

THE BVARC BULLETIN

The Monthly Publication of The Brazos Valley Amateur Radio Club

Volume 18 Issue 8

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(713) 342-8028

NOTES FROM THE PRESIDENT

by Carl Cunert—WB8SVR

Hello again. As you know, Field Day has come and gone, and for those of you who did not attend—tsk, tsk. An enjoyable time was had by all.

We started the day early with a great breakfast at the Kettle on Highway 6 and Clay Road. We then headed for Katy Park and commenced setting up antennas and equipment. As the antennas were going up, the sun made sure we knew it was there. Man, it was HOT! WN5A had the honors of getting the first station on the air with his all-band antenna. Then, KK5W, with the help of many (including KF5NU's portable tower), raised his 5 band trap dipole for CW.

KC5ASI gave us the use of his motor home, where we made a lot of 6m contacts and UHF points. N5YKR set up his 10m station and after having two rigs go south, finally got his main rig going south on the last day. With that kind of luck, Mike, you should stay away from the lottery.

KB5VHE retained the services of a nice generator for our use, and made sure it was ready to go and kept it going. Of course, Kevin was there to help with the antennas as well, and probably got more work than he bargained for.

At about sixish (is that yuppie enough Carl?), KB5LDY began to feed the group's thundering, growling stomachs. Carl and his wife made sure all were well rewarded for their dedication in setting up the site. The club covered the food bill for all those who helped with the setup. Next year, we may just have

fajitas for supper, with the club possibly picking up the tab.

We operated as a 3A station using the club call, KC5OIG, which doesn't exactly roll off of the tongue. So, Lanny used the phonetics "KC5 Orgy in Galveston." Now that's a call! Only you, KB5VTB.

WB5BIR will be working the event again next year, and says it will be bigger and better. I believe it. He is already talking to KG5KV and KF5NU about how to set up the site for next year. Antennas are already being considered for 1996, and it is planned that they will be ready to go before the event. They will be proven antennas, tuned and ready to go.

Allen tells us that as a club, we earned about 4,000 points, which is better than last year's results.

There were so many OM's and YL's who helped make Field Day a success, I can't possibly remember everyone, but I would like to extend my sincere THANKS to everyone.

To everyone—73 and good DX, or whatever trips your mic.

Carl—WB8SVR

SPECIAL THANKS

All of us at BVARC would like to extend our gratitude to the management at KHTV, Channel 39, for the use of their equipment and facilities in order for this bulletin to be published.

BVARC BOARD MEETING*by Louis House—KD5GM*

A quorum of the BVARC Board of Directors met at the Sugar Land Community Center, on July 7, 1995. This was the seventh meeting of the calendar year. President Carl Cunert, WB8SVR, called the meeting to order at 7:35 p.m.

The following Board members and guests were in attendance: Carl Cunert, WB8SVR; Donn Washburn, N5XWB; Louis House, KD5GM; Billy Jones, KC5EVD; Victor Richard, N5NAS; Bud King, N5UOG; Carl Hacker, KB5LDY; Betty Wilcox, KA0TEN; Allen Brier, WB5BIR; Connie Brier; Larry Levy, WD5DRB; Jackie Burton, KC5OHJ; Sam Wilson, N5CPA; and Dwayne Jones, KB5YTA.

Recording Secretary Louis House, KD5GM, presented the June minutes. The minutes were accepted by a unanimous vote after the changes "Houston Ham Comm" to read "Gulf Coast Ham Comm" and the addition of Carl Hacker's call sign "KB5LDY."

Treasurer, Donn Washburn, N5XWB, Presented the Treasurer's report showing a balance of \$3,887.42. The report was accepted with a unanimous vote. Donn also reported a club membership of 200.

Sam Wilson, N5CPA, Rag Chew Net Manager reported a good month with check-ins ranging from 8 to 14. Sam thanked Mel Thatcher, KB5ION and Charlie Prochaska, KG5KV for filling in as Net Control in his absence during the month of June.

