



B-VARC BULLETIN

The Monthly Publication of the
BRAZOS VALLEY AMATEUR RADIO CLUB
Serving Fort Bend and Harris Counties

Editor in Chief: Kelley Hughes N5ULZ (713) 499-9806 FAX: (713) 499-0279 Compuserve ID: 72603,623

The Brazos Valley Amateur Radio Club (BVARC) was originally organized in 1978, primarily as an emergency communications group available to assist the communities of Missouri City and Stafford when required. Since that time, BVARC has grown and expanded its activities to become the most active Ham radio club in the southwest Houston area.

Today, BVARC is truly a general-interest club, with an impressive record of Public Service. This commitment to service has been recognized by the Amateur Radio Relay League with the coveted status of Special Service Club. We are proud of our members, who represent the finest in Amateur Radio. Membership is not limited to licensed operators, but is open to anyone with an interest in Amateur Radio. Meetings are held at 7:30 pm on the second Thursday of each month at the Sugar Land Community Center. Talk-in assistance is available on the 145.47 and 442.5 MHz repeaters.

To obtain information about the club and its various activities, as well as information about joining the club, contact Betty Wilcox, KA0TEN, at (713) 859-6512.

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AUGUST 1994

ADDRESS CORRECTION REQUESTED

From: Brazos Valley Amateur Radio Club, Inc.
P. O. Box 1630
Missouri City, Texas 77459



Allen Mattis N5AFV
5314 Wigton Drive
Houston, TX 77096



B-VARC MEETING SCHEDULE

Thursday, Sept. 1	Board of Directors Meeting
7:30 pm	Sugar Land Community Center
Thursday, Sept. 8	General BVARC Membership Meeting - Sugar Land Community Center
7:30 pm	

September 1994

B-VARC Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4 7:30 PM A.R.E.S. Net 147.30	5 7:30 PM 34-94 Swap Net 146.94 8:00 PM Fort Bend County Emergency Net 145.49 9:00 PM BVARC Net 145.47 & Linked Repeaters	6 8:00 PM 10-10 SHOT Net 28.488 10:00 PM AMSAT 147.10	7 8:00 PM B-VARC Rag Chew 3.960 (Busy? +3 Khz)	8 7:30 PM Membership Meeting Sugar Land Commu- nity Center	9	10 7:30 AM B-VARC Breakfast 9:00 AM Hou. Emer- gency Management NET 146.84 (9:30 on 3.905)
11 1:30 PM Texas State RACES Net 7.248 7:30 PM A.R.E.S. Net 147.30	12 7:30 PM 34-94 Swap Net 146.94 8:00 PM Fort Bend County Emergency Net 145.49 9:00 PM BVARC Net 145.47 & Linked Repeaters	13 6:00 PM Amateur Exam Session Strake Jesuit College Prep. 8:00 PM 10-10 SHOT Net 28.488 10:00 PM AMSAT 147.10	14 8:00 PM B-VARC Rag Chew 3.960 (Busy? +3 Khz)	15	16	17 7:30 AM B-VARC Breakfast 9:00 AM Hou. Emer- gency Management NET 146.84 (9:30 on 3.905)
18 7:30 PM A.R.E.S. Net 147.30	19 7:30 PM 34-94 Swap Net 146.94 8:00 PM Fort Bend County Emergency Net 145.49 9:00 PM BVARC Net 145.47 & Linked Repeaters	20 8:00 PM 10-10 SHOT Net 28.488 10:00 PM AMSAT 147.10	21 8:00 PM B-VARC Rag Chew 3.960 (Busy? +3 Khz)	22	23	24 7:30 AM B-VARC Breakfast 9:00 AM Hou. Emer- gency Management NET 146.84 (9:30 on 3.905)
25 1:30 PM Texas State RACES Net 7.248 7:30 PM A.R.E.S. Net 147.30	26 7:30 PM 34-94 Swap Net 146.94 8:00 PM Fort Bend County Emergency Net 145.49 9:00 PM BVARC Net 145.47 & Linked Repeaters	27 8:00 PM 10-10 SHOT Net 28.488 10:00 PM AMSAT 147.10	28 8:00 PM B-VARC Rag Chew 3.960 (Busy? +3 Khz)	29	30	

