



CROSSTALK

News Bulletin of the TRW Amateur Radio Club

Member, American Radio Relay League

APRIL 1985

** FD'71 ** FD'73 ** FD'75 ** FD'76 ** WAS ** WAC **

Garrett/W6TRW Repeater: 145.32/-600(2A-PL) -- UHF: 442.000in/447.000out

CALENDAR FOR APRIL AND MAY

Saturday	April 27, 8-11am	Swapmeet, Northwest corner of Compton/Marine and Aviation behind the Chevron station.
Tuesday	April 30, noon	Club Meeting, R4/1041. Speaker will be Clint Mason, WA6TMJ. Topic will be the Voice of America in Delano, California. Highlights of the recent Ham trip with pictures!
Tuesday	May 7, noon	First Club Picnic! El Nido Park, 182nd between Hawthorne and Inglewood. Good Food! You must bring and show your Club Membership Card with you to partake of the repast!
Tuesday	May 14, after work	Executive Board Meeting. All members are welcome!
Saturday	May 25, 8-11am	Swapmeet
Tuesday	May 28, noon	Club Meeting, R4/1041.

!!!! NOTICE: THE JUNE TRW/ARC SWAPMEET WILL NOT CONFLICT WITH FIELD DAY! SWAPMEET WILL BE SATURDAY, JUNE 29 !!!!!

QST - QST - QST - QST-NOW HEAR THIS-QST - QST - QST - QST

During the last few months, there have been an increasing number of Sellers at the TRW Amateur Radio Club (TRWARC) Swapmeet that have resisted complying with the rules of the event. It must be remembered that all participants in the TRWARC Swapmeet do so as guests and at the pleasure of the TRWARC, the TRW Systems Employee Association and the TRW Redondo Beach/Manhattan Beach facility.

No Commercial Sellers are permitted.

For the purposes of this Swapmeet, Sellers are considered "commercial" if they offer items in quantities greater than that which a prudent Ham would have acquired for his personal use, if they have a resale license or add sales tax to a cost, if they accept charge cards for payment, if they give business cards identifying where the items or services can be obtained, or if at other times they are engaged in a business that has the same items for sale.

It has been called to our attention that media of other entities have published erroneous information about the TRWARC Swapmeet. To reiterate, the time is from 8:00 a.m. to 11:00 a.m. on the last Saturday of the month only. This Swapmeet is Amateur Radio and Electronics oriented and is not computer oriented nor general communications oriented such as telephone equipment for land-line use.

All clubs receiving the Crosstalk are requested to pass this information along to their members. All publications are requested to check any reference to the TRWARC Swapmeet to be sure that the information they print is accurate.

Thanks for your cooperation.

Walt Pearson, N6DZM, TRWARC President

General Meeting 26 March 1985

Paul Lukas, N6DMV

President Walt Pearson opened the meeting and announced that one more place was available at the Club's reserved table for the Banquet at the Queen Mary Hamcon. Past President Bill Rodner, K6AWS, can be heard at 14.330 +3KHz on Monday, Wednesday, Friday and Saturday at 1130 PST from Northern Idaho. Paul Wisiolek assumed the position of training Chairman and is looking for an assistant. Dale Jensen handed out last year's Field Day results and this year's sign-up sheet for Fri-Sun, June 21-23. Chris Wachs gave details on the recent TASMA meeting. Highlights included: no more odd split repeaters will be coordinated, a new set of repeater guidelines were adopted, a recognized area was set up for simplex autopatches, no change or study was voted on a 15KHz versus 20KHz spacing, and simplex frequencies were suggested for Packet Radio use. It was reported that there were still too many commercial sellers showing up at the Swapmeet. Measures will be taken at the next Swapmeet to discourage and turn away illegal sellers. Several new faces were seen at the meeting: Bernie Shrednik (K6AAC), Terry Thompson (KB6CUT), Gary Talbott (N6KPR), Mike Zingery and Don Arnush - WELCOME! Joe O'Brien introduced the speaker, R. C. "Smitty" Smith (W6RZA) of Hughes Space Center. Smitty has been a Ham since 1939 and he gave an excellent presentation on the workings of the Volunteer Examiner Coordinator Program within the Greater Los Angeles Amateur Radio Group (GLAARG). A request was made for assistance in putting up the Club 40 Meter Quad Antenna. Interested parties can contact Bob Hume. 26 people attended the meeting which was adjourned at 1300 local time.