Bud King, N5UOG, presented a schedule of the confirmed dates that have been reserved for the BVARC meetings from the period of July 2, 1996 to December 12, 1996. All Board meetings during this period are on the first Thursday of the month; however, there are four membership meetings that will not fall on the second Thursday of the month. These dates are: July 18, August 22, October 17, and November 21. Bud reported that the growing community use of the Sugar Land Community Center facilities and the fact that BVARC is a non-profit organization, placing the club as a number three priority user, was the reason second Thursdays were hard to

acquire for this six-month period. The Board thanked Bud for all his hard work in acquiring these facilities for the club.

Allen Brier, WB5BIR, gave an impressive report on the BVARC Field Day operation, stating that more contacts were made this year than last. Allen gave a complete rundown of the bonus points earned for the event. Allen also stated that a report will appear in the newsletter for August. The Board thanked Allen Brier, WB5BIR; John Hall, KC5EHW; Dwayne Jones, KB5YTA; and Michael Ricco, N5YKR for all their hard work, putting together a fine Field Day. A very special thanks was given to Carl Hacker, KB5LDY, for the splendid meal prepared for Field Day.

President Carl Cunert, WB8SVR, appointed Jackie Burton, KC5OHJ, to the Board as Editor of the BVARC newsletter. President Cunert thanked Ms. Burton for taking the job. Bud King, N5UOG, suggested that the wording "Serving Fort Bend and Harris Counties" on the header of the newsletter may be outdated as a description of BVARC's service area. Followed by some discussion, a motion was made for the wording on the header of the newsletter to be changed to read "Serving the Greater Houston Area." The motion passed with a unanimous vote.

Larry Levy, WD5DRB, recommended that word be passed on during the nets for articles for the newsletter to be passed on to Jackie Burton, KC5OHJ. Larry also pointed out that a public service net call-up procedure is published in the newsletter for July and that all members might want to keep it for future use, in case it is necessary for any one person to call the Net.

President Carl Cunert, WB8SVR, stated the FCC will allow vanity call signs to clubs in September and that he would like for the club to have a contest to pick a call sign for BVARC. Carl said that a prize can be decided on at the next Board meeting.

Dwayne Jones, KB5YTA, BVARC Public Service Net Manager, suggested that all announcements on the PSN be limited to two and a half minutes. Dwayne stated that this procedure would allow ample time for all the announcements, Newline and still run

the Net in a timely manner. Followed by some discussion, it was determined that a motion was not necessary for the Net Manager to adopt this procedure. A hearty thanks was given to Dwayne for doing a fine job with the Net.

Donn Washburn, N5XWB, brought to the Board's attention the possibility of purchasing a phone line to access the "Internet," and run those portions of the service that would be of interest to the amateur community through packet radio. It was determined that a program on this idea be put together for one of our membership meetings.

President Carl Cunert, WB8SVR, adjourned the meeting at 9:15 p.m. with a unanimous vote.

MEMBERSHIP REPORT*by Donn Washburn—N5XWB*

As of July 17, 1995, the current membership for the club is:

206

VOLUNTEER(S) NEEDED!*by Dwayne Jones—KB5YTA*

We are in need of a volunteer, or possibly several volunteers, to run the BVARC Public Service Information Net.

If you are not sure of the procedures used in running the net, the guidelines were published in the July 1995 issue of the newsletter.

Anyone wishing to volunteer or needing further information concerning the net should contact me as soon as possible.

73 Dwayne Jones—KB5YTA

FIELD DAY REPORT

by Allen Brier—WB5BIR

The 1995 Field Day at Katy Park has come and gone and I think it was a great success. This was my first time as a Field Day Chairman and I found out that it was a harder job than I thought it would be; however, I had great help from Dwayne, KB5YTA; Michael, N5YKR; and John, KC5EHW. I could not have done it without them. All in all, things turned out better than I thought, and a good time was had by all—not to mention the fact that we improved our score from last year!