August						
S	M	T	W	T	F	S
1	2	3	4	5	6	
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

October						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Notes From the President

by Doug Holley, KE5SR

I hope that everyone enjoyed our July meeting featuring the Ice Cream Social as much as I did. Of all the meetings we hold each year, my favorite is the Ice Cream Social. A special thanks to Claude (K5HFY) for the organization and Betty (KA0TEN) for the serving.

Each six-month period BVARC must secure a monthly meeting room for the board and general meetings. Meeting rooms at the Sugar Land Civic Center are very much in demand by both private and public groups. Most of these meeting rooms are rented on a fee basis by the city of Sugar Land. However, BVARC qualifies as a non-fee status, thank goodness. Someone must arrive at the site very early in the morning when each scheduling is done. Bud King (N5UOG) has once again been in line for BVARC around 5 a.m. on this scheduling morning just so that we as a group will have a room for our meetings each month. I hope that the club members realize and appreciate the dedication and effort that goes into this task. Please go by and thank Bud for what he has done. By no means is this all we have to thank Bud for, as he is extremely active in many areas for our club's benefit.

BVARC was organized in 1978 as a general-interest club, but also dedicated to public services. Our diversification in our interests and involvement with public services has made BVARC a great club. Our membership number of 225 people to date signifies our ability to offer something for all interests. Our ability to assemble at meetings, dinners, camp-outs and field days proves that there is something that bonds our group with both common and diversified interests. These are some of the things that make BVARC what we have become today.

Within our organization which is comprised of many, there are but a few that do the bulk of the work. Help in many areas is needed. Our public service events, our newsletter publication, our training sessions, both theory and code and net control operations, are just some of the areas that so few people put so much work into. There is much need for additional help. Probably ten percent of our members do ninety percent of the work. Duties such as setting up tables and chairs, cleaning up, and being an Elmer are jobs that are critical. Please try to volunteer to be more involved and be more a part of your club.

The Skywarn program that I arranged for BVARC on June 29 was attended by very few members. The class was publicized in the newsletter, both BVARC nets, and I spent a day of my personal time calling to remind members of the

BVARC RAG CHEW CHECK-INS
3.960 MHz 8:00pm Wednesdays
Compiled by Mel Thatcher, KB5ION

July 8, 1994

KE5SR (Net Control), W5EFB, K15SC, N5AFV,
N5CPA, W5GLD, N5UOG, WN5A, KB5PAJ

July 13, 1994

KB5ION (Net Control), K15SC, KB5PAJ, N5CPA,
W5EFB, WB5VYR, N5OAC, W5GLD, N5AFV,
N5UOG

July 20, 1994

N5CPA (Net Control), N5UOG, N5YKR, K15SC,
KB5PAJ, AB5OK, W5GHK, KG5KV, WD5CJL,
KF5NUJ

July 27, 1994

KB5ION (Net Control), N5UOG, N5OAC, W5EFB,
KE5SR, N5CPA, W5GLD, KB5ZRV, N5YKR,
N5AFV, AB5OK, W5GHK, KB5LFU, KG5KV

August 3, 1994

KB5ION (Net Control), W5GHK, W5EFB, K15SC,
KB5PAJ, N5AFV, N5OAC, N5UOG, N5YKR,
W5HFY, N5CPA, W5GLD, WB5VYR, KA5GXV/M,
AB5OK, KE5SR, KG5KV, K5HFY, KB5JOG

class. All of this resulted in very little turnout for this vital public service seminar. We as Hams are committed to public service of many types, and now is the time to become more responsive and get involved.