The meeting came to order at 1741 local time. Present were: Bill Daley - K6BO, Bob Hume - KG6B, Dale Jensen - K6ZTI, John Keller - N6JLS, Paul Lukas - N6DMV, Walt Pearson - N6DZM, Don Resor III - N6KAW, Chris Wachs - WA2KDL, Jim Wike - W6GPE and Paul Wisiolek - K1TKL. The speaker for the next club meeting (Tues, April 30, Noon, R4/1041) will be Mike Semas, who will talk in the Voice of America Shortwave station in Delano, CA. (ed. note: Mike had to cancel and speaker is now Clint Mason, WA6TMJ but the topic will be the same). Mel Erb sent a message stating that 3600 new QSL cards have been sold to date, still 21,200 (!) left. Cards are \$0.03 ea, 200 minimum. The minutes of the last Executive Board meeting were accepted as printed in the Crosstalk. Jim Wike reported that out of the \$50.00 allotted for the St. Patrick's Day event, \$41.15 was spent. Some details of the upcoming TRW/ARC Picnic (Tues, May 7, Noon, El Nido Park) were discussed. Bob Hume reported on the new tower/antenna installation. The blueprints for the tower base have been completed. Bob said there will be a 40 Meter Quad Antenna erection party after the Swapmeet (Sat, April 27). All members were encouraged to give a helping hand. Bill Daley passed on a copy of the Religion Section of the Saturday, April 6 Los Angeles Times which had an article entitled "Radio Hams: Voices in the Wilderness" which told about Amateur Radio Operators that belong to the International Mission Radio Assn. Chris Wachs reported on the TASMA coordinating meeting which took place recently. Some of the recommendations made by TASMA affected simplex autopatches and new repeater guidelines. Paul Lukas was asked to write a letter to the TASMA Secretary to obtain a copy of the guidelines when they become available. Walt Pearson reported that he has learned from Paul Weisz that the August HamCon preparations are well under way. Walt requested that Bill Dews and other Emergency Assistance Team (EAT) members put together an emergency action plan. Jim Cox sent a note saying that the W6TRW repeater is almost ready to be re-installed. Chris Wachs announced that there will be a state-wide earthquake emergency drill on the 18th of April when a simulated 8.4 Richter will hit the state. Many RACES and ARES operators will be involved. Paul Wisiolek disclosed his experiences as a VE in Van Nuys. There will be an Amateur Radio testing session held in the South Bay hopefully at the RPV City Hall sometime near the end of May. Look for details next month. Paul is looking for another facility that will hold approx. 30 people for the code tests. If anyone knows of an available facility please contact Paul, his number is on the back page of Crosstalk. Dale Jensen reported that more operators are required for Field Day. You don't need a license to help as a logger. See the info sheet elsewhere in Crosstalk. There is still a question about power cables for Field Day, and an attempt will be made to find them. Don Resor III reported on the continuing problem of commercial sellers at the Swapmeet. The Rules are being tightened up to exclude commercial sellers. Walt Pearson read a draft of a letter he composed on the same subject. (Please see front page of Crosstalk). The meeting was adjourned at 1910 local time.

Wanted -- For Sale -- Freebies

Wanted: A copy of the Tempo 2020 Operators Manual or the original and I will make a copy and return. Call Norm Stockwell, N6NS, (213) 217-3165.

A woman was describing her husband to a friend. "He's the kind of man who always hits the nail right on the thumb."

Santa Maria Radio Swapfest

The Santa Maria Radio Swapfest will be held June 16, 1985 at Union Oil's Newlove Picnic Grounds just south of the town of Santa Maria. Claiming to be the biggest Swapfest in the Central Coast the Swapfest includes a Santa Ma. BBQ with all the trimmings. Prices are:

Dinner & Drawing Ticket - Adults	\$7.95
Children (6-12)	\$3.50
Swap Spaces (approx. 2'x6') each	\$3.50
Extra Drawing Tickets	\$1.00 ea or 6/\$5.00

Grand prize is an Icom 730 HF Xcvr and second prize is a 2 Meter mobile Xcvr. Winners must be present and Xcvr winners must present a valid Ham license. Send your reservation with a check or money order made out to Santa Maria Swapfest to:

Santa Maria Swapfest
P.O. Box 1753
Santa Maria, CA. 93456

Be sure to include your name, call sign, mailing address, and number of adult, child, swapspace and extra prize tickets you want.