First, the breakdown of scores:

80m CW—40; phone—8
 40m CW—134; phone—66
 20m CW—345; phone—19
 15m CW—17; phone—72
 10m CW—0; phone—5
 6m phone—86
 2m phone—43
 70cm phone—11
 Solar power phone—5
 Novice 10m phone—230
 Packet—5 (counts as CW)

Total: CW—541; phone—315 (+ novice)

In addition, we earned 1,400 bonus points made up of the following: 3 generators (300 points); ARRL member operators (total of 30 for 300 points); 100 points each from: Media Publicity, Location in Public Place, Information Booth, Message to Section Manager, WIAW Field Day Message, Natural (Solar) Power, Packet Radio and VHF/UHF Operation.

The total for the 1995 BVARC ARRL Field Day is 4,194 points, not including the Novice score (see note below).

I again wish to thank all involved, especially the operators: AA5LF, AK5G, K5HFT, KA0TEN, KB5DXP, KB5VHE, KB5YTA, KC5ASI, KC5FMT, KC5FMU, KC5HNJ, KC5OHJ, KC5UN, KD4ZBT, KF5NU, KC5CB, KD5GM, KG5KV, KG6JCM, KK5QQ, KK5W, N5VDA, N5XWB, N5YKR, WA3PMT, WA5SCE, WB8SVR, WD5CJL, and WN5A. If I missed anyone, my apologies. I also wish

to thank the cooks for an excellent spaghetti dinner Saturday evening and a great breakfast on Sunday morning. Those assisting in the cooking efforts were KB5LDY, KA0TEN, N5UOG, Christy Carrigan, and others.

Other thanks go to the following: Tommy, KC5ASI, for the use of his luxurious mobile home and 6.5kW generator; KB5VHE, for the use of his 4kW generator and assistance in erecting antennas; N5VDA, for packet assistance; AB5IP, for general help; Lonnie Jones (KB5YTA's father) for the use of his camper and winch truck; KB5DXP, for manning the talk-in station; KG6JCM, for pick-up and delivery of equipment; KF5NU, for the tall crank-up pole supporting one end of our 80/40 dipole; KK5W for antennas, camper and equipment; KC5FMT and KC5FMU, for VHF/UHF operation; K5HFX, for ice and coolers; Connie Brier, for ice and drinks; and anyone else for help and for just showing up to have a great time. I am sure I have missed someone, but offer my thanks for your help and apologies for not including your call/name here.

Although we had a few equipment failures and a few blown fuses, most everything worked well, and the weather cooperated with (relatively) low humidity, light breezes and less insect activity than last year. We were able to get the antennas up faster than last year and had the use of three air-conditioned camper/trailers. This is a trend that I hope will continue. Most stations were active until about 2:00 a.m., with the 40 and 80 meter stations manned almost all night. CW operators were more abundant this year, which is reflected in our overall increase in score. Hats off to the novice station (using the call of N5XWB), operated primarily by N5YKR and KB5YTA, for their great effort. Dwayne had so much fun on HF that he is considering going to code class so that he can upgrade! The down side is that somehow the novice station logs have been misplaced. We will make a gallant effort to either recover the logs or extrapolate a portion of them from the scratch sheet. We have until July 27th to submit the logs to the ARRL.

We operated 3A again this year; however, we had as many as seven stations operating simultaneously with only minor interference problems (except of course when KB5YTA tried in vain to answer the 20m station on their second harmonic in the 10m phone band!).

It's not too soon to be **thinking about next year's Field Day**. The Board of Directors has already decided to hold it at Katy Park again. I have **volunteered** to be Field Day Chairman, so if you have any ideas, I will be listening **all year long**. We might even increase to 4A or 5A if we can get enough activity!

Thanks again to everybody for their help, hard work and for the **good times!**

73 Allen Brier—WB5BIR

OF SPECIAL INTEREST...