A reminder again— Ft. Bend Emergency Management will conduct a seminar on hazardous materials that are transported through this area. If you can fit the time in your schedule, this is a seminar with much useful information that may one day save a life. The seminar will be held at the George Memorial Library in Richmond on Tuesday, Sept. 6. There will be two time sessions to choose from. The early session will be held 7 a.m. until noon, and the later session will be held 6 p.m. until 11 p.m. I look forward to seeing you there.

73's and good DX.

Doug (KE5SR)

I Speak - - -

Randy Pollard, AK5G

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Board of Directors Meeting

by Bud King, N5UOG

A quorum of the B-Varc Board of Directors met at the Sugar Land Community Center on August 4, 1994. This was the eighth meeting of the Board for the 1994 calendar year. The following Board members were in attendance: Doug Holley, KE5SR; Sam Wilson, N5CPA; Victor Richard, N5NAS; Bill Dessens, N5KXU; Claude Sessions, K5HFY; and Bud King, N5UOG. President Holley, KE5SR, opened the meeting at 7:40 PM. The minutes of the July Board meeting were submitted by Bud King, N5UOG, and approved unanimously. The Club Treasurer, Sam Wilson, N5CPA, reported a balance of \$3,748.01 in the treasury as of July 31, 1994. The treasurer's report was approved unanimously.

A report concerning the B-Varc Rag Chew Net indicates it is recovering from the summer doldrums. The check-ins are back up to the normal numbers.

Kelley Hughes, N5ULZ, the Editor in Chief of the B-Varc BULLETIN, advised the Board that the new cut-off date for the submission of articles will be the 15 th. of the month. Kelley, once again, stated the need for additional articles for publication. A discussion concerning Application Forms, additional Bulletins, and informative articles relating to B-Varc, resulted in the need being recognized and additional copies will be printed.

Mike Hardwick, N5VCX, Public Service Event chairman, stated that October would be a busy month with the following events scheduled: "MS Enduro Skate" - October 1, Saturday, with a participation of 500 skaters anticipated; "America's Number One Challenge against Violence" - October 8, Saturday, a 5K Run with 2200 runners anticipated; "Alamo Challenge" - October 15 and 16, with 600 riders anticipated to participate; "20 K Run" - October 16, with 1800 to 2000 runners expected to participate; "Texas Coastal Bike Ride" - October 30, with an expected participation of 1800 to 2000 riders. The "25K Run" is scheduled for November 13.

Sam Wilson, N5CPA, was brought up to date on the Club equipment inventory.

President Holley adjourned the meeting at 8:30 PM.

Adolph

Alex - WA5UHT

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Lou Kronberg
Chairman of the Board
WSIH

Tom Taormina (K5RC)

by Doug Holley (KE5SR)

At the July 14 general meeting, we at BVARC had the pleasure of hearing Tom speak on several subjects of interest to our group.

Tom thanked BVARC for their participation in the construction of their tower this past spring. A program presented by Tom showing the history of the old fallen tower and the building of the new tower is in our plans for the near future.

Tom also announced that he will be running as a candidate for a Vice Director of the West Gulf Division of the A.R.R.L. We need someone of Tom's talents to represent our interests with A.R.R.L. For many years I have felt that our division has not been represented and that our concerns have been overlooked. I think Tom will be responsive to our concerns. Please keep Tom in mind during the upcoming elections.

The World of Ten Ten

International

by Al Mattis N5AFV

Many Ten Ten International members are looking forward to the Las Vegas 1994 Bash, which will be held August 18-21, 1994, at the Hacienda Hotel and Casino. Preliminary results have been announced for the 1994 Spring CW QSO Party, held May 7-8, 1994. The Possum Trot (NC) chapter took first place, with thirty logs submitted. Houston S.H.O.T. came in fifth, with only five logs submitted. The Ten Ten Board of Directors met July 22, 1994, in St. Louis, MO. This year's annual board meeting was hosted by the Gateway (MO) chapter.