Tidbits from the Jolly Little S...

Let me correct an error that crept into last month's report on the St. Patrick's Day bash at Shakey's. I inadvertently mistook Secretary Paul "O'Lukas" YL as his XYL. My apologies to Paul and Helen.

Ten cents a watt may not sound like a lot to pay for power, but when you are running 25,000 watts illegally and that is what the fine amounts to, it sure can put a dent in your pocketbook! That's what happened to Jerry, WB5LEV, when the FCC decided to crack down on the overpowering operation that he was running. I think I will stick to QRP!

There was a light little shaker the other day that was felt at my QTH so I decided to see what the defacto expert on earthquakes, W6FXN, had to say about it. It seems that some pressure had been building to the north for a while and the little shaker did not relieve it. Dick felt that it was a pre-shock to something that would let loose over the following weekend and what should I read in the paper that Monday but there was a good size quake in the Fillmore area that weekend. We also talked about the possibility of him making a Club presentation and he was open to the idea. Keep watching here and maybe we will have a super presentation in the near future.

By the way, please don't forget that we have the first Club picnic coming up on Tuesday, May 7th at El Nido Park, which is located on 182nd Street between Hawthorne Blvd and Inglewood Ave. The parking lot is on Kingsdale Ave which runs north/south along the east edge of the park. Last year's picnics were a lot of fun and I never went away hungry or thirsty. And the location is nice for those off site to the south of Space Park. Please remember to bring your Club Membership Card with you.

If you didn't catch this elsewhere, Bill Rodner, K6AWS, has been on 14.330 +3 KHz at 11:30 PST Monday, Wednesday, Friday and Saturday. If you are lucky Trudy may even say hello.

The Hughes El Segundo ARC is looking for communicators to help out for the Jimmy Stewart National Relay Marathon to be held at Griffith Park on Saturday, April 13th. Both 2 Meter and 220 MHz equipment will be used. If you are interested in helping call Scott Fraser at (213) 616-2566.

An interesting tidbit from the W5YI Report states that the new Ambassador to the United States from Brunei is a ham! Penigram Haji Idriss, Brunei Embassy, 2600 Virginia Avenue, Washington, DC, 20037, holds Amateur Radio call sign V55PM. He used to be active on CW from Brunei, a small British-protected sultanate on the north coast of Borneo.

TASMA Election Meeting Report

Two members of the TRW/ARC attended the Two-Meter Area Spectrum Management Association (TASMA) Election Meeting on Saturday, March 23rd. Besides the election of officers, a number of additional items were discussed and voted on and we have a summary here. It should be pointed out that the actions taken at this meeting constitute guidelines only and that the items voted on and passed must be reviewed by the Technical Committee for final action.

At the previous meeting it was voted that TASMA would coordinate odd split repeaters. Not understood was that odd split repeaters eat up simplex frequencies. Thus the choice was to (A) continue to coordinate odd split repeaters and lose simplex frequencies, (B) coordinate only the seven presently on the books, or (C) do not coordinate any more odd split repeaters. Decision (C) was passed by the membership.

The following guidelines were approved by the membership for repeaters under TASMA coordination.

- Autopatches do not repeat "touchtones."
- Users of autopatch systems limit transmitter modulation to 3 KHz peak deviation while maintaining 2.5 KHz for highest 6-9 row numbers.
- All repeaters incorporate either a bandpass cavity or a resonant circulator/isolator between the transmitter and the transmitter port on the diplexer.
- All repeaters incorporate modulation limiters.
- All repeaters incorporate post limiter low pass filters that conform to at least FCC minimum requirements for commercial FM communications equipment.
- All repeaters operate with the modulation limiting circuit adjusted to 3.5 KHz peak deviation.
- Audio repeat levels should be adjusted for a 1 to 1 repeat ratio. This should be adjusted at approximately 2.5 KHz peak deviation. This means that when a 2.5 KHz deviated signal is received a 2.5 KHz signal is retransmitted.
- All audio interface impedances should be matched to minimize audio distortion and provide low audio passband ripple.
- Repeater receivers should have an IF passband of less than 16KHz in order to reject poorly adjusted user transmitters.
- Repeaters should operate at minimum power level and H.A.A.T. to afford reasonable coverage within the desired area.

The following were elected to office. Chairman, Don Root, WB6UCK; Vice-Chairman, Tom Wilson, AJ6L; Secretary, Karl Pagel, N6BVU and Treasurer, Bob Thornburg, WB6JPI. Simplex autopatches will be coordinated between 145.615 MHz and 145.785 MHz (inclusive) only. CTCSS tone will be assigned by the Committee. Non-use of ring-back is recommended, and voice ID instead of machine CW ID is recommended. All coordinations will be on a non-interference to existing activities and a non-protected from interference basis.

Frequencies available for coordination are as follows:

145.615	145.675	145.740
145.630	145.690	145.770
145.645	145.710	145.785
145.660	145.725	

Existing stations operating in other parts of the band will be invited to move to the new segment. Those not on a recognized channel will be asked to move onto the nearest channel.

TASMA is going to amend the bandplan to show coordinated simplex use of 145.01/145.03/145.05/145.07/145.09 MHz for use by packet digi-peaters in the Southern California area. Northern California is going to use the same frequencies.

Not approved for change or study was the changing of the 146-148 MHz band spacing from 15 KHz to 20KHz. It appears that we will have the status quo for now.

NEW MEMBERS - - OLD MEMBERS

Welcome to the Club:

Bernie Schrednik, K6AAC, who has been a Ham for 47 years!

Terry Thompson, KB6CUT, a Ham of less than a year who is destined to be a "CUT" above the rest.

Allan Bonney, WB7PUZ, who has been a Ham for 7 years and holds a Technician license.

Badges have been ordered for Ralph, W6MSX; Carl, WB6TDE; Charles, KF6CI; Bernie, K6AAC; Terry, KB6CUT; Matt, WA6AJC and CROSSTALK Editor (I wonder who that is for?). Badges should be in by the next club meeting and if you wear it you get a free door prize ticket!

From the Library

George Lee, W6IOW

What's new in the April issues of:

QST: A Talking Frequency Display
Speech Synthesizer for readout
A variable reference oscillator for synthesized VFO's
A high performance CW demodulator
A 1/4 KW 23 cm Amplifier, Part II
A Power Supply Performance Tester (active load)
Product Review: Heath SW-7800 G.C. Rcvr
Trio-Kenwood TH-21AT

HR: Digital HF Radio - A sampling of techniques
A carrier operated relay for VHF Amplifiers
A PSK telemetry demodulator for Oscar 10
Controlled Vertical Radiation Rhombics:
Part 2: Antenna Erection and Performance
Run RTTY on your Timex
Run RTTY on your VIC-20

CQ: Not received yet

73: Not received yet

Amateur Radio Call Signs

From the W5YI Report

Issued as fo the First of March:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen	Group D Novice
0	NJ0M	KD0VJ	N0FZL	KA0UCK
1	KY1N	KB1RO	N1DKK	KA1MSD
2	NI2X	KD2LM	N2FJJ	KA2WXO
3	KV3G	KC3RB	N3EGO	KA3NTN
4	AA4HX	KH4AK	N4LOC	KB4NCK
5	NUSN	KE5XD	N5HSU	KA5VNL
6	WE6X	KG6PA	N6LRI	KB6HVP
7	NM7L	KE7EF	N7GXV	KA7USI
8	NK8V	KD8WY	N8GHR	KA8VZK
9	ND9N	KD9NT	N9FAP	KA9TDT
N.Mariana I.	AH0D	AH0AC	KH0AG	WH0AAG
Guam	AH2V	AH2BD	KH2BV	WH2AFM
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	WH6W	AH6FZ	NH6DB	WH6BCK
Kure Is.			KH7AA	
Amer. Samoa	AH8B	AH8AB	KH8AD	WH8AAO
Wake Wilkes Peale		AH9AB	KH9AB	WH9AAC
Alaska		AL7GR	NL7FH	WL7BGD
Virgin Is.	KP2L	KP2AT	NP2BF	WP2AEJ
Puerto Rico	WP4F	KP4IJ	NP4MS	WP4DYX

The trouble with some people today is that they are educated beyond their intelligence.

March Swapmeet Notes

Don Resor III, N6KAW

"And the show must go on," as the phrase is commonly said. And so will the W6TRW Amateur Radio Club Swapmeet. This month marked the beginning of the first phase of new stringent management strategies and enforcement tactics which govern the judgements and decisions made by the W6TRW Executive Board. These strategies were implemented by the group of Swapmeet Managers this month. As they entered the sellers parking lot, each was asked, "We want to know what kind of merchandise each person has for trade." It was also indicated to each seller that a crew under the supervision of myself along with several others from the W6TRW Executive Board would be walking around to each sellers table and making judgements as to whether ALL sellers were offering for trade the merchandise claimed at the time of entrance. Sellers were asked to put away any items or literature which was not within the boundaries of the Policy/Rules of the W6TRW Swapmeet. To speak quite frankly, We mean business!! We will not stand for any Bull. It must be understood that being a seller at the W6TRW Swapmeet is a privilege, not a right. Those who attend are our guests. These changes have been a long time coming and were not whipped up overnight. Elsewhere in this Crosstalk is a message from the TRW/ARC President which gives a better definition of what we mean by a "commercial" seller.

I am extremely thankful to Chris Wachs, WA2KDL, and John Keller, N6JLS, for coming out and helping with the decisions and enforcing the W6TRW Swapmeet Policy/Rules. Thanks also to Walt Pearson, N6DZM, and the rest of the Executive Board for your support and advice. The traffic situation was handled excellently by Stan Johnson, W6EKK, Don Harvey, KG6BH and Bruce Johnson, N6EXQ. Coordinating the sellers as they entered the lot, screening of seller's merchandise, and later walking around looking for empty parking spaces so that any late arrivals could also enjoy the swapping; an all around great job. Thanks to all who helped out this month, I really saw a lot accomplished and we really covered quite a bit of ground in whipping the Swapmeet into shape. The winner of this month's raffle is Walt Pearson, N6DZM. Walt will receive a check for \$10.00 to be applied toward his next purchase at the Swapmeet. Congratulations Walt! Well I guess this wraps up every little bit including some of the "loose ends." Hi Hi. See you all out there next month. 73.

Old Friend Needs Our Help

Eileen McKinney, KA6DGV

How many times have you sat back during the NET and listened to our old friend the WESTLINK tape? Did you ever enjoy just keeping up with the latest without having to plow through a bunch of newspapers and magazines to do it? I know I've enjoyed hearing a lot of the articles over the years. Well, WESTLINK is in financial trouble now and down to its last few dollars. There isn't even enough in the budget to pay the phone bills for the future. So - it's up to all of us to bail poor WESTLINK out. Even if you can only afford a dollar, it will help keep WESTLINK on the air. All the little dollars will add up and keep the budget afloat. If you can help please mail your contributions to:

WESTLINK
c/o Dr. Norm Chalfin, K6PGX
P.O. Box 463
Pasadena, CA 91102

The time to come to the aid is now - not when it's too late to help. Please don't delay.

Thanks, JPL/ARC W6VIO Calling

More or better is not always the best way to success. Sometimes it's simply a matter of doing what needs to be done.

Commuting Traffic Fun

Seen recently during commuting rushhour traffic on crawling freeways:

Small foreign car with grey-haired couple, rear license frame: JOE & MILDRED - RECYCLED TEENAGERS

Big burly guy driving large 4 wheel drive truck, rear license frame: I'LL HAVE ANY KIND OF A DAY I DAMN WELL PLEASE!

Bumper stickers seen on several cars: AVENGE YOURSELF - LIVE LONG ENOUGH TO BE A PROBLEM TO YOUR KIDS.

Seen any good one's yourself? Send them in - we could all use a good guffaw!