Did you know it took a **murder** to convince the world the **telegraph** was a useful instrument? In 1837, Charles Wheatstone and William Cooke developed a six-wire **telegraph** system and installed some **short lines** for demonstration purposes. They **hoped** to sell it to the British railway system. The rail officials were **not impressed**. However, in 1844 a **woman** was murdered in Salthill, England, by a man who boarded a train for London. Police telegraphed ahead a **description** of the murderer, who was **captured** by London police and eventually **convicted** and hanged. News of the event made headlines confirming the **usefulness** of the telegraph.

(Taken from *Morse Code: The Essential Language* by Peter Carron Jr., W3DKV)

Along those lines, we **discovered** that Louis House, KD5GM, found a new use for CW on Field Day. It **seems** that Louis drove to Katy Park and could not get in the gate. After sending CW on his car horn, Allen Brier, WB5BIR, recognized the signals and **met him** at the gate. Good thinking, Louis!

The Editor

REPEATERS KC5OBT — 145.47 AND 444.55MHz

The Memorial Emergency Radio Association (MERA) is the corporation that owns and operates the 145.47 and 444.55MHz repeaters. The purpose of the organization "...shall be to provide the capability for emergency communications to the Memorial Hospital System." With this in mind, all repeater users stand ready to assist during an emergency. The FCC has recently issued MERA a club call sign—KC5OBT—and this is now the ID being used on both repeaters.

Here are a few facts about the repeaters: Antenna is a Diamond X 500-H at 182 feet above ground level; output for the 2m machine is 15W and for the 70cm transmitter is 10W; the subaudible tone on 2m is 123.0Hz and 103.5Hz for the 70cm unit.

There are ten volunteer control operators who monitor both repeaters continuously for proper use and compliance with all FCC rules and regulations. Some of the "no noes" are: no business communications; no broadcasting or news media gathering; no music; no criminal activities; no codes or ciphers; no obscenity, profanity, or indecency; no false signals; no retransmitting of radio signals; and no malicious interference. If any of these "no noes" are heard by the repeater control operators, the repeater(s) will be turned off until the violation ceases.

Various nets are conducted on the MERA repeaters. Should an organization wish to conduct net activities on either of the repeaters, prior approval will be required. Just contact any one of the board members (listed below) for the necessary approval, prior to your net.

All repeaters need maintenance, repairs, and enhancements to stay operating. In other words, it takes money to run a repeater. As a user, you should support your favorite repeater with annual donations. Donations to the MERA Repeaters should be sent to our treasurer:

Harold Parker—ND5F
1915 Spillers Ln.
Houston, TX 77043

MERA will conduct an open meeting on September 19, 1995 at 7:30 p.m. at Strake Jesuit, Rm. 503. Please come to voice your views and hear what we have done and plan to do with the repeaters.

73. MERA Board

Randy	AK5G	President
Jack	WN5A	Vice President
Harold	ND5F	Secretary
		Treasurer/Trustee
Bill	N5KXU	
Ray	WA5F	Trustee
Bud	N5UOG	
Allen	N5AFV	
Vic	N5NAS	
Mike	WB3HZP	
Betty	KA0TEN	

VE EXAM RESULTS JULY 1995

by Harold Parker—ND5F

The following are the results of the July 11, 1995 VE Exams given at Strake Jesuit College Preparatory:

The VE Team consisted of:

Louis House -	KD5GM
Harold Parker -	ND5F
Don Schexnaider -	AB5IV

The Assistants were:

Cass Germany -	KG5IT
Irene Gordon -	N5AYX
Steve Sinclair -	KC5CWP

All of us at BVARC again thank Vincent—WA5ETS and everyone at Strake Jesuit for making these excellent classroom facilities available to us for our exams each month.

73, Harold Parker—ND5F

July 11th Results

A total of 37 exams were administered during the evening to 15 applicants. Six unlicensed candidates received their new licenses: 3 technician and 3 "codeless" technician tickets. Four others upgraded with a total of 23 elements passed for an overall "pass rate" of 62%.

Congratulations to all the following who upgraded and/or passed exams:

Emmet Bargraser—Technician Plus
Kenneth Durham—Technician Plus
Fredrick Kracke, KC5OPK—Advanced
Suzanne Mountfort—Technician
Robert Newman—Element 2
Susan Newman—Technician
Robert Sorge, KC5FMZ—Advanced
Dale Temple, KC5HNJ—General
Van Ward, KB5DXP—Element 3B
Thomas Weldon, KC5OPM—General
Luther Westerman—Technician Plus
Elizabeth Williams—Technician

BVARC RAG CHEW NET CHECK-INS

by Sam Wilson—N5CPA

The BVARC Rag Chew Net is held on Wednesdays at 8:00 p.m. on 3.960MHz. The following check-ins were reported for the month of June:

June 7, 1995

KB5ION (NCS), KB5VTB, KF5NU, WD5CJL, W5EFB, W5GLD, KK5MS, KG5KV, KK5DO.

June 14, 1995

KG5KV (NCS), KF5NU, KI5SC, KB5PAJ, W5EFB, W5GHK, KK5DO, WA5TWL, KB5ION, N5UOG, WN5A, K5HFY, W5IHV, W5GLD.

June 21, 1995

KG5KV (NCS), KB5VTB, N5CPA, KB5ION, W5GHK, KF5NU, KK5DO, N5UOG, W5GLD, N5OAC, WB8SVR, KK5JJ.

June 28, 1995

N5CPA (NCS), KB5ION, KF5NU, N5AFV, KI5SC, KB5PAJ, AK5G, KG5KV.

THE WORLD OF TEN TEN INTERNATIONAL

by Al Mattis—NSAFV

The Ten Ten International convention held in Tuscaloosa, Alabama, June 15-17, 1995, was a great success. Approximately 140 persons attended the event. One of the highlights of the convention was meeting VK4WBH (Bill) and his wife, who traveled from Australia for the meeting. VE7AAP (Janis) and VE7ACM (Garry) from British Columbia took second place for miles traveled to the convention. Ten Ten members from Houston who attended the meeting included KC5CP (Mike) and his wife Margie, KA5OVO (Dave), KA5SHP (Jeanine), and K5AFV (Allen). The convention provided an opportunity for people to meet in person after having talked over the air.

The Houston Space Houston on Ten (SHOT) Chapter's weekly net continues to have approximately ten stations check in each week. The chapter is pleased to welcome Dale Brown, KC2PZ, as the newest local member. With the good E-layer propagation we have had, many out-of-town stations continue to check in to the net. A number of Houston area stations have qualified to apply for their Ten Ten numbers, and we hope that they will also join the Houston SHOT chapter.

With the recent improvement in propagation conditions, Ten Ten paper chasers have been very active on 28.345MHz. Chapters with specials for paper chasers this month include Branding Iron (TX), Ocean State (RI), and Peach State (TX). The most popular chapters among paper chasers this month appear to be Pirates of the Mississippi (IL), Twin Cities (MN) and Kansas Trails (MN).

Propagation on the 10m band has really picked up during the past month. Openings to both coasts occur regularly. Many states in the mid-portion of the country have strong signals each day. Some of the E-layer propagation has been so widespread that DX has been worked on 2 and 3 hop paths. Europe was worked by several Houston stations during the past month. The E-layer propagation this past month has ranked as

the best in almost a decade. Check out 10m and don't miss out on the fantastic summer conditions.

Remember, the Houston SHOT net meets every Tuesday evening at 8:00 p.m. local time on 28.488MHz. 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 10m band.

FROM THE EDITOR...

Greetings from your new editor. Being new to amateur radio, as well as a new member of BVARC, I decided the best way to get involved would be to jump in with both feet. So, here I am.

However, putting together a newsletter is not a job for just one. I guess you know what's coming next, right? Please don't stop reading just yet. It's not so bad. Don't think of it as work, but as an opportunity to help. I am sure each of you has his or her own area of expertise in the field of amateur radio, and this is a perfect opportunity to share that knowledge with fellow hams. Whether it's just a one-time article or a series of articles on a particular subject, your contribution(s) will be greatly appreciated—not only by me, but by the readers as well.

We, as amateur radio operators, are in the business of communications, which includes both verbal and written. Let's take this opportunity to "communicate" our knowledge with other hams. Even if you think what you know is no big deal, or everybody knows it already, don't let that stop you. It may be important to some ham out there, seasoned or new, who doesn't already know and is afraid to ask. This may be the only way he or she will ever learn.

So, with that in mind, let's all put our knowledge on paper and share it with others. Each and every one of you has

the opportunity to be a part of this newsletter, and I encourage you to do so.

Thanks for your support.

73 Jackie—KC5OHJ

SCANNER JACK'S CORNER

by Jack Roberts—KB5TMY

Harris County 800MHz trunking system.

Program your scanners as follows. Do not use delay. Lockout data channels. Program from highest frequency to lowest frequency:

✓ 860.7125	✓ 860.2375
✓ 859.7125	✓ 859.2375
✓ 858.7125	✓ 858.2375
✓ 857.7125	✓ 857.2375
✓ 856.7125	✓ 856.2375
✓ 860.4875	✓ 860.2125
✓ 859.4875	✓ 859.2125
✓ 858.4875	✓ 858.2125
✓ 857.4875	✓ 857.2125
✓ 856.4875	✓ 856.2125
✓ 860.4625	
✓ 859.4625	
✓ 858.4625	
✓ 857.4625	
✓ 856.4625	

UPCOMING SWAPFESTS

Texas City Hamfest

Saturday, July 29, 1995, Nessler Civic Center, Texas City, Texas. Opens at 8:00 a.m. For more information, call Carl (Bill) Steele (409) 948-0308.

Austin Summerfest

Weekend of August 4-6, 1995, Wyndham Southpark Hotel, Austin, Texas. General admission is \$7.00. For more information, call (512) 838-5045 (days) or (512) 345-0800 (evenings).

Victoria Swapfest

Saturday, August 19, 1995, Knights of Columbus Hall, Victoria, Texas. Door opens at 8:00 a.m. General admission is \$5.00, which includes 1 raffle ticket. For more information, call (512) 573-0821.

CHOOSING AN ANTENNA

by Rick Hiller—KF5NU

Choosing an antenna for your amateur radio station requires a little logical forethought. You should first decide what bands and modes you want to work and then choose the antenna that will provide the best performance for your particular operational situation.

There are many, many different antenna types and each one will provide good performance, but this performance will be limited to the band(s) or mode(s) for which the antenna was designed. For example, some antennas are designed for a single band while others are multi-band. Some antennas work DX well while others do not.

There are certain performance factors that will influence your selection of one antenna over another. These factors include gain, front to back ratio, polarization, angle of radiation, bandwidth, and physical size. It is best to take some time and learn the characteristics of each antenna type before you choose an antenna.

VHF Antenna Scenario

VHF repeater work is the easiest way to explain this antenna type versus performance/requirement correlation. Let's start with a ham with an HT that lives, as I do, close to the 145.47 repeater. All I need on my HT is a "rubber duck" antenna, which is an electrical 1/4 wavelength, helically-wound, shortened 2 meter vertical antenna. The important factor here is "vertical." FM repeaters historically have had their antennas vertically polarized due to the fact that repeaters were initially used to support commercial mobile VHF communication where antennas are more easily made vertical to work against (in a good way) the vehicle body. VHF frequencies are polarization sensitive, so in order to work into the repeater efficiently, I need to have a vertically-polarized antenna on my HT.

Now what if I move my home QTH away from the repeater a few miles? The repeater signal received is still strong, but I can't get into the repeater from inside my house due to the weak 2 watt HT

output signal. So, I put up a J-pole on my roof. A J-pole is a vertically polarized 1/2 wavelength antenna. I placed the antenna outside and in the line of sight of the repeater so repeater operation with my HT from my new house is back to normal and I am happy again.

But now I have to again move my QTH out 59 towards Wharton. This time, I am working on the extreme fringes of the repeater's operation, and both the reception and transