyone can use the system. Only those licensed by the Federal Communications Commission as amateur radio operators are allowed to transmit. Bruce Brown, WB4YTU, developer of the system, is trying to get that changed so the repeater television can receive more widespread use.

Also, a large television studio, equipped with huge cameras, powerful equipment and technicians, is not necessary. According to Brown, who operates a small station in his apartment, all that is needed is an ordinary television set, equipped with a modified VHF/UHF converter, a $160 shoe box-sized television camera, a $15 police radio transmitter, a video modulator, floodlight, microphone and odds and ends of electrical equipment. Brown's system cost about $400.

The system is similar to closed circuit television, except for the repeater, which is a station with a high antenna that relays broadcast signals and amplifies them en route to their destination. Without the repeater, broadcast distance is cut to about one-third.

At least 20 amateur radio operators in the Washington area already own miniature television stations. To transmit picture and sound to other homes, the broadcaster faces the camera, flicks a switch and speaks into a microphone. The receiver does not need a camera, but gets the black and white picture and sound on his home television set.

Those broadcasters who do own cameras to transmit pictures must wait their turn to appear, since the system has only one channel. Only one station can transmit at one time.

Earl Higgins of Gallaudet's office of educational technology said the only cost to the school would be about $125 for equipment to receive and transmit signals, since the school already owns a complete closed-circuit television studio.

All that's needed now is about $25 each for installation of the converter onto home television sets of deaf persons.

Higgins said programs such as basic education, income tax preparation, repair and maintenance around the house, self defense for women and furniture selection could be brought into the homes of Washington's deaf by the end of August.

In the same public service vein, the portable system could be used by police and fire units, news reporters and doctors. These workers could transmit instantly back to their offices, headquarters or emergency rooms, pictures and sound of events happening as far as 45 miles away, Brown said, without the usual bulky equipment.

Store clerks could show merchandise to shoppers at home and the system could be used to monitor vacationers' homes when connected to the door.

Brown, 28, designed most of the station atop the 15-story apartment building in Alexandria where he lives. The whole idea was started by Terry Fox, WB4JFI, 23, an employee of a Washington videotape studio, and Brown with the help of about 20 amateur amateur radio operators who later formed Metrovision, Inc., an organization of amateur television buffs. Most of the machine work with the combination surplus and home-made materials was handled by George Gelestino, a machinist in Oxon. Hill.

The other amateur radio operators are not all engineering experts. They include workers at Chesapeake & Potomac Telephone Company, an American Airlines pilot, a college student and a computer salesman. Most got involved in amateur radio and then amateur television to meet people and have fun tinkering with equipment.

The operators have not engaged in full-scale entertainment because of FCC stipulations that prohibit even playing music on the air, Brown said. The restriction is part of their license rules.

However, Brown sometimes broadcasts with his Ernie and Cookie Monster Sesame Street hand puppets and Terry's wife was shown a couple weeks ago wearing a bikini.

The operators talk to and watch each other almost every night between 7 and 11 p.m., except on nights when "Sanford and Son", "All in the Family" or a good movie is playing on the commercial channels.

But usually, "When we talk about stuff on the air, we stay away from religion and politics," Brown said. "And of course, no pornography or anything like that."

The operation also uses what Brown calls a character generator. It consists of a set of typewriter keys which can print messages on the television screen between broadcasts. Last week's message was "We're the best, not CBS."

Neither Brown nor any of the other Washington area amateur operators seem interested in making money from the project, though Brown hopes some day a company will manufacture a solid state system instead of the mass of wires and small metal boxes amateur operators use. However, only those holding an amateur radio license can transmit.

Brown, an electronics engineer at the Naval Research Laboratory, may start pushing harder to get entertainment on the station after a while, though the nonprofit organization is basically seeking only public service use of the system.

The 28-year-old Brown achieved slight fame about seven years ago during his days as an engineering undergraduate at Purdue University, when his automatic computerized lawnmower was introduced nationally via the American Broadcasting Company network. Like the television repeater, Brown's invention was just for fun, not profit.

He said the system could be used by communities to broadcast local entertainment and services, although the system is too expensive to install the necessary repeater stations right now. Though the amateur operator must spend only a $12 entrance fee into Metrovision to broadcast, they must spend the initial hundreds of dollars to get set up.

Large-scale house to house communication is not yet feasible because of the system's only one channel, and long distance use is only available if a number of tall repeater towers, spaced about 100 miles apart, were placed throughout the country.

(Washington Post)

NOTICE TO BLIND HAMS

Anyone knowing a blind ham who might be interested in receiving tape cassettes of The Worldradio News, WCARS Sentinal, WPS 3952 or MTN BLAZER, contact Walt Keleher, WA6FAQ, 136 Bidwell Way Vallejo, CA 94590. Phone (707) 642-0401 These cassettes will be supplied on a loan/returnable basis at absolutely NO COST to the blind ham. Anyone that would like to help, WA6FAQ could use a donation of a 60 or 90 min. cassette or two.

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May friendship between amateurs result in peace between nations.

# Send a friend

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

name of guest

address

city, state, zip

my name

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

# profile

A TRIBUTE TO
A MAN NAMED SMITH

by Alex "Red" Coulter, WB6ZWG

I can still recall the little wind-up train and circular track that I played with as a child. Though my train was very inexpensive, and had none of the sophistication or realism of a modern toy train, it was my inspiration for countless hours of fantasy.

It was the year 1885 that Thomas A. Edison, with the assistance of two colleagues, worked out a system of communication between railway stations and moving trains. Five years later, on the 14th of July 1890, the reliable stork service delivered a new baby boy to a home in Redlands, Calif. The destiny of this new-born was to be written by the progress of the railroad for many years to follow.

Millard M. Smith demonstrated a flair for mechanics at a very young age, and spent a part of his early years as a bicycle repairman. Millard was eighteen years old when, on the advice of a relative, he started heckling the Santa Fe railroad for a job. His persistence continued for a full year, before he was hired to work as an apprentice mechanic in 1909. Millard's work days were ten hours long and earned him ten cents per hour.

Perhaps it was Millard's red hair that provided the flame of motivation and aspirations that would elevate him from the "grease monkey and common laborer". It was in 1913 when "Red" Smith became a full fledged mechanic. He was sent from San Bernardino to Winslow, Arizona, where he spent the next six months. The Santa Fe moved Red to Williams where he was promoted to Division Chief. This assignment made him responsible for all cars and locomotives between Williams and the Grand Canyon.

Red discovered that life offered more than steam and steel. In 1914, with a new-found love at his side, he was married at Williams, Arizona. A year later neighbors could see many square white things dancing in the desert breeze from the Smith clothesline. Daughter Charlette was now making her contribution to the laundry basket. Another promotion took the Smiths back to Winslow where Red was made Gang Foreman. A year later Red accepted the same job at Needles for two cents more per hour.

With so many transfers, moving became a regular activity of the Smiths. The summer heat at Needles was too much for Red so through connections he took a job as night Round-house Foreman in Los Angeles where they lived for several years.

It was 1932 that Red suffered a real setback. A detached retina and complications caused the loss of his right eye and brought an order that Millard Smith was to be released from service with the Santa Fe railroad.

It would seem, however, that our Mr. Smith was born under a lucky star. Not only did the Santa Fe rescind the order for release, but in 1935 "Red" was made Master Mechanic over the Arizona division at Needles. As king-pin over the entire division he found Needles a bit cooler. A transfer to Fresno occured in 1942 and Red was made Master Mechanic of the Valley Division. He was now responsible for all trains running between Barstow and San Francisco, plus three tug boats and five barges on San Francisco Bay. Seven years later in 1949, Red's office was moved to Bakersfield.

Red planned to retire in March of 1960 but fate dealt the Santa Fe a tragic hand. This provided Red with a very unpleasant final task with the company. It was a little after five o'clock, on the evening of March 1, 1960, that death and destruction rode the rails of the Santa Fe. The day's light was surrendering to long evening shadows as the sleek passenger train, "The City of San Francisco", approached Bakersfield from the north. About five miles west of Bakersfield the driver of a loaded tank truck, apparently unaware of the train's presence, drove onto the track directly in the train's path. As a result of the explosion and blazing inferno that followed, the lead locomotive was dwarfed in size, and passenger cars were scattered like bowling pins. Many lives were snuffed out in what was to be the most tragic railroad accident ever to occur in this area. After all investigations at the accident were completed, it was Willard Smith's job as Master Mechanic, to clear the area of all wreckage and return things to normal.

With that last job for the Santa Fe complete, Red was to be guest of honor at a retirement dinner planned by his many friends and co-workers. Once again fate stepped in and the dinner had to be postponed as Red was rushed to a San Francisco Hospital for eye surgery. Having lost his right eye, he now faced the threat of losing his left. Many days passed as Red laid in that hospital room in grave darkness. When the bandage was removed "Red" was asked if he could see. He said he could not.

Perhaps it was a combination of his bull dog tenacity, faith, and courage that returned sight to that left eye. Red feels that his victory over the white cane was by a very slim margin.

With sight restored, Red left the hospital to join his many friends (500 strong) for that retirement dinner.

Red and I sat in the comfort of the ham shack in his beautiful home, and re-lived the nostalgia of the occasion via his tape recorder. I listened to the numerous speeches, given by the "brass" from the Chicago office, followed by the taped voice of "Red's" wife, and finally a "thank you!" speech by the honored guest that brought a lump to my throat. I was still wondering how anything could top such an event as Red started the recorder again. This tape was presented to Red by a road foreman friend. It contained all the sounds of a steam locomotive as it traveled the rails of the Cajon Pass between San Bernardino and Barstow.

Red's wife, Agnes, died June 3, 1963, leaving him very much alone except for a remarkable Boxer dog by the name of "Pudgie". Red had been a short-wave listener, so it was natural that his interest would turn to Amateur Radio.

With the assistance of Earl "Hobby" Hobson (W6LI) of El Segundo, Red acquired his Novice license in 1965 at the age of 74. A year later, Red up-graded his license, and was made a life-time member of the Kern County Radio Club, Inc.

That same year Red lost his faithful dog "Pudgie" as the result of a brain tumor. Pudgie was sadly missed, but this time Red was not alone, as his many new ham friends had found their way into his home at 1913 Duke Drive.

It was Veterans Day in 1967 that our Mr. Smith married his present charming wife, "Lottie". This marked a new beginning for Red, so in 1969 he again elevated his Amateur status by earning the Advanced classification for WB6PCE. Red is a member of KCRC, ARRL, WCARS, and the Santa Fe Amateur Radio Club. He has also earned the following awards... RCC, WAS, WAC, and is a member of the DX Century Club.

Millard "Red" Smith, at the age of 85, stands tall among men. With the dignity of a true gentleman, Red admits that life has been good to him.

I asked if he had any good advice for our young people and his answer was typical of the way he had lived his own life.

"Never take the path of least resistance in life".

("Splatter" Kern County, CA Radio Club)



# QSL card of the month

How does your QSL card look? Are you truly proud of it? Does it reflect your personality, your individuality?

Should a QSL card be a real momento for the person receiving it? Should it have a theme or meaning?

In an effort to elevate the status of QSL card design, "Worldradio" will, each month, feature a QSL card of the month.

We shall, naturally, lean towards cards which have an international friendship theme. We are also interested in those which depict man relating to the world around him.

As a partial stimulant to such designs, we shall award a one-year subscription to "Worldradio" to the amateurs whose cards are chosen for display. We will also attempt to make an arrangement with one of the QSL printers who advertise here to give each month's selection 500 more QSLs.

This month we are pleased to display the card of the super-active Kay Anderson, W8DUV

She took the DUV of her call and added a picture of a dove. The message on her card is certainly appropriate.

Kay is a gung-ho amateur. She is also active in scouting, church and social activities. She holds a job and raises family. We're going to run an article on this dynamo soon and make the people who always whine "I don't have the time" to whatever is asked of them feel really bad.

Send in your QSL card.

# dx digest

**by Gary Stilwell, W6NJU**

Gary was on vacation this month. His column will be seen next issue. John Troster, W6ISQ, kindly consented to write a DX "think piece" essay.

WHY KINGMAN REEF?
ARE YOU A "PURIST"
OR "EXPANSIONIST"?

by John G. Troster, W6ISQ

In the aftermath of the Kingman Reef DXpedition this past July, let's talk about why people go on these trips, and, just as important, why do individual people support them financially.

Why go DXing?

To put a DXpedition like the Kingman Caper in proper perspective, it would be instructive to ask this: why do people handle traffic? What is there that is so fascinating about copying messages from one unknown person to another? There is, of course, a sense of service, or contribution, even a little competition among some in trying to make Brass Pounders League. But most important, the traffic handlers handle traffic because they enjoy it. They want to handle traffic more than anything else in amateur radio.

The same might be said for the fellows who build 432 MHz gear. They want to build 432 gear. That's it. Perhaps they want to use that equipment for Moon Bounce. But it's 432. They love it.

Ditto 160. Have you ever tried to carry on a 160 meter QSO in Illinois in the summer time with those horrendous static crashes? Talk about challenges! But the die-hards hang in there. 160 is their baby and that's it. The rest of amateur radio is non-existent.

And then there are the old-fashioned, non-stop rag chewers. Day and night the rag chewers chew. All problems of ham radio and the world are solved repeatedly. The marathon goes on with various participants. If one chewer has to QRT for "a couple a hours to take the XYL shopping", he'll be able to rejoin the roundtable without missing anything that can't be recounted in less than a minute!

The point is made. Everyone has his own challenge, his own way of enjoying what he likes most to do in Amateur Radio. Each party, in his own way, contributes something---even if it is nothing more than band occupancy, which is sometimes very important, but sometimes unbearable.

So it is with DXers. They want to talk to rare or far-away places around the world. This is what they like to do most in Amateur Radio. They will go on or support a DXpedition because that is their "thing", their personal challenge. So Kingman Reef was there, it was rare, it was a challenge. What more could the DX fraternity want? Someone had to go. The whole philosophy can be summed up by adapting Captain Mallory's famous, although nowadays, somewhat overworked phrase to the effect that DXers want to go to those rare spots "because they are there."

Why was Kingman Reef a "New" Country?

Kingman Reef was there as a "new" country by virtue of the definition of a country in the DXCC (DX Century Club of the ARRL) rules which essentially says that two islands located over 225 miles from their territorial government seat will be considered different countries if they are under the control of different government agencies. Palmyra Island, 35 miles south of Kingman Reef, is under the jurisdiction of the Interior Department, but Kingman Reef itself is under the Navy Department .. .... voila! Kingman Reef is a "new" and separate country.

Who Goes?

So the "new" country---the challenge--- was there. Now how to put it on the air? Volunteers are not hard to find for any DXadventure. But for a DXpedition, skills are important. An operator must be skilled in handling both CW and SSB in pile-ups, have the self-discipline to be calm when the callers refuse to follow directions, be able to repair the equipment, endure a few hardships and a few privations, be in good physical condition, have the stamina to operate or log many long consecutive hours. Then too, the operators must be able to get away from home for a month or so and pay part, if not all, of their expenses.

In addition to all these technical and physical requirements, the operators must have that great flair for adventure that keeps the juices flowing when the mind and body want to say QRT.

To be selected as an operator is an accolade akin to making All-American. It means the people selected are the best around in all categories. In the Kingman Reef episode, the DX world was indeed fortunate to have some of the very top operators of the Northern California DX Club" Bob Ferrero, K6AHV; "Rusty" Epps, W6OAT; Pete Grabosky, WB6OOL; Jim Rafferty, WA9UCE/6.

How To Go?

As in any expedition, there are many who stay at home and do the hard organizational and planning work. In the Kingman Reef venture, there was Merle Parten, K6DC of the Northern California DX Foundation and Bob Thompson, K6SSJ of the Northern California DX Club---and many others who spent hours on the telephone, on the air, attending to myriad details necessary to launch the trip. Why did they spend this time and energy to put a few fellows on a piece of coral? Because it too was their personal adventure. They wanted to do it--it was their love in amateur radio and they wanted to contribute to it.

Who Pays?

The DXpedition was financed by DXers who wanted the "new" country put on the air. For the person who is just starting to chase DX a "new" one might be a TG9 or a 5T5. The fellows who have been around a while are looking for Clipperton or Iraq. But no matter how long a DXer has been in the chase, or how many countries he has, there is something about a DXpedition to a rare spot that brings out the old, the new, the casual and the avid DXer! These people, by their interest and enthusiasm, push the idea, and those who can, contribute to the financing--before and after.

Is It Worth It?

Many say, "it would be better to spend all that money to send rigs to other countries or spend it here or there." Maybe so. But the fact remains that contributors to a DXpedition would not contribute to other activities in many cases. A person contributes to a particular DXpedition because he wants to see that DXpedition go. The individual probably would not be interested in giving for other purposes because he is not interested in that activity. It's like some people contribute to the Cancer Fund but not the Kidney Fund. So when a person says money should not be spent on DXpeditions, it is important to remember that the money might not be available for those other purposes, regardless of the merit or need. People

spend their money on the things they want to. No DXpedition--no money.

It All Adds Up

What we had then at Kingman Reef was a group of amateurs interested in one thing---DX. The "new" country, Kingman Reef, was there----waiting, and the operators were chosen and ready. DX chasers of the world were QRX and they wanted to see the trip go, and they were willing to finance it.

All the ingredients were there for an exciting, old-fashioned adventure. And that's how come Kingman Reef, KP6KR, was put on the air.

What The Old Boys Are Arguing About

SHOULD A "COUNTRY" BE A COUNTRY?

In Dxing, as in any sport, there are rules of the game. The most basic rule pertains to the definition of a "country". The fact that there are now about 320 amateur radio "countries" whereas there are only about 150 United Nations countries is rather hard to explain to the neighbors.

The difference is in the definition of what constitutes a "country". The UN recognizes political entities, but the DXer's country list---the DXCC list--recognizes various islands, territories and other possessions of the same country, each as a different "country". Thus, Alaska, Hawaii, Guam, Virgin Islands, even the 1000 foot by 50 foot Kingman Reef, are all considered separate countries for DXCC purposes.

Other rules apply: the land must be 225 miles beyond the governing territory (a case for islands), or if not that far, must have "foreign" territory between the two (although enclaves are not recognized). Then, there is the rule that applies principally to the U.S. (in the case of islands) concerning administration by different government bureaus as was explained in the case of Kingman Reef being different from Palmyra.

"Purist" or "Expansionist"?

Recognizing Kingman Reef as a "country" is the sort of thing that drives a wedge between the "purists" and the "expansionists" of the DX world. The "purists" insist that an uninhabited atoll cannot be a "country" by any definition. Furthermore, the "purist" believes there should be "x" number of permanent residents living in (on) the "country". Or some say that a "country" should have a governmental seat of some sort.

The "purist" gags on semantics when the present DXCC list is called a "country" list because he wants a "country" to be defined in the traditional sense. No more reefs or uninhabited islands. And he is unmoved by the fact that the "pure" definition would forever limit the number of countries considerably below the current possible 320 or so.

The "expansionist", however, does not get hung up on the traditional definition of a country. He recognizes a DXCC country as a piece of real estate--a bit of geography --and the more pieces the merrier. He would be happy to call it the DX Geography Club. Furthermore, the "expansionist" wants to see more "countries" declared by the simple expedient of changing the DXCC rules periodically. Thus, every few years, the 225 mile rule and perhaps other criteria should be reduced by a few miles to allow new countries to come under the mileage radius rule.

In votes taken at conventions and meetings of both Southern and Northern California DX Clubs, the "expansionist" philosophy has won.

A Five-Year Country?

There is another interesting question which DXers are arguing about. That is, if an uninhabited island is activated as a country, should those who received DXCC credit for working it receive that credit in perpetuity even though there is no recurring activity.

To circumvent this problem, some believe that after, say, five years of no activity, the credit for working that "country" should be cancelled, but not the country itself. Thus, if Kingman Reef is not activated again within five years, those who have DXCC credit for working the Reef will lose that credit. The Reef, itself, however, will remain on the country list. The purpose, of course, is this. If no one goes back there, the newcomers to DXing will never be able to work it. Thus they will never be able to catch the old-time leaders or make the Honor Roll (i.e. work all but 10 of the current countries). Such a five year rule would tend to keep things even for old and new DXer alike.

So the wonderful world of DX is filled with controversy. But that's part of the fun too. And as long as there are islands and exotic lands and rules and DXCC lists, there will be intrepid DXers who will search their maps and navigation charts and interpret rules to find "new" countries. Long may they DXadventure.

●

SEPT. - MUF From Burbank, CA

| GMT | AFRI | EURO | SOAM | ASIA | SPAC |
|---|---|---|---|---|---|
| 01 | 12.1 | 9.1 | 18.7 | 19.2 | 21.0 |
| 02 | 9.0 | 8.4 | 15.5 | 18.8 | 19.4 |
| 03 | 8.5 | 8.0 | 12.4 | 17.9 | 19.4 |
| 04 | 10.7 | 8.3 | 11.0 | 16.4 | 18.8 |
| 05 | 10.6 | 9.4 | 11.2 | 14.6 | 15.5 |
| 06 | 9.8 | 10.3 | 11.6 | 13.0 | 14.1 |
| 07 | 9.1 | 10.0 | 11.4 | 12.0 | 13.0 |
| 08 | 8.4 | 9.8 | 9.6 | 11.5 | 12.6 |
| 09 | 7.9 | 9.4 | 11.4 | 11.2 | 12.5 |
| 10 | 7.7 | 9.1 | 11.5 | 10.9 | 12.6 |
| 11 | 8.3 | 9.1 | 10.4 | 10.2 | 12.5 |
| 12 | 9.9 | 10.0 | 10.7 | 9.4 | 11.6 |
| 13 | 12.0 | 11.7 | 14.7 | 9.2 | 10.6 |
| 14 | 13.9 | 13.8 | 17.7 | 10.5 | 11.7 |
| 15 | 15.2 | 15.6 | 19.2 | 11.7 | 11.7 |
| 16 | 15.9 | 16.2 | 19.7 | 11.3 | 10.7 |


| GMT | AFRI | EURO | SOAM | ASIA | SPAC |
|---|---|---|---|---|---|
| 17 | 16.2 | 15.9 | 20.6 | 11.1 | 9.8 |
| 18 | 16.2 | 15.6 | 22.4 | 11.3 | 9.0 |
| 19 | 16.4 | 15.1 | 24.4 | 12.3 | 10.9 |
| 20 | 16.6 | 14.0 | 26.0 | 14.3 | 14.3 |
| 21 | 16.8 | 12.6 | 23.5 | 16.5 | 17.1 |
| 22 | 17.2 | 11.1 | 22.7 | 18.1 | 18.6 |
| 23 | 16.6 | 10.1 | 20.9 | 18.7 | 19.6 |
| 24 | 14.5 | 9.6 | 19.2 | 19.1 | 20.4 |

Predictions were kindly provided by Bob Goldman, K6BD. The MUF's are median value (aprox. half the days of the month will be higher and half will be lower). Suggest using 85% of MUF as guide, but check on next higher band for opening.

(From JPL Amateur Radio Club "Newsletter")

●

PROPAGATION- Looking for the latest available forecasts? Try MAIL-A-PROP, a weekly propagation newsletter prepared by W3ASK. Annual subscription $30. pp. Send SASE for sample to MAIL-A-PROP, P O Box 86, Northport, NY 11768

# repeaters

ABOUT THAT ARI...

by Norm Brooks, K6FO

You've heard about BCI and TVI and have a pretty good idea of what those initials mean. But what's ARI? The I, of course, stands for interference. The A.R. must mean Amateur Radio. Right? Right.

If you've been on 2 meter FM for any length of time, the day will come when your telephone will ring and some friendly (or irate) amateur will tell you that your FM transmitter is bringing up a repeater that you were not even attempting to work through. It may be a repeater on the adjacent channel to your "favorite" repeater. Or it may be one many kHz away. In any case, the call spells Trouble with a capital T.

Let's look at what's happening here. First, the top two megahertz of the 2 meter amateur band has been divided into 67 channels (from 146.01 to 147.99 MHz). These channels are designated as repeater input, repeater output or simplex, according to a master plan. Now consider that receivers at repeater stations are pretty sensitive - they can usually serve a 1 watt walkie-talkie at a reasonable line-of-sight distance from the repeater. With this sensitivity, even a few milliwatts on a repeater input frequency will cause serious interference problems.

But you say, "I'm on the Happy Valley repeater input frequency of 146.34. How come they're hearing me on that other channel? If it's a nearby channel to 146.34, say 146.31 or 146.37, your transmitter may not be tuned exactly to 146.34. It could be off enough to be in the pass band of the adjacent channel receiver. Corrective action of course, is to retune the crystal oscillator on your transmitter, using an accurate counter.

Another possible problem could be over-deviation. This is the case when you're heard in nearby channels, but somewhat garbled. Simple solution - turn the deviation control on your transmitter down so that you meet the standard narrow band deviation of not over ±5 kHz. The most difficult case is when you're heard in a channel many kHz away from your transmit frequency. This comes about when your transmitter puts out spurious radiations called "spurs." Such a faulty transmitter is called "dirty", probably because the signal is not clean!

In that case, some pretty serious things can be wrong, such as (1) spurious crystal modes, (2) ultrasonic oscillation in the audio or modulator stages, causing far-away sidebands at equally spaced intervals, (3) spurious (self-excited) oscillation in the transmitter oscillator or amplifier stages, and possibly (4) all of the above! The cause of such a problem is not easy to find, and to correct it will require the proper test equipment, including a spectrum analyzer. Here's where even a technically qualified amateur may have to call for help. There is no stigma to sending your radio back to the factory for trouble shooting this kind of problem. They have the equipment, you don't.

The worst thing you can do is to continue to operate after you've been told your transmitter is causing problems.

Which brings us to the most important part of this article - your attitude. Channelized FM operation is different from tunable HF operation in many ways, and this is one of them. You can't "go it alone" on FM. You can't bury your head in the sand and ignore a spurious radiation problem on FM - there are too many repeaters around to be interfered with. The worst attitude you can display is "There's nothing the matter with my equipment." How do you know for sure? The best attitude is "Let's run some tests, and maybe you can help me identify the problem in my equipment." Also, your caller may be interested in making such tests because he may not be certain that his equipment is not contributing to the problem.

Radio amateurs are well known for their accomplishments in self-policing. You may recall the FCC has delegated to amateurs the authority to self-coordinate the various repeater channel allocations. Both of these activities are working well together, and many interference problems are being solved daily. This means problems between individual stations and various repeaters, as well as between repeaters. Amateurs have even approached FM commercials, who operate in channels near our bands and pointed out spurious signals that cause problems in the ham repeater band. The commercials are always happy to be approached this way, because they know that equipment does act up at times, and it is better to be told about the problem by an amateur than by the FCC. We should adopt the same attitude, because if we refuse to cooperate in checking out our problems, we can be reported to the FCC.

Further, if you're clobbering an amateur repeater, you're probably radiating in the commercial bands, too, and an FCC ticket might not be far away.

# Ohio

Between travelers on Ohio Route 4 and 99 (or other North-South highways) and also for the East-West travelers on the Ohio Turnpike, U.S. Route 2 and 6, also U.S. Route 20, there are stations monitoring 146.52 Simplex for emergencies, during most of the day and as late as eight or nine p.m. Lou Fraun, K8IQP and/or Dorothy Fraun, WA8QQM, if K8IQP is not home, will monitor the frequency. Possibly there are others, also doing the same, in the same area, but it is not known for certain who the others are. Also, the time when the crystals arrive for the scanner receiver, then possibly other frequencies will also be monitored, for emergency traffic only. 52.52 is the normal and priority frequency in the area. The range of this station is around 30 miles (or a little more).

There are repeaters in Toledo, Ohio, on the following frequencies: 01 61--34 94--19 79. In Fremont, Ohio, during daylight hours, the new 31 91 repeater is now in service. In Cleveland the following repeaters are known to be on but which are closed or are on "PL" are not known: 16 76--34 94--13 73--22 82--25 85(soon to be on)--and in a Cleveland suburb 01 61. Some of these are overlapping in the area between Cleveland and Toledo, but that remains up to the individual station travelling through the area to determine which he can work on.

## OSCAR (continued from page 28)

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. And,

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.

Since its creation in 1969, AMSAT has been responsible for three satellite projects:

1. Australis-OSCAR 5 - A satellite built by students at Melbourne University in Australia. Licensed to AMSAT by the Commission on June 10, 1969, and launched by NASA in January 1970, AMSAT completed extensive modifications, testing, launching arrangements and data collection for this satellite project.

2. AMSAT - OSCAR 6 - First of a series of long-lifetimes amateur satellites, OSCAR 6 continues to serve for regular use by approximately 2,200 amateurs in over 78 countries since its launch by NASA in October 1972. It was licensed by the Commission to AMSAT under the authority of the WA3NDS license, and AMSAT was responsible for the spacecraft design, fabrication, testing, launch arrangements, telecommand and operation.

3. AMSAT OSCAR-B (OSCAR 7) - This amateur communications satellite is now in final testing for a launch by NASA this summer. Expected to operate for three years or more, OSCAR 7's subsystems have been developed by amateur groups in the United States, Australia, Canada, and West Germany under AMSAT's management. The Commission issued the license W3OHI to AMSAT for this satellite on March 15, 1974, for a five-year term.

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## overseas (continued from page 2)

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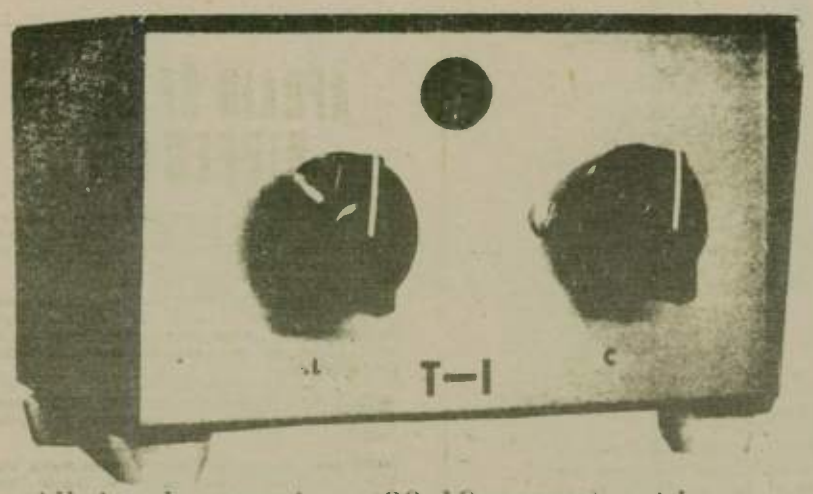


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The newsletter carries articles on digital and linear circuitry using both discrete and integrated circuit components. Digital articles explain the techniques of logic design, implementation of the logic with circuitry, circuit layout and grounding for high speed logic, and IC usage considerations. Linear articles are concerned with topics such as designing with op-amps, transistor parameters and biasing, feedback, filters, and oscillators. Calculating power transistor temperature rise and heat sink selection is explained for power applications.

Construction articles are included for projects such as lab equipment, demonstration circuits, clocks, hi-fi and radio equipment, many of which are available in kit form. The articles include construction information and complete schematics.

ELECTRONICS MONTHLY NEWSLETTER is issued monthly except September and January. Please send a check or money order for $10.00 for a one year subscription. A sample copy is available for $1.00.

VALLEY WEST 879 Laburnum Drive Sunnyvale, CA 94086


"Don't Knock It Unless You've Tried It!"

by Bud Schultz, W6CG

After some 48 years of hamming I've just about made the full route.

The DX craze with its pile-ups -- the message handling bit and the BPL -- 15 years of pioneering RTTY and trying to make 100 countries on FSK -- etc., you name it and I've tried it! Field days - VHF contests - hidden transmitters - QRP rigs. From the oatmeal box helix and slop-jar rectifiers to the modern S-line gear is a long trip but I rode it all the way.

Then one day an old pal of some 40 years standing said "Hey-how about listening for me on OSCAR 6?" Not being an astrophysicist I sure wasn't very keen about the idea, but not knowing how to brush off an old pal, I agreed to give it a try. He suggested all I had to do was listen around 29.5 MHz at the right time and that was all there was to it. I gave it a try and was amazed to hear some 30 CW and SSB signals coming off a really dead ten-meter band; from Maine to Hawaii and Florida to Alaska. As a matter of fact I optimistically rigged up my CL-146 (10 watts?) so I could key the PTT and impatiently waited for the next pass of that darned "shoebox" in the sky. I didn't expect too much from my "Ringo" vertical but when I heard things start to happen I put out a CQ and to my wonderment here comes KL7MF calling W6CG and asking for a report on his sigs!

Honestly - fellers - for the first time since my first ham QSO some 48 years ago, I got buck fever. Couldn't hardly remember my own call and my hands were sweating like a Novice on his first time out!

All of the above is just my way of saying if you are finding Amateur Radio a bit dull at times or if you are becoming a bit bored with your hobby, give OSCAR and the AMSAT group a try.

At the very least, you will find it a challenge and if it doesn't raise your blood pressure the first time you get an answer back to your first call into space, then you are a medical phenomenon. It really doesn't require any fancy gear, but like every other facet of amateur radio - the better the gear, the better the results. I'm still using the Ringo vertical but have upped the power to a big fat 80 watts and I must say I did just about as well with the little FM rig I started with. The log shows 27 states and 3 countries worked so far since the first of December. I still look forward to every pass of the thing in the hope of getting something new. If you want to try your hand at this and want some info to help you get under way, just send a large SASE with 20 cents postage to ARRL and request their guide to amateur satellites.

Just keep in mind that in the next few years much of our communications will be via satellites, and you should be glad of a chance to get in on the ground floor. OSCAR 7, which will be launched shortly, will include 432 to 144 translators as well as 146 to 29 MHz links. This satellite hopefully will be available along with OSCAR 6, so activity should be plentiful.

Again, I repeat - you don't have to be a space scientist to become involved in this most interesting phase of Amateur Radio. "Try it - you'll like it!"

(Decoder", Crestline CA Repeater Org.)

AMSAT Nets

In order to keep the satellite users in touch with each other and to provide information to newcomers, the following AMSAT nets meet regularly:

North American East Coast 75 Meter Net
Mondays 9:00 p.m. EDT (0100Z Tues.)
3850 kHz LSB
Net Control W3ZM, W3TMZ or K2GUG
Note the change in time and frequency.

North American West Coast 75 Meter Net
Mondays 7:00 p.m. PDT (0200Z Tues.)
3850 kHz LSB
Net Control W6OAL or W6EJJ
Note that East Coast and West Coast Nets are now on the same frequency, so stations in between should be able to work both.

International 20 Meter Net
Sundays 1800Z*
14,280 kHz USB
Net Control W3ZM, W3TMZ or others

Western Europe Net
Sundays 0915Z
3780 ± 10 kHz LSB
Net Control G3IOR

JA Net
Mondays 1300Z
3560 kHz LSB
Net Control JA1ANG

Southeast Asia Net
Thursday 1300Z
14,320 kHz USB
Net Control JA1ANG or others

ZL Net
Mondays, Thursdays and Saturdays
7:00 p.m. LSB
Net Control ZL1WB

*G3IOR listens at 1730Z for European and African checkins.

In addition, the frequencies 3850 kHz LSB and 14,280 kHz USB are designated as general watch frequencies for discussions of satellite matters following passes.

In the Washington area, AMSAT traffic is handled via 2 meter FM on 146.85 MHz simplex and through the AMSAT repeater WR2ABU (146.25 to 146.85 MHz).

In southern California, the WR6ACJ repeater (146.25 to 146.85 MHz) has been designated as an official medium for exchanging information relating to the amateur space program. It is suggested that those in other areas also adopt 85 simplex and the 25/85 repeater combination for satellite discussions. In those areas where such repeaters already exist, check with the present inhabitants of the channel to see if they would mind having their facility used for such a constructive purpose as satellite talk. If we all standardize on this frequency combination, it will be much easier to get in touch with each other when traveling.

Readers are requested to inform AMSAT relative to corrections, additions or deletions to the above net schedules.

Bulletins of general interest to those interested in amateur satellites are broadcast regularly on OSCAR-6 reference orbits (first orbit of the Greenwich day) at approximately 10 minutes after ascending node. These bulletins are received over most of eastern North America.

(from "AMSAT Newsletter")

Satellite Radio Award Given

by Doris Wright

A radio amateur pioneer who has contacted 1,800 stations in 50 states and 14 countries on three continents via the Oscar 6 satellite was presented a trophy from the Radio Amateur Satellite Corp. a worldwide organization.

Joe C. Patterson, W5VY, received the trophy, one of the first ever given by the international organization.

He was cited for his accomplishment of communicating with the 1,800 other amateurs via the satellite, which was launched in 1972 at Lompoc, Calif. by NASA with the NOAA-2 meterological satellite on a two stage Thor-Delta launch vehicle.

Patterson said the Oscar 6 orbits the earth every 115 minutes and allows him to transmit information for about 20 minutes. The satellite has a radio beacon to guide the radio amateur.

Patterson said the ultimate purpose of the satellite is to be ready to help transmit information during disasters.

An advantage to the satellite is that it can be used without waiting for weather conditions to be clear, he said.

Patterson was presented his trophy by Roy L. Albright, W5EYB, director of the West Gulf Division of the American Radio Relay League, and Dean Davis, W5BGE, representing the San Antonio Radio Club.

Patterson said that 1,000 amateur radio hams have suceeded in communicating with each other via satellite. The procedure involves the radio amateur transmitting a signal to the satellite in what is known as the two-meter amateur band. The satellite then retransmits the signal from the original amateur station down to earth in the 10-meter band.

"In order to establish communication, the radio amateur must have accurate knowledge of the time when the satellite would be in what is known as the line-of-sight range from his station, although the satellite will be several thousand miles away," he said.

## background

AMSAT is a non-profit, tax-exempt 501 (c) (3) scientific corporation founded in the greater Washington, D.C. area five years ago. AMSAT's purposes and objectives as set forth in its 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.

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(please turn to page 26)

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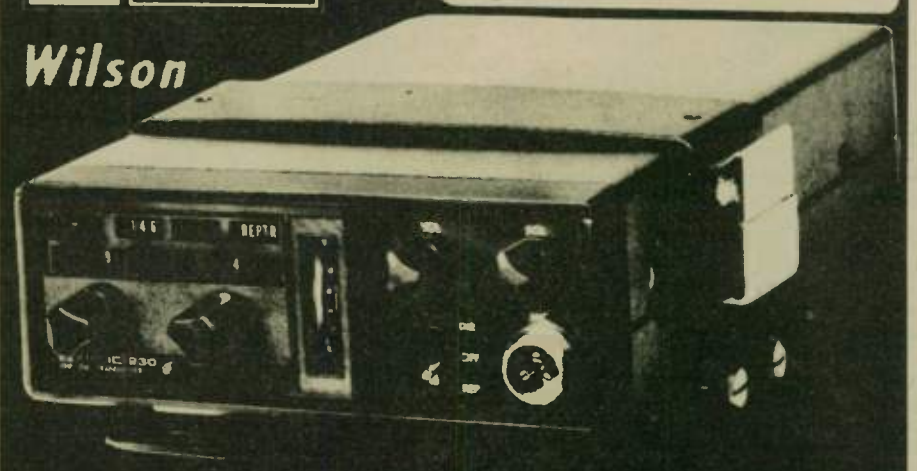

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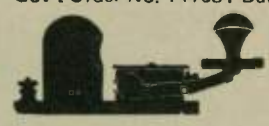

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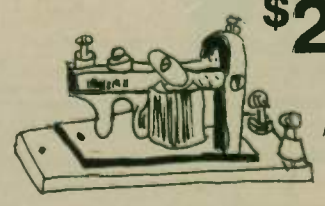

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# spectrum

## control

(from page 16)
appear on the system network diagram on file with the Commission.

4. Add Sec. 97.111(g) to read as follows:

97.111 Operation of a Repeater Station

(g) A repeater station licensed either for local control or for remote control, may also be operated under automatic control where:

(1) Devices and procedures have been implemented such that compliance with the rules can be accomplished without the duty control operator present at the control point at all times the station is on operation.

(2) All radio communications transmitted by the station are monitored by the duty control operator in real time, or reviewed within 72 hours. In the event a violation is detected, the repeater station licensee must take the necessary steps to prevent a recurrence.

(3) All radio communications transmitted by the station are recorded such that they can be reproduced. The recordings shall be:

(i) Preserved for a period of at least 30 days,
(ii) Retained in the possession of the station licensee. and
(iii) Made available to the Commission upon request

(4) The name of the station licensee, and the names of designated control operators, together with appropriate information so the duty control operator may be readily notified by Commission personnel to effect a prompt shutdown of the station, has been filed with the Engineer in Charge of the radio district in which automatic control of the station(s) is intended. This notification shall have been filed within the past year, or at the time of any change thereto, whichever is most recent.

(5) Upon notification from the Engineer in Charge, or other Commission Representative, of improper station operation under automatic control, said operation must be immediately discontinued until all deficiencies have been corrected and the Commission so notified. Otherwise, the station(s) may only be operated under local control, or under remote control if authorized.

---

The San Diego USO has proposed to equip their new building at 510 West "F" Street in downtown San Diego with an amateur radio station. They will need licensed operators to staff the new station one or two evenings a week to provide phone patches for the servicemen.

RADIO HAM 'EYE BANK NET' DETAILED TO MID- WEEK LIONS

The role played by amateur radio operators all over the country in relaying information on cornea transplants was explained to the Mid-Week (Sun City, AZ) Lions Club Wednesday.

Mrs. Helen Gibson, an amateur radio operator, was guest speaker talking on "The Emergency Eye Bank Network."

Radio operators work with 92 eye banks across the country, she said, notifying each other when a cornea transplant is available or when one is needed.

Operators are constantly on duty and requests are aired immediately. Information on delivery methods and times are worked out to increase efficiency, Mrs. Gibson said.

The system was started in 1962 with seven cities participating, she said, and now serves all of the U.S., Canada, and part of Mexico.

In the past 11 years, requests for 8,000 transplants have been handled.

## Worth It!

The mailman delivered a letter from FCC. Enclosed was the new call for WN4SAC who had been waiting for this mailman for several weeks.

Armed with the new WB4SAC I thought I would try my new rig which I had just received.

I no sooner turned it on to make my first QSO when I received an emergency call from WB4WWN, requesting a base station with telephone facilities.

I learned of a very serious accident on the turnpike and was asked to contact the State Highway Patrol, which I did and was later informed that they arrived on the scene in minutes and the situation was well in hand.

I feel very proud to be an amateur and the services rendered in an emergency is payment in full for all the trials and tribulations. in gaining a ticket... Ted Yagle, WB4SAC

(Florida Skip)

AMSAT-OSCAR 6 ORBITAL PREDICTIONS BOOK - 1974: An AMSAT-OSCAR 6 orbital predictions book is available from Ham Radio Magazine, Greenville, New Hampshire 03048 USA for $1.00, postpaid. This book, intended as a daily reference source for all users of the OSCAR 6 satellite, contains equatorial crossing times and longitudes for all 4,183 passes of AMSAT-OSCAR 6 between February 1 and December 31, 1974, with an accuracy estimated at better than ten seconds in time. Write Ham Radio for your copy today. (Please include extra IRC's if you would like your copy airmailed overseas).

KISSINGER'S KILOHERTZ

by Eunice G. Bernon, K8ONA

Intriguing conversation may be heard in a superstructure atop the Department of State Building Annex in Washington, D.C. But the conversation is not classified "Confidential."

To the contrary. Voices emanating from the ninth-floor location reach out all over the world, with fitting identification: "This is amateur radio station W3DOS."

Members of the Department of State Amateur Radio Club include personnel of the Voice of America, U.S. Information Agency and Agency for International Development. Their purpose is to bring together ham operators stationed at U.S. embassies and consulates overseas and their counterparts in Washington.

The club's public relations sparkplug, Dexter Anderson (K3KWJ), told me, "There are many more hams in our home offices here and in overseas ports than one would imagine. We've an obvious interest in encouraging communications skills among our personnel, so operators will be available to assist regular communications should they be needed in emergencies. This alone would make our activities worthwhile."

The DOS Amateur Radio Club, sponsored and financed by the Department of State-U.S. Information Agency Recreation Association, meets monthly. It is affiliated with the American Radio Relay League, Radio Amateur Satellite Corp. and the Foundation for Amateur Radio.

The club's Foreign Service Bulletin, mailed to 66 countries, contains club news, coverage of leading ham radio organizations and popular periodicals. It lists U.S. Foreign Service hams serving abroad, their countries of assignment and their American as signed station call letters.

Worldwide personnel are encouraged to check into the Foreign Service Net, which meets Sundays from 1500 to 1600 GMT on 21.415 MHZ, with W3DOS net control station.

Just like thousands of ham operators around the United States, DOS Club members participated in the ARRL annual Field Day Contest June 22 and 23. Visitors to the nation's capital easily located the club's Field Day site on the Mall, between the Washington Monument and the Lincoln Memorial, at the corner of 21st St. and Constitution Ave.

•

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

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Bill Welsh, W6DDB, (l.) is shown receiving a letter of congratulation from Lockheed President D.O. Wood. Bill was commended for donating 13 gallons of blood. Bill, an Edison Award winner is an electronic engineer working on the P-3 Orion aircraft.


**by Nick Hauck, K6QPE**

This month contains an interesting anniversary for Amateur Radio. On 21 September 1924, the first two-way communication between the United States and New Zealand was accomplished by amateurs. Next month, on 19 October, marks the 50th anniversary of the first two-way communication between England and New Zealand. It too, was accomplished by amateurs. The contact covered 97.6 of the antipodal distance.

A few months from now, 2 February 1975, to be exact, will mark the 50th anniversary of the first two-way communication between the United States and Japan, accomplished by amateurs.

What we're getting at is that the "regular" way of Amateur Radio communication has been around for some time now. The phrase "the world at their fingertips" has been with us for quite awhile. With SSTV possibly the phrase will be "a personal window on the world".

How much of a "window on the world" depends on us. SSTV has the potential to be a vital means of communication, if we view it in a mature fashion.

Those who display a sensitivity towards its utilization will reap great rewards. They will find their interest growing and growing and they will make contributions. Those who go at it in the ordinary way, (and who approach everything in the ordinary way) will lose interest and leave it. They just drift from toy to toy, never making an intense effort at anything.

Will we, after 50 years, just continue to prove "the laws of radio work" or will we step out. To give an analogy--If you go to visit someone, do you spend the entire evening describing the car that got you to their home or do you move on, to communicating with them?

To the point. What we put out, our "program" so to speak, is far more important than the mere fact that we are able to do it. We know we can do it. The question is--what do we do with it?

We must make it an "art form". We should be creative with it. What is "creative"? Rollo May in "The Nature of Creativity" said "Creativity is the encounter of the intensively conscious human being with his world". John W. Haeffle in "Creativity and Innovation" said "Creativity is defined as the ability to make new combinations of social worth."

Eric Fromm in "The Creative Attitude" said "Creativity is the ability to see (or be aware) and to respond". Now that sounds like SSTV. We see. But what do we see? Plain letters on a plain background? Or do we see something that some thought has gone into?

Let us not be trapped in a concrete mold. Be creative. With all the materials around us all we need is the motivation. Let us bring "the total person" to whatever it is we transmit. Our experiences are converted into wave pulses which are translated into the symbols appearing on the screen.

What do we aspire for SSTV? Will it be but cold and mechanical or will it be a thing of warmth and joy? Is the electronic process the end or but a means to an end, which would be the result of the process? We can not be frozen in ice but must search for a frame of mind that allows us to progress. We must see and respond to our "window on the world".

The participants in the "window" idea will find their lives enriched. And, they are the adventurous ones. We stand on the brink of a journey worth taking. The possibilities are unlimited.

There are those who will, of course, be content to merely putter thinking they are doing something. But, have you noticed that all the great inventors were more interested in the effect, what they hoped to accomplish with the object, than with the process itself. That is what separates those of accomplishment from the tinkerer. If one reviews the lives of (in our own field) Bell, Marconi, DeForest, etc., they had the usage in mind, not just the technique.

In fact, look at SSTV itself. The acknowledged leader in the field, Copthorne MacDonald, WØORX, is not only a technical whiz but is also at the very forefront of searching for and finding "new directions". (See his "Toy or Tool" in Worldradio, May 1973, page 19)

"Worldradio" would like to print what you are doing in SSTV "graphics". Take a picture off your tube. Send it in. Help the other guy.

With regret I must announce this is my last SSTV column for this paper. Increasing demands, occupational, educational, and other, force me to relinquish this column. I do hope someone else will pick it up and continue it. Just give ye olde editor a buzz. You are not completely rid of me, however, as I shall be writing articles on other subjects if and when time permits. Thanks to all who wrote in. Your letters were appreciated. Please support the next SSTVer who takes over this helm. And, remember, part of the strength of Amateur Radio depends on how we use this precious resource, SSTV.

## crossband (continued from page 19)

the more typical application of crossbanding, at least for the near future, would be the addition of one or more input and output frequency channels to an existing repeater. For example, a frequency pair in the 442-450 MHz repeater band might be added to an existing repeater already operating in the 146-148 MHz band. There would then be the capacity for an amateur using a 146-148 MHz transceiver to communicate with another amateur using a 420-450 MHz transceiver by means of the crossband repeater. In densely populated areas, the additional unoccupied frequency pairs required would not be available, as pointed out by the ARRL. However, in less populated areas, they would be available, and it is in these areas that crossbanding would have its greatest appeal.

6. Amateur repeater stations, at least as they are presently used, fundamentally provide a party line type of operation. That is, only one user can be retransmitted at a time while all others wait their turn. Consequently, there is a limit on the number of users any one repeater can accommodate, regardless of whether the repeater utilized 1,2,3, or more frequency pairs. As the limit is approached, user time would become so minimal and waiting time would become so excessive, in most instances it would be a necessity to terminate crossband operation in favor of independent repeaters. For this reason, we suspect there may be no need for the prohibition against crossband operation.

7. Crossband operation by repeater stations would be limited to those frequency bands authorized for repeater operation. New Sec. 97.126 in Subpart E, "Prohibited Practices and Administrative Sanctions" would incorporate the current policy on other types of retransmissions. Only repeater stations, auxiliary link stations, and certain remotely controlled stations are licensed to automatically retransmit the radio signals of other amateur stations. By the term "automatic retransmit", we mean retransmitting other signals in real time or very near real time. An example of a prohibited practice would be the retransmission on the 14.0-14.35 MHz amateur band of another amateur station transmitting on the 144-148 MHz band, or vice versa. However, it is completely proper for an amateur operator at one station to receive a message from another station, and then later send the same message to a third station, such as done in many amateur traffic networks.

8. Authority for the proposed rule changes herein is contained in Sections 4 (i) and 303 of the Communications Act of 1934, as amended.

9. Pursuant to applicable procedures set forth in Sec. 1.415 of the Commission's Rules, interested persons may file comments on or before October 30, 1974 and reply comments on or before November 16, 1974. All relevant and timely comments and reply comments will be considered by the Commission before final action is taken in this proceeding. In reaching its decision on the rules which are proposed herein, the Commission may also take into account other relevant information before it, in addition to the specific comments invited by the Notice.

10. In accordance with the provisions of Sec. 1.419 of the Commission's Rules and Regulations, an original and 14 copies of all comments, pleadings, briefs, or other documents shall be furnished the Commission.

11. All findings made in this proceeding will be available for examination by interested parties during regular business hours in the Commission's public reference room at its headquarters in Washington, D.C., (1919 M Street, N.W.)

FEDERAL COMMUNICATIONS COMMISSION
Vincent J. Mullins
Secretary

APPENDIX

Part 97 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

1. Sec. 97.111 (c) is revised to read as follows:

97.111 Operation of a repeater station.

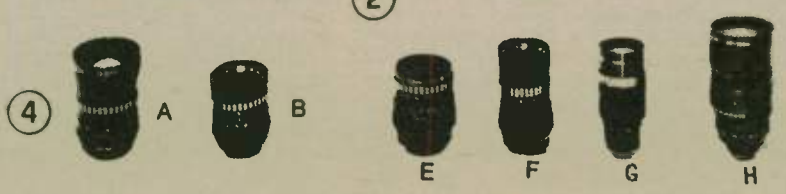
* * *

(c) A repeater station may concurrently retransmit amateur radio signals on more than one frequency band authorized for repeater stations, but may not concurrently retransmit on more than one frequency channel with-

(please turn to page 34)

# ROBOT


① ② ③

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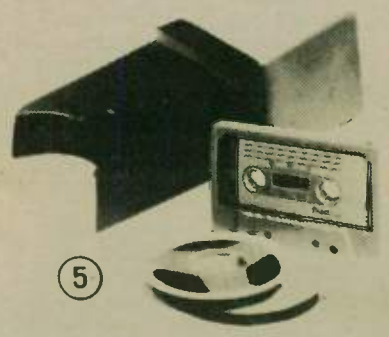

⑤

# Slow Scan TV Equipment Line.

## ① MODEL 70A SSTV MONITOR

Displays amateur standard pictures from any SSTV audio source: station receiver, tape, camera. Six inch (diagonal) display, all station cabling included.
Front panel controls for easy station operation. Connectors for receiver, transmitter, microphone, tape, waveform monitor. LED tuning indicator, auxiliary demodulated video output, phone line connection.

**$345**

## ② MODEL 80A SSTV CAMERA

Generates amateur standard SSTV pictures and fast scan video for viewfinders. High-resolution separate-mesh vidicon provides ample sensitivity in ordinary room light. Controls for contrast, brightness, vidicon beam, SSTV signal level, black/white video reversal and 1/4, 1/2, full frame selection.
All solid state except vidicon. All station cabling included; requires suitable C-mount lens.

**$345**

## ③ MODEL 61 VIEWFINDER

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

**$265**

## ④ LENSES

| Lens | Focal Length mm | Min. f stops (All 22 max) | Min. Focus (in inches) | Price |
|---|---|---|---|---|
| A | 12.5 | 1.9 | 10 | $ 60 |
| B | 25 | 1.9 | 24 | $ 30 |
| E | 25 | 1.4 | 6 | $ 65 |
| F | 50 | 1.9 | 42 | $ 55 |
| G | 150 | 3.2 | 96 | $ 90 |
| H | 20-80 | 2.5 | 60 | $195 |

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# maritime mobile

**by Bill Yost, WA6PIU**

As with any phase of amateur radio whether it be QRP, SSTV, or DX, common interest in one way or another, leads to a specialized club. MM stations have got to be the most widely dispersed of any ham group, yet they too manage to merge through the common bonds of a club.

As far as I know there are three such clubs operating within this country. The Maritime Mobile Amateur Radio Club, Kate's Navy, located in Southern California, and the Society of Wireless Pioneers. Since we have previously written about the Wireless Pioneers, this column will be devoted to the MMARC.

My first contact with the MMARC came by way of K1APE in Connecticut. I was aboard the RV Alaska. We were 15 days out of San Pedro bound for nowhere off Baja, Calif. which is typical of an oceanographic cruise. Fifteen meters was really hot as I pounded out a CQ. I was big on CQs in those days (typical novice). Anyway in comes the clean fist and strange call of K1APE. I didn't know whether to reply with my call or a banana - HI.

Anyway, as one blessed with a bonus call myself, we quickly got into a QSO on the merits of maritime mobile. He explained that there was a club devoted to guys like myself who saved their sanity at sea via ham radio. (At the time I was coming through the ship's intercom system so I'm not sure it was so sane.) Well, he went on to tell me about the club. Apparently, the club is wide open to anyone associated with maritime mobile operation. They even accepted me after a close vote. Active membership is open to any licensed radio amateur who is actively engaged in a sea-going capacity. He shall have an amateur station available to him while at sea. Initiation fee and first year dues will be $6.00 after which the dues are $3.00 per year. He or she has full voting privileges.

OK, so you're on the beach but you spent your time on the water. You're still in under the active (retired) category. Same dues and voting rights.

Now how about those who have a great interest in maritime operation? Perhaps they're building a boat in the back yard with potential ham operation in mind. According to the scoop sheet for interested members, there is an associate membership. Such association is open to any amateur who submits to the Secretary-Treasurer (that's Phyllis), 30 QSLs of contacts made with Maritime Mobile Stations while at sea. Foreign stations may submit certified copies of logs. I'm not sure whether the station applying need be at sea or the stations contacted, I assume the former.

And then there's honorary membership - a nominated position. Dues apply only to active members. The certificates issued are in one word, impressive. A full sail clippership with a bone in her teeth makes up the center with a gold seal accenting the corner. I don't seriously think there is a finer certificate in Amateur Radio.

The QSL cards are another work of art. They are available to members at a nominal cost.

Anyone interested should contact Phyllis Riblet, W5CXM, 5627 Tiffany Drive, Houston, Texas 77045.

I should mention that MMARC is hosting an all time Maritime mobile convention the 4th thru 6th of October, 1974, in Houston. It sounds like a good function with plenty of activities. Any old salt cruising through Houston should be there. Again contact Phyllis for details.

Back here where the rivers meet (World-radio Headquarters) we again ask your help in formulating future columns. Let me know what you want in the column. Hopefully, I will have a questionnaire compiled to better filter out the interests of our readers. In the meantime, I could really use some information concerning VHF marine coverage (ham type). If your local repeater gets out over the water, I would appreciate any relevant information i.e., frequencies, estimated coverage over water, repeater attitude - friendly, hostile, indifferent, etc. Hopefully, we can get a small atlas together for our MM ops. Any contributions on MM antenna installations are also welcome. We will have an article featuring the "cat whiskers" antenna plus any other designs which are presently utilized.

---

RETROSPECT (continued from page 3)

8. Net discipline and operating procedure was exemplary. This was, unfortunately, in contrast to some other amateur groups. Our training nets paid off.

Now for the bad news:

1. The popularity of 2M FM has almost destroyed its usefulness in a disaster. There were so many 2M rigs and commercial VHF rigs in Xenia that they overloaded each other's receivers. Often it was impossible to copy local repeaters. Those who rely exclusively on this mode of operation will have to plan on diversification.

2. The Columbus Red Cross message screening and handling procedures did not mesh well with ours. This made a lot of extra paperwork. We will work on this.

3. Outbound traffic from some stations was routed randomly, rather than via the NTS. Thus its probability of delivery is lower.

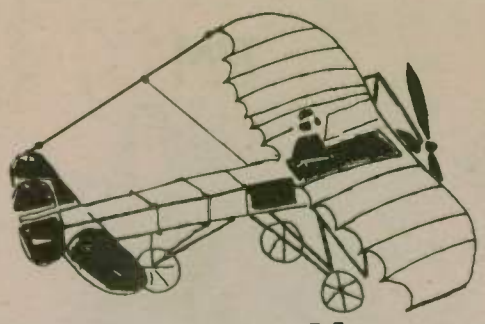
4. The ubiquitous 2M FM transceiver almost never has a headphone jack, or at best it has a non-standard one. They are not very useful in a noisy environment.

5. The Ohio SSB net was at times chaotic, due primarily to the use of random, inexperienced net control stations. These well-meaning but uninformed stations did not understand the concepts of precedence, directed net, NTS, or designated Key City station.

6. The station facilities at Red Cross are suitable only for local coverage. Thus all messages had to be relayed via other stations. This delayed things, made it impossible for Red Cross officials to talk directly with one another.

As with most protracted operations, by the third day we really had all the bugs out and were in full swing. Next time maybe we can do it the first day.

As a post-script, a week after Xenia, storm warnings were again announced. The AREC Green Alert was given, and within 10 minutes, 28 stations had reported in on 2 meters. There is nothing like a real disaster to keep people on their toes!



# aeronautical mobile

**by Vern Weiss, WA9VLK**

Aviation. And Amateur radio. Ahhh, magic in those hobbies.

I think every ham, whether licensed pilot or not shares some yearning to get "into the blue." Likewise, every pilot, whether licensed ham or not, holds a curious fascination for the art of radio communications. This column, it is hoped, will accurately convey the enthusiasm of the many amateur pilots who have joined their avocations into one wonderful activity, aeronautical radio operating.

This column is to serve as a forum for those who have discovered that operating while aloft is a very, very grand experience. It is one thing to man a DXpedition station on a rarely heard island; but imagine a QSO from a point in space which has never been traveled by man! From a landlubber's viewpoint, QSO'ing an airplane ardors even the most tired of amateurs. Anyone who witnesses the pileup for an airmobile station is quickly assured of this fact.

On non-commercial flights, no special regulations are placed on our radio operations, other than those Federal Aviation Regulations and FCC regulations which apply to any other situation. Definitely taboo is operating of any sort while on ANY commercial flight.

In fact, the FAA is strongly considering the use of pocket calculators being outlawed because of interference. As with any other action, we will report the disposition of amateur radio/flying-related news.

It is fortunate that most popular light-planes are using 12 volt electrical systems, for this makes aerohamming but a cigarette-light-plug away. This, coupled with the variety of small, low-power HF and VHF transceivers available, make installation less of a grueling experience. Rental pilots will especially appreciate working VHF with one of the handi-talkies available: or HF with the Ten-Tecs and Atlas units. Airplane owners naturally can enjoy flush-mounted instrument-panel stations, but plopping the rig on the panel top must suffice for the rentee. Pilots flying the newer Cessnas might have to make do with the rig on the XYL's lap as the recent Cessnas are sporting lower seats. In any case, anywhere the transceiver sets is fine since placement is not critical to its performance... only yours.

Even though the rig and antenna are inside the airplane, the altitude will make up for any inside-fuselage RF loss. Inside, even one single, crummy little watt will produce a very substantial signal. One watt at 2500 feet on two meters will wallop a receiver one-hundred miles away with such force that the operator will be begging you for mercy. I needn't even go into ten watts, or (ulp!) thirty watts.

Since amateurs on the ground get enthused about working an aeronautical station, some have printed special QSL cards for their flying radio operations. One only has to mention once on the air that he offers special airmobile QSL's and the pile-up triples. Great feeling... that being the hunted!

A non-serious incident a few months ago has made my Drake TR-22 a necessary resident of my flight bag.

I was flying into Chicago-Hammond Airport to pick up passengers. When radioing for winds and active runway, I requested a phone call to my passengers to inform them I was soon landing and they could drive to the airport. A simple, happens-all-the-time request. Uh-uh, not when all airport phones are out. Enter: Visions of walking who-knows-how-many miles to find a telephone. Fortunately, Co-pilot Drake (who flies from the right seat when there is no passenger) had the solution to my dilemma. He found a local K9 willing to make my phone call. I landed and treated myself to an Orange Crush and Co-pilot Drake to several moments of ni-cad charge. We both felt fresh for the ensuing flight. It occurred to me how valuable the amateur rig would be when flying into sod fields with no telephone or facilities. How many times have you had to walk a mile to a farmhouse for a silly phone call?

Another case in point. A friend of mine who is a Luscombe pilot and amateur, was chugging along through central Wisconsin late one evening hoping to make Oshkosh on available fuel. Unfortunately in one of those in-flight terror-filled fuel reviews we all make once in awhile, he found himself in a "situation" Night, (isn't that always the case?), just enough fuel to make a familiar airport with facilities, but runways lit only upon request. Pressed into service was the two-meter FM walkie talkie aboard for a telephone call to the airport manager. And moments later... voila'... lights! Sure FSS would have helped out, but the amateur rig was good insurance. Cooperative airport managers aren't bad to have around either.

Next month we will talk about some quick 'n simple ways to get a signal on the air from an airplane on the low bands. Let me know what you're doing, flying, how often and where. A picture isn't a bad idea either! Mail news to 719 West Water Street, Kankakee, Illinois 60901.

## crossband (continued from page 32)

in the same frequency band. A repeater station authorized to operate in conjunction with one or more auxiliary link stations for relaying radio signals, received at another location(s), to the repeater station may utilize input (receiving) frequencies not available for repeater stations, provided the input frequencies to the auxiliary link stations(s) are in frequency bands authorized to repeater stations.

* * *

2. New 97.126 is added to read as follows:

97.126 Retransmitting radio signals

No amateur radio station, except a properly licensed repeater station, auxiliary link station, may automatically retransmit the radio signals of other amateur radio stations.

---

The Richmond Amateur Telecommunications Society will sponsor a booth at the Atlantic Rural Exposition, Richmond, Virginia, from September 19 through September 29, 1974. A special events call, WE4ARE, will be used for HF and VHF operations. Look for us around 3988 kHz, 7288 kHz and 146.88 MHz. WE4ARE QSL cards will be sent to stations contacted upon receipt of a SASE sent to: R.A.T.S., POB 842, Richmond, Virginia 23207. Visitors to the booth, located in the Better Living Center, will be eligible for prizes, including an electronic calculator, QST subscription, and a 2 meter beam. The Atlantic Rural Exposition is one of the largest state fairs on the east coast. SEE YOU THERE!

## 1974 Pacific Division Convention
## Greater Bay Area Hamfest

Oct. 26, 27, 28
Royal Coach
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For Info:
Address:
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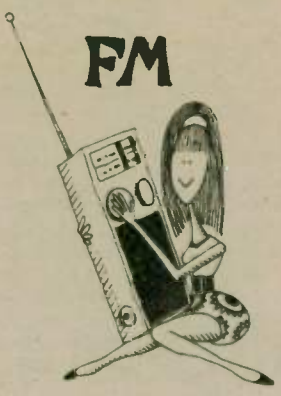
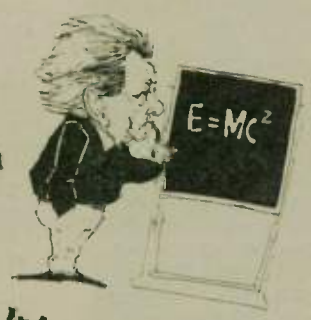



Sister City - K6LFH

OSCAR - AMSAT


Integrated Circuits
Art Fury, WA6JLJ


Bill Orr, W6SAI



And Much More


# clubs

The Santa Cruz County Amateur Radio Club, Inc., which takes in the cities of Santa Cruz, Watsonville, Capitola, the communities of Davenport, Boulder Creek, Ben Lomond, Soquel, Aptos, Freedom and Felton, was first organized in the year 1916. Struggling for identity through two World Wars, organization was finalized in the early 1950's. In 1962 articles of incorporation were filed with the State of California and the same year affiliation with the ARRL was effected.

One of the formost activities of the club is the annual ARRL Field Day outing, in which they have been participating since the early 1950's. Not among the top scorers but at least some recognition in QST.

The club's AREC net on 2 meters which meets every Monday evening on 146.00 MHz, has been in operation for six years with a dozen or so check-ins each roll call. This net has furnished operators and mobiles for parade control, speed boat races, bicycle races, election day data, and even a tennis tournament.

One of the most prominent of the hams to have been a member of the Santa Cruz club was radio pioneer John Reinartz, K6EJ. After John's death, the club petitioned the FCC for use of his call for the club's memorial station. Upon issuance of K6BJ to the club a contest was held among members for a suitable design for a QSL card. The result was a QSL showing a schematic of one of John's most famous designs, the Reinartz Oscillator.

Club membership does not consist of retired hams only by any means. Since establishment of Cabrillo College's electronics program there has been a steady influx of young college people into the club. Also, from a radio seminar, held weekly at the college, there have been many able high school youngsters joining. This mixture of age and youth has given the group a unique balance insofar as interest in the varied facets of ham radio. The Santa Cruzers are into almost every phase from DXing, county hunting, UHF, RTTY and are seriously considering an FM Repeater.

Instrumental in keeping the club informed and directed is the monthly newsletter "SHORT SKIP" mailed to members just prior to the monthly meeting night. The various editors have successfully endeavored to keep the membership informed of activities, and acts also as the voice of officers and committee chairmen.

With a paid membership averaging fifty plus, monthly attendence is thirty or more each meeting. This high percentage of club participation is due largely to constant efforts by club officers to have an interesting program every month, knowledgeable guest speakers, auctions held twice a year, and a dinner meeting each December when the annual election of officers is held. Attendance too, could be attributed to the informal manner in which the regular meetings are held, Roberts Rules were long ago discarded and cordiality is encouraged.

To keep meetings interesting and not too lengthy, a board, consisting of the outgoing president, president and four elected members, was formed to handle business details and pass on membership applications and to bring suggestions for new activities and operations. These board members meet each month usually at a member's QTH.

It was at one of these meetings in early 1972 that president Jim Marshall, WA6-HCL, presented the idea of Santa Cruz sponsoring an ARRL convention. The board had mixed emotions, but after much discussion presented the idea to the general membership. The same reaction followed, however, after much thought and discussion the membership voted to back the president, and a convention committee was formed. Credit goes to Jim, Paul Tibbs, (W6WGO), Al Fugelseth, WB6RWU), Ed Pollock, (W6KHS), Dick Damon, (WA6GSL), who along with the advice and assistance of ARRL Pacific Division Director Doc Gmelin, (W6ZRJ), and Vice-Director Al Gaetano, (W6VZT), who came up with a convention site, a program, and the instilled enthusiasm of the club members.

The Santa Cruz County Amateur Radio Club, Inc., K6BJ at this present moment, whose varied skills, backgrounds and equipment stand ready to offer a public service, be it emergency or routine.

●

This column was designed to be a forum for the clubs. Use it to exchange information. What type of activities have been successful for you? Some other club would like to know about it. Have you run licensing classes? Tell the way you did it. What type of campaign do you use to find new members? Share your ideas with the other clubs.

●

THE QUARTER CENTURY WIRELESS ASSOCIATION, Southern California Chapter, holds semi-annual meetings, Earl Burdette, W6YYV, is Chairman.

RAMONA RADIO CLUB meets the 3rd Monday at 546 W. Broadway, San Gabriel, Charles Williams, WA6CTB, President.

THE SAN FERNANDO VALLEY RADIO CLUB meets the 1st and 3rd Fridays at Panorama City Recreation Center, 8600 Hazeltine. Lee Strickland, WB6FQP, President.

THE SANTA CLARITA AMATEUR RADIO CLUB meets the 3rd Wednesday at Valley Federal Savings and Loan in Newhall, Bob Hopkins, K6JNH, President.

THE SIMI VALLEY RADIO CLUB meets the 2nd & 4th Wednesdays at the Security Pacific Bank, near Larwin Square. Dick Hollihan, President.

THE SOUTHERN CALIFORNIA DX CLUB meets the 1st Thursday, 7:30 P.M. Their meeting places have been varied the past few months due to the search for a suitable location so if you wish to attend, contact Larry Weaver, W6JPH, President for information.

THE SOUTHERN CALIFORNIA VHF RADIO CLUB meets the 2nd Friday at Norwalk City Hall 12700 Norwalk Blvd. Gary Lopes, WA6MEM, President.

TRI COUNTY AMATEUR RADIO ASSOCIATION meets the 2nd Monday at Pomona First Savings & Loan, Garvey and Center Streets. Joe Lyddon, WB6UFX, President.

TRW AMATEUR RADIO CLUB meets at noon on the last Wednesday of month at TRW Systems, Redondo Beach. Frank Halligan, WB6GBC, President.

THE UNITED RADIO AMATEUR CLUB meets the 3rd Friday at Glendale Savings and Loan, 556 W. Ninth Street, San Pedro. Pete Matthews, WB6UIA, President.

THE W6IN SOCIETY meets every Monday at the Emergency Operations Center, 120 MacNeil Street, San Fernando. Charles Barnes, WB6ASC, is President.

Next month in "Worldradio" we will have a listing of club meetings in the greater Washington, DC area.



## attn: clubs

How would you like to go on Field Day in a Winnegabo instead of that drafty old tent. Or possibly operate from Fiji or the French Riviera. All it takes is money. And we've got it for you. All you have to do to fatten the ol' club treasury is accept our generous commission for selling "Worldradio" subscriptions through your club.

We wanted to know if our proposal was a good one so we asked a few people who knew something about money what they thought of it. From Arriflex Onnasty came this comment, "If I had such a deal I would have never gone into chips". We turned to Jay Saul Getter who mused, "Looks better than a soil well". Nellie Stonefella opined, "If my grandfather had received an opportunity like that he could have given away quarters instead of dimes. Through his spokesman, Cliff Earring, E. Howie Hues said, "It sounds so good I'm considering leaving my penthouse so I can get in on it too."

So, who are we to argue with such financial genies. To get full details just write to H. Ellie Huntz, Worldradio, 2509 Donner Way, Scaramento, CA 95818

THE WEST VALLEY AMATEUR RADIO CLUB is a new addition to our roster. Marty Woll, WB6VZI, is president.

THE YOUNG LADIES RADIO CLUB of LOS ANGELES meets the 2nd Saturday in members homes. Esther Gardner, WA6UBU, is President. Sixth District Chairman of YLRL is Violet Barrett, W6CBA.

THE ASSOCIATED RADIO AMATEURS OF LONG FEACH meets the 1st Friday at 4040 E. Spring St., George Riggins, WA6DZR, President.

THE CARSON AMATEUR RADIO CLUP meets the 1st Monday at 8:00 p.m. in the Carson Annex Fldg., 22101 So. Main Street, John Seely, W6OCV, President.

THE DOWNEY AMATEUR RADIO CLUF meets the 4th Tuesday at Yale Engineering, 12405 Woodruff. Ken Wahrenbrock, WB6FQF, is President

THE "50" CLUF OF CALIFORNIA meets the last Thursday at 7:30 PM in the Taix Restaurant, 1911 Sunset Flvd. Los Angeles. Murray O. Polen is President

THE FULLERTON RADIO CLUE meets the 3rd Tuesday at the Hillcrest Park Clubhouse. Fob Halsey, WA6HAR, President

THE INGLEWOOD AMATEUR RADIO CLUB meets the 4th Friday, 8:00 PM at the Inglewood Recreation Center. Larry Wren, W6ZCN, President.

THE JET PROPULSION LAPORABORY AMATEUR RADIO CLUB meets the 2nd Wednesday at 12:00 Noon at JPL. Merle MacMedan, W6IUV, President.

THE LOCKHEED EMPLOYEES RECREATION CLUB (LERC) AMATEUR RADIO CLUF meets the first Thursday at 7:30 P.M., 2814 Empire Ave., Purbank. Dave Cox, WA6PIO, is president

THE LOS ANGELES REPEATER ASSOCIATION meets quarterly in Chino. Skip Perry, WA6LYR, President.

MONTEREY PARK AMATEUR RADIO CLUB meets the 1st Thursday at Garvey Ranch Park, 751 So. Orange Ave. Paul Irish, K6HEF, President

THE NORTHRUP RADIO CLUB meets the 1st Monday, 5:00 P.M., at the Northrup Recreation Club House. Robert Cobb, W6CFM, President.

THE OLD OLD TIMERS, California Chapter, holds semi-annual meetings. Robert Holly, W6DRV, is Chairman.

THE PALISADES AMATEUR RADIO CLUB of CULVER CITY meets the 3rd Wednesday at the Veterans Memorial Building, Culver & Overland.

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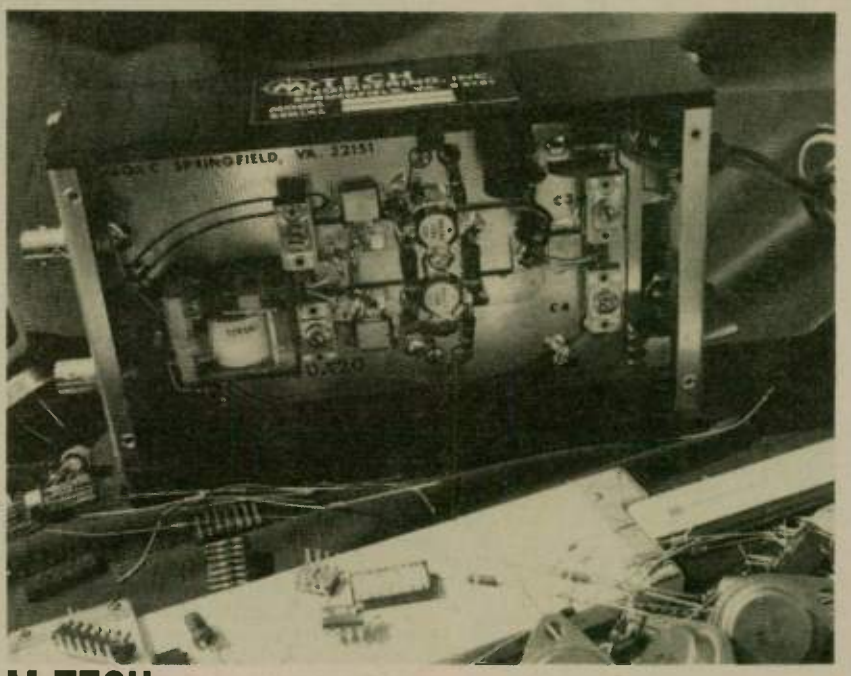

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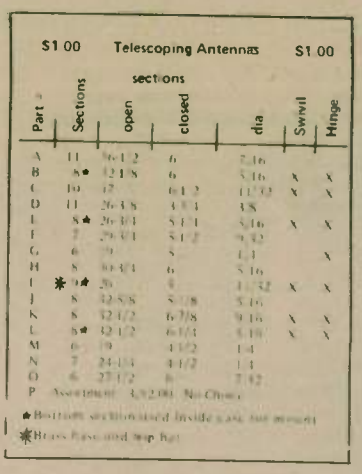


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# Letters

I have read your magazine with great pleasure, and I think it covers a great area of our hobby... Per Anderson, OZ6MI

I find this a real fitting journal for the ham fraternity... Ernest Amarasinghe, 4S7EA

Worldradio News is a very fine tribute to Amateur Radio; certainly one of my favorite publications... Perry Klien, K3JTE

Truly a ham's newspaper! It's practically a roundtable in print... Lou Schurrer, WB6OON

Congratulations on your third anniversary. I find your NEWS presents a unique combination not found elsewhere. May you continue to succeed... Bill Grenfell, W4GF

Your newspaper is doing a magnificent job in spreading the good work of the amateur ... Leo Gibbs, W8BHT

I have long admired your newsy, informative publication for its emphasis on "international good will, emergency communications, public service and humanitarian usages of Amateur Radio". For those reasons alone you are worthy of my support. What goaded me into immediate action is your pro-ARRL position. Too few hams realize that our very existence is a direct result of the ARRL and their efforts. Their work with the IARU for the upcoming frequency allocations conference is a case in point. Your sympathetic attitude towards the ARRL warms my heart and I grieve when some unknowledgable ham decries them... Frederick Gately, W6LNH

The most versatile Amateur Radio publication I have ever seen... W. H. Cooney, W8LM


# The Worldradio News

an international newspaper

Fourth Year

The Worldradio News is published monthly by Worldradio Associates.

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

Article contributions and advertising inquiries are invited.


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(continued from last month's issue)

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MEDICAL: Any licensed amateur radio operator in the medical or paramedical field should join MARCO (Medical Radio Council). Contact: Stan Carp, M.D., K1EEG, 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.

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