Thanks, KN6H and the Hughes El Segundo ARC Bulletin

Communication

Bill Dews, K6AWO

The TRW Amateur Radio Club has been exchanging the Crosstalk with other clubs in the Southern California area plus points East for quite a few years now. The one thing that I have noticed is the Club Officers come and go and it's hard to keep in contact with the other clubs on a more personal basis. We are all communicators but can't seem to get together on the phone. Our Club Ham Shack has a phone answering machine that will receive messages 24 hours a day, 7 days a week. In addition the Crosstalk lists the Club Officers with their work phone numbers. What we need is a list of the officers and phone numbers from all the rest of the Clubs so that when the need arises we can get together on the ol' twisted pair and really communicate with each other. By the way, if your club has been listing phone numbers all along, disregard the above and consider your Club and newsletter in the "10" Class.

Amateur Radio Scholarships

From the W5YI Report

The Foundation for Amateur Radio Inc., a non-profit organization with headquarters in Washington, D.C., plans to award nineteen scholarships for the academic year 1985-86. The Foundation, composed of fifty local area amateur radio clubs, fully funds two of these scholarships from the proceeds of its annual Hamfest. It administers without cost to the donors, seven scholarships for the Quarter Century Wireless Association, two for the Dade (Florida) Radio Club, and one each for the Radio Club of America, the Richard G. Chichester Memorial, the Young Ladies Radio League, the Edmund G. Redington Memorial, the Amateur Radio News Service, the Columbia (Maryland) Amateur Radio Association, the Baltimore (Maryland) Amateur Radio Club and the Lewis Wilkinson Memorial. Licensed Radio Amateurs may compete for one or more of these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled or have been accepted for enrollment in an accredited university, college or technical school.

Most of the scholarships require the applicant to hold at least an FCC General Class license or equivalent. The scholarship awards range from \$350 to \$900 with preference given in some cases to residents of specified geographical areas or the pursuit of certain study programs. Additional information and an application form can be requested by a letter or QSL/postcard, postmarked prior to May 31, 1985, from:

F A R Scholarships
6903 Rhode Island Avenue
College Park, Maryland 20740

The Foundation is devoted exclusively to promoting the interests of Amateur Radio and to those scientific, literary and educational pursuits that advance the purposes of the Amateur Radio Service.

The following is an excerpt of an article that appeared in the April 6, 1985 edition of the Los Angeles Times and was written by Russell Chandler, Times Religion Writer.

Radio Hams: Voices in the Wilderness

A missionary deep in the jungles of Peru was desperately trying to reach help for 14 children who had been suddenly stricken with an eye disease that rendered them temporarily blind.

And because Paul Jerome Stack of Vista, a key West Coast member of the International Mission Radio Assn., had his amateur radio tuned to a special frequency that day, help was dramatically on its way within a matter of hours.

The International Mission Radio Assn. is a unique organization of 700 members in 40 countries who check in on the 20-meter (14.280 megahertz) band from 11:00 a.m. to noon (Pacific Standard Time) Monday through Saturday to exchange information, relay messages and handle emergency communications.

"I was the only one on the missionary net who could hear the Peruvian missionary's small, low-power station," Stack, 65, who has been a "ham" (amateur) radio operator for 52 years, recalled the other day. "This guy was so far from civilization that his only other means of communication was having the natives beat drums and pass the message from tribe to tribe down the river."

Stack, using a "phone patch" - a device that connects a telephone to a radio transmitter and receiver - telephoned an Escondido eye specialist. The missionary and the doctor talked directly about treating the ailing children but, unfortunately, the missionary did not have the necessary medications. And obtaining them would require a week or more.

However, an organization in Lima, Peru, that flies medical supplies to missionaries was also tuned into the missionary net. The radio operator there could hear Stack's side of the conversation but not the Peruvian missionary.

Stack, who has been a member of the radio association for 20 years, relayed the exact location of the missionary compound, and the drugs were airdropped the next day. "Four or five days later," Stack said with a smile, "the missionary was on the air again to tell me, 'Praise God, all 14 children have recovered from their eye disease and every one can see!'"

....in addition to helping remote missionaries keep in touch with their home base and stateside friends and relatives, the missionary network has often been pressed into service to handle emergency communications during natural disasters in Latin America.

When Hurricane David ripped through the Caribbean in 1979, leaving 80,000 people homeless, Catholic Relief Services called on the mission radio group to maintain contact with relief officials who could not be reached through other channels. For more than a week, ham radio operators provided the only communications link between the agencies, planeloads of supplies and medicines, and relief directors on the islands.

Earlier, in 1972, when a December earthquake rattled Nicaragua, the radio association was the official emergency channel. More than 13,000 health and welfare messages were handled by the net, which meticulously logs each conversation as "a piece of traffic."

In 1976, during the disastrous Guatemala earthquake, the net was again loaded with emergency traffic; Bryon Lovelady, a Methodist minister in Houston, was on the air nonstop for four days handling communications between Roosevelt Hospital in Guatemala City and the research department of the Houston Medical Center.

International Mission Radio Assn. is closely associated with the Medical Amateur Radio Council, a 650 member group of medical and health-care professionals. And the net also offers emergency medical advice through a connection with the University of Alabama Medical School and Hospital in Birmingham.

"The Club has arranged for phone-patch contact with their

medical personnel," said Father Michael Mullen, a Vincentian priest who is a theology professor at St. John's University in New York City and the current president of the radio association. "The service is multifaceted and bilingual." And it has made a life-or-death difference more than once.

In late 1979, a measles epidemic swept through Honduras, and net member Ruth Paz, who works with two hospitals in San Pedro Sula, radioed for help because the local doctors did not have enough vaccine. Within two weeks, 50,000 doses of vaccine, donated by the Communicable Diseases Section of the Central Americas Office of the World Health Organization, were airlifted into Honduras. The Birmingham university complex handled all arrangements.

"Father Mike," as his networking colleagues call him, also tells the story of an 8-year-old Honduran girl who had been severely burned. The radio association arranged for her travel, hospitalization and extensive skin grafting in a Miami hospital. Through the efforts of Paz, the girl even talked from her bed, via shortwave radio, with her father 800 miles away.

One of Paz's most recent mercy missions involved Erica Minerva Nolasco, 8, who was struck by a truck last September. The Honduran youngster sustained multiple injuries - including a severed leg - that needed specialized help unavailable in Honduras. Through the ham net, Paz arranged for Interplast, a group of physicians based in Fort Lauderdale, Fla., and Stanford University Medical School's Division of Plastic and Reconstructive Surgery, to send consultants to Honduras. Meanwhile, residents in Erica's hometown and an American school donated funds to fly her to New Orleans. And in Manasquan, N.J., radio club member Warren Mulhall coordinated radio phone-patch efforts to find a hospital that would treat the youngster without charge.

Paz accompanied Erica on the commercial flight to New Orleans, and an anonymous donor lent his Learjet for the final segment of the trip to Hartford, Conn., where the girl was admitted to the trauma center at St. Francis Hospital. "She is still in the hospital," Mullen said last week, "but she's doing fine and has been fitted with a prosthesis. Her recovery is remarkable."

Growth of the mission radio club is also remarkable, notes Mullen, 70, who operates his 1,000 watt station from a cramped cubbyhole just outside the student lounge at St. John's University. In 1966, when he "stumbled into this fascinating field of amateur radio," the Catholic Mission Radio Assn. - as it was known then - had about only 50 members.

Within the last five years, the association - now interdenominational - has doubled its membership and increased its broadcasting activity by 25%. Walter Walker, the International Mission Radio Assn.'s net "manager" who works out of Nokomis, Fla., estimates it receives 19,000 "check-ins" and 10,000 "pieces of traffic" (successful linkups) annually.

The radio association's 700 members include 25 religious communities and dioceses in addition to the individuals in every walk of life - and even a few celebrities: Sen. Barry Goldwater (R-Ariz.); William Wilson, U.S. Ambassador to the Vatican, and Father Dan Lineham, S.J., a radio association charter member and noted seismologist who was the first to measure the thickness of ice at the North Pole. (Overall, there are about 400,000 licensed ham operators in the United States; they spend \$200 million a year on their equipment.)

Stack, sipping an iced glass of mint sun tea, noted that on this particular day, when a reporter and photographer visited to eavesdrop on the 20-meter band, the net had only 67 check-ins and 18 pieces of traffic - "a slow day."

"We need more Southern California hams for the missionary net," he said. "Many missionaries out there would love to talk to their relatives at home base. And they need help in emergencies."