The Houston S.H.O.T. chapter wishes to thank all Houston area amateurs who participated in the 1994 Summer QSO Party, held August 6-7, 1994. Propagation was not very good in Texas, but stations located in Colorado and Illinois reported excellent conditions. Applications for the S.H.O.T. chapter's Lunar Landing commemorative certificate continue to pour in. Many out-of-town operators qualified for the certificate during the August QSO Party. The S.H.O.T. chapter is pleased to welcome its newest member, the M. D. Anderson club station, KK5W.

Ten Ten paper chasers continue to be active on 28.345 mhz. Ten Ten chapters with specials for paper chasers this month include Steel City (IL), Texas Gamblers (TX), Quahog (RI), Branding Iron (TX), and Branding Iron II (TX). Due to a job change by the chapter head and certificate manager, the Columbianes of Colorado (CO) chapter has gone QRT effective June 1, 1994. New certificate managers have been named for the Samuel Clemens (CT), Branding Iron II (TX) and City of Lights (IL) chapters. Certificate managers for the Earthquake Country (CA), Camelia Capitol (CA), Kings and Queens (MT) and Dancing Dolls (MT) chapters are recovering from recent surgery, and ask that paper chasers hold upgrades for those chapters until further notice. We all wish them a speedy recovery.

The summer E-layer openings have not been as good this past month, however, band openings continue to occur. The

summer propagation conditions may bring E-layer openings at any time of the day or night, so check ten meters occasionally to see if it is open. In general, domestic propagation has been fair to good. DX propagation has generally been poor to good, with occasional openings to Latin America and the South Pacific.

Remember, the Houston S.H.O.T. (Space Houston On Ten) net meets every Tuesday evening at 8 pm local time on 28.488 mhz. All amateurs are welcome to check in, even if they do not have a Ten Ten number. If you are not a member of Ten Ten International and wish to join the organization, please check into the net. There are a lot of exciting activities in Ten Ten, and many friendly people can be found on the ten meter band.

Field Day 1994

by Doug Holley (KE5SR)

BVARC field day was held June 25th and 26th at Katy County Park. The total point count came to 2444, but the emphasis was on having a good time by all. We made 441 contacts on CW, mainly thanks to Allen Brier. 340 phone contacts were made, 73 satellite contacts, and 1 ATV contact. We made extra points by having a novice station, operating on emergency power, having media coverage, information booth, message to our section manager, packet station, and having a UHF/VHF station. Approximately eighty-five people operated or just came by for the food and social fun.

We had a catered evening Bar-B-Que meal and a delicious breakfast to start out our Sunday morning. We appreciate Betty (KA0TEN) for cooking the breakfast meal and serving our catered evening meal Saturday afternoon.

Our station call was KK5W and Al Zermeno was our field day chairman for the second year in a row. We owe many thanks to so many that made our field day a success. My sincere thanks to all that helped and already we are making plans for next year's field day.

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National Traffic System

by Louis House, KD5GM

The ARRL National Traffic System is the main system of Public Service and Public service in the grass roots of amateur radio. There are many amateur radio operators who are dedicated to handling traffic (messages) through the NTS, yet there is a need for more amateurs to participate in our traffic nets, amateurs who will continue to train upward and ensure an ongoing NTS in the future of amateur radio.

Recently, two dedicated amateurs, Arley Garvin, WB5NKC, and his wife Pat, WB5NKD, implemented a well rounded "Basic Traffic Handlers' Course." This course is designed "to teach the important points of CW traffic nets and traffic handling." I believe this course is the first of its kind in our area and it should generate a lot of interest in the amateur Community.

The "Training Course" is offered on two slow speed CW traffic and training nets. Both of these nets meet 7 days a week and are managed by amateurs who are dedicated to amateur radio, the NTS and to the upward training of amateur operators who like to handle traffic.

The earlier net, Oklahoma training net, called OTN, is managed by Arley Garvin, WB5NKC. OTN meets at 6:30 pm CDT/2330Z on a frequency of 3693 KHZ. The later net, Oklahoma/Texas slow net, called TSN, is managed by Cecil Carter, K15LQ. TSN meets at 8:00pm on a frequency of 3719 KHZ.

All amateurs licensed to operate on these frequencies are invited to check in (QNI). If you are interested in the "training courses" simply send /TRNG after your call sign, for example: KD5GM/TRNG. This sign will let the net control station (NCS) know that you want to receive training messages. The NCS will, at some point during the net, call for the instructor volunteer to (QNV) make contact with you and move you off to another frequency (usually 3 to 6 KHZ) so you can receive your training messages.

You may receive as many training message as you wish, typically 1, 2 or 3 at each net you check into. You may copy at a speed that is comfortable for you, just tell the instructor volunteer to QRS for slower speed or QRQ for faster speeds.

Net control stations, instructor volunteers, and other net participants "do not hear mistakes nor do they bite" so feel at

ease. Traffic handling is a lot of fun and very rewarding, both to the public and to one's self.

Information will be supplied to any amateur radio operator who checks into either of these nets for the training course. Won't you come and join us on OTN and TSN - tune in and listen a few evenings- then QNI, you'll be glad you did.

73 es CU on the Nets!

Louis House, KD5GM
Official Relay Station
South Texas Section

Results of the August 9th Amateur Exams

by Harold Parker, ND5F

B-VARC again sponsored and administered the ARRL's Amateur Radio Examinations that were held on Tuesday evening, August 9, 1994 at Strake Jesuit College Preparatory in Houston.

V.E. TEAM:

Glenn Lewis, K15CE
Harold Parker, ND5F
Mike Strong, KT5H

Assistants:

Carl Albrecht, AA5JW
Cass Germany, KG5IT
Craig Culver, AB5OK
Irene Gordon, N5AYX

A total of 17 exams were administered during the evening to 9 applicants. Six (6) unlicensed candidates received their new "codeless" Technician license. One other upgraded with a total of 14 elements passed. The overall "pass rate" for the evening was 82%.

Congratulations to the following who upgraded and/or passes exams.

Michael Fontenot - Technician
Tonya Fruge' - Technician
Minh Ha - Element 1A
Joseph Manby - Technician
Donald Melendy - Technician
Francis Nussbaum - Technician
Van Rathgeber - Technician

Jerry Thomas, Pending - Technician Plus

Many thanks to all the Team Members and Assistants who volunteer their valuable time and effort each month.

All of us at B-VARC again thank Vincent, W4SETS, and everyone at Strake Jesuit College Preparatory for making these excellent classroom facilities available to us for our exams each month.

73 de ND5F

PUBLIC SERVICE EVENTS UPDATE

by Mike Hardwick, N5VCX

Jell, the summer has been long and hot, and it will remain so for a few more months, so BVARC's remaining events are scheduled for after September, when things get a lot cooler (I hope). As you can see, there are still many events left for the rest of the year.

Those remaining events will be coordinated by several highly experienced people. That experience allows the communications at the events to go very smoothly, and new hams can learn and gain confidence operating their ham radios in many situations. If you are new to ham radio and are just a little unsure about working these events, don't worry about your inexperience. The desire to participate and help is the key. Come on out and have a good time with one of the most active clubs in the Houston area and use amateur radio in a fun way

For the 5K run on October 8 and the 20K warm-up run on October 16, the race coordinator, Jerry Aucoin, asked me let everyone know that if non-hams are interested in volunteering, he has several positions open for both events. If you are interested in volunteering for any positions, please call him at 772-2723. He would really appreciate the help.

The 20K warm-up run is the beginning of the warm-up series for the Houston-Tenneco Marathon in January. There will be more warm-up runs as the schedule shows, one in November and one in December. BVARC has been working the warm-up series for several years now and they are the regular events ever year. Everybody be sure to sign-up for at least one of the warm-up runs this year.

A tentative date of Saturday, November 5, 1994 is scheduled for a public service training class to inform new hams about the finer points of working public service events. Working a ride or run for the first time can be a little scary, and this training should help ease some of the concerns. Attendance at the class is not required before working an event, but it will definitely help. For more information, contact Carl Hacker, Mike Hardwick, or Bret Prichard (calls and phone numbers below).

UPCOMING PUBLIC SERVICE EVENTS

DATE: Saturday, October 1, 1994

Event: MS Enduroskate

Volunteers needed: 10-15

HAM Contact: Randy Pollard, AK5G,
h/667-5123

DATE: Saturday, October 8, 1994

Event: America's #1 Challenge - U. S. Against
Violence 5K Run

Volunteers needed: 10-15

HAM Contact: Carl Hacker, KB5LDY,
w/792-4359 h/977-9754

DATE: Saturday/Sunday, October 15 & 16, 1994
Event: ALA Alamo Challenge Bike Ride to San Antonio

Volunteers needed: 50-60

HAM Contact: Mike Hardwick, BVARC, N5VCX,
w/443-8636 h/771-4625

Bret Prichard, HAMS, N5VOY, w/645-5400

DATE: Sunday, October 16, 1994

Event: 20K Marathon Warm - up

Volunteers needed: 30-35

HAM Contact: Mike Hardwick, N5VCX,
w/443-8636 h/771-4625 (Pre-event)

DATE: Sunday, October 30, 1994

Event: Texas Coastal Bike Ride

Volunteers needed: 35-45

HAM Contact: Bret Prichard, HAMS, N5VOY,
w/645-5400

DATE: Sunday, November 13, 1994

Event: 25K Marathon Warm - up

Volunteers needed: 30-35

HAM Contact: Allen Mattis, N5AFV, h/721-3637
w/752-5752

DATE: Saturday, December 10, 1994

Event: 30K Marathon Warm - up

Volunteers needed: 30 - 35

HAM Contact: Don Wade, WB5IBT, h/242-6706
w/667-3262

DATE: January, 1995 (Exact date unknown)

Event: Houston Tenneco Marathon

Volunteers needed: 120 - 140

HAM Contact: Carl Hacker, KB5LDY, w/792-4359
h/977-9754

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The Final Assault With the PRO-95 Beam

by Doug Holley, KE5SR

The weekend of July 9 and 10 marked the final installation and mounting of the giant Mosley beam on M.D. Anderson Cancer Institute and Hospital. A coordinated effort involving members of B.V.A.R.C. and the 272nd Electronic Installation Squadron of the Texas National Guard made the endeavor come true.

Al Zermeno (KK5W) coordinated the efforts of B.V.A.R.C. members to assemble the beam and prepare it for installation on the tower by the Texas Air National Guard. Coordination of the Guard was by Master Sergeant Wiley.

The Mosley PRO-95 beam replaced an aging six element Yagi that had been part of the hospital's emergency communication system for many years. Planning for the installation had taken a year, with assembly and mounting of the beam taking eight weeks. The massive size of the beam itself required in depth planning and installation by professionals such as the Texas Air National Guard. The boom is thirty-six feet long, supporting nine huge elements. The weight of the beam is over one hundred pounds and required seven people just to move it. The final mounting height is about two-hundred forty feet.

Members of B.V.A.R.C. met Saturday morning, July 9 to re-check all installation specifications and re-tighten bolted hardware. Once the beam was mounted on the tower above the roof, any further fine tuning adjustments would be almost impossible; therefore, everything had to be correct when the Guard took responsibility for the mounting. B.V.A.R.C. workers hurriedly completed their task and turned the beam over to the Guard by 2 p.m. Saturday. An approaching heavy thunderstorm left us all with an uneasy feeling.

The Guard had mounted the rotator and quickly started the beam installation on the tower. Their eight man team was none too many dealing with the beam. Their installation went slowly but carefully as not to damage the beam. Just as they managed to secure the beam to the mast above the tower, the thunderstorm rolled right over us, and being on top of the hospital working on antennas was definitely the last place anyone wanted to be. The guard secured the beam temporarily to escape the storm and returned Sunday

morning to complete the installation under more favorable conditions.

Within a few hours Sunday morning, the Guard had completed the beam and rotator installation on the hospital roof. Several of the Air National Guard's commanders visited the installation site. One commander was Captain Lesa Spivey who is stationed in LaPorte along with the Guard unit that assisted with the mounting.

There are so many people to thank for their contribution with the installation that it will be hard to list them all, and I don't mean to leave anyone out. A few of the people that worked and contributed the final weekend of the installation were Bill Dessons, Craig Culver, Doug Holley, Dwayne Jones, Bud King, Elton Kytie, Charlie Prochaska, Betty Wilcox, Greg Weldy, David Litchford, and Al Zermeno. We owe a great deal to the Texas Air National Guard for their help.

The station at M.D. Anderson carries Al Zermeno's call (KK5W) and is directed by him. Funding for the station is derived in part through the sale of Christmas cards designed by the pediatric patients and by private gifts. The station activities are designed to convey through transmissions patient messages whenever and wherever possible. Many cancer patients and particularly children patients visit and benefit in enjoyment from the hospital ham station. The station oftentimes is a grateful outlet from their daily routine cancer treatments.

After completion of the installation Sunday, we had some very special guests who came to see the station. One such person was Cheryl Lewis, the mother of a young cancer patient, Charles Whitmire. They stayed to visit the group and learn what a ham station is about. We were happy to have them as guests and look forward to many other cancer patients and families visiting in the future.

Another special treat that we had on Sunday was reporter Ben Wilson and camera person Connie Gott of Channel 13 coming by the ham station to film the station and interview young Charles Whitmire. A very special thanks goes out to Channel 13 for their exposure.

As stated before, the station at M.D. Anderson is partially funded by pediatric patient's Christmas card sales, but any additional donations are appreciated. Presently, all our coax is seven years old and needs replacing very badly. If you have unused sections of RG8 coax, the donation will be greatly appreciated. We look forward to seeing you at the station in the near future. All are welcome.

Satellites and Ham Radio

by Bruce Paige, KB5ZRV

Last time we talked about working AO-13 and the equipment needed. Now we will discuss how to tune your radio to AO-13. Remember, never transmit if you cannot hear the satellite. If you do, you might be transmitting over someone else.

To locate the satellite, just as we did on AO-21, you need to have a satellite tracking program or have someone print you out the position of the satellite for a particular pass. For field day, having the print out is sometimes easier than having to carry your computer to the field along with all your radio equipment.

AO-13 operates on a downlink frequency between 145.825 and 145.975 and a uplink frequency between 435.420 and 435.570. Notice there is now a spread of 150 kc's. Now, here is the trick if you transmit on 435.503 you will hear yourself around 145.895. I say around because due to the spin, the way the antennas are pointing and other things, you will be close but you will have to tune to find yourself. Since the center of the pass-band is 145.890, you will find voice operations above this and CW operations below. Most DX is near the passband and you should always leave 10 kc's between you and other QSO's. Once you have tuned your radio so that you can hear yourself, you then set the radio to reverse frequency tracking. This means that if you increase the receive frequency, the transmit frequency will decrease. And if you decrease the receive frequency, the transmit frequency will increase. For this satellite, if you take the receive or transmit frequency and subtract it from 581.398, you will have the other. This is another quick way to find the correct frequency.

Now to tune yourself in, I usually tune to the high portion of the band, make sure I do not hear anyone talking and then start transmitting Test 1-2, Test 1-2, this is KB5ZRV, test 1-2. As I turn the transmit frequency until I sound just as natural as possible. Now you press that special button that places the radio in reverse tracking. Remember this is the feature where the frequencies track in opposite directions.

If you now tune to where you hear someone, your transmit frequency will follow you and you are ready to have your first QSO. Sit back, wait for the current QSO to end, and call the other station. While you are transmitting, adjust your transmit frequency to remain on the same receive frequency. That

way, you do not walk down the band and interfere with someone else's QSO. Now you've done it. Your first AO-13 QSO. Remember how exciting that first 2m repeater QSO was when you got your license or that first HF QSO after you passed your code test. Well, you just got your next thrill. Look for those DX stations and have fun. Don't forget to send in for some of the AMSAT awards as you qualify for them. In fact now that you have made your first contact either back on AO-21 or AO-13 you can submit for the Satellite Communications Club.

This is just the basic requirements for working AO-13 if you are interested in more details, or have a topic you would like discussed feel free to write me via packet or internet at KB5ZRV @ AMSAT.ORG. Also copies of this script are available via internet. Next time we will talk about some of the awards and certificates available with satellite endorsements.

Future topics will be working telemetry only satellites such as Dove, types of coax for your satellite station. Working the MIR Space Station and the SAREX program on the shuttle.

If you would like additional information on AMSAT you can write to:

AMSAT
850 Silgo Ave
Silver Springs, Maryland 20910
or call 301-589-6062

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PROJECT BEACON UPDATE

by Al Mattis N5AFV

Project Beacon, a research effort by a group of Houston metropolitan area radio amateurs, has been completed. The project was designed to study the possible effects of active faulting on radio propagation in the LF and MF nondirectional beacon (NDB) band. Four beacons were selected for monitoring: HU (395 khz), SYG (338 khz), AAP (269 khz) and JPA (347 khz). These airport beacons were selected because they are located near active faults. Amateur radio operators monitored the selected beacons once each day, looking for 1) Primary signals consisting of odd rumblings and hissing sounds, 2) Sudden enhancement of signals or sudden drops in signal strength, or 3) Perceived shifts in the received frequency of beacons. The monitoring was done for a one year period from February, 1993, through February, 1994.

Even though the Houston metropolitan area does not experience earthquakes, active faulting is present. The city is experiencing a subsidence problem, with portions of metropolitan area having subsided approximately ten feet. The subsidence occurs in conjunction with active faulting.

During Project Beacon, no primary signals or sudden enhancement of signals were observed. There were, however, six episodes of apparent frequency shift observed by monitors. In an effort to limit data to actual frequency shifts, only those events observed by two or more monitors were counted. The U.S. Geological Survey operates a network of extensometers in the Houston metropolitan area to measure subsidence. Record charts from the two closest extensometers were examined.

Four of the frequency shift events correlate with a change in

the rate of subsidence. Movement along the faults apparently ceased during these frequency shift events. During such times of no movement, stress would build up along the fault, perhaps causing an increase in the movement of saline waters in porous rock adjacent to the faults. In the Houston metropolitan area, saline waters are present in porous sandstones as shallow as 800 feet. Because these reservoirs of conductive fluids are close to the earth's surface, such a movement of fluids would be expected to affect the earth's magnetic field. The apparent frequency shifts of LF beacons observed by Project Beacon monitors are believed to result from such an effect.

The second group of two frequency shift events does not appear to be related to local subsidence or movement along the faults which control subsidence. These two events do correlate in time with a 4.2 magnitude earthquake which occurred 175 miles west-southwest of the Project Beacon study area in Atascosa County, TX, and a later 3.0 magnitude aftershock. The first frequency shift event was detected 44 minutes prior to the earthquake, while the second frequency shift event was detected 15 hours prior to the aftershock. The timing of these frequency shift events suggests, but does not prove, that they are related to the Atascosa County, TX, earthquakes. It may be possible that the Atascosa County earthquakes could have had an effect detectable by Project Beacon monitors.

Project Beacon would not have been possible without the participation and contributions of many people. The efforts of Ralph Cheek, Bud King, T.J. Layton and Jack Roberts, who served as primary monitors, are particularly noteworthy. An additional twelve persons provided back-up monitoring. Frank Stiver and Al Zermeno participated in many stimulating discussions. Without the work and effort of the many project participants, there would have not have been a Project Beacon, and their contributions are gratefully acknowledged.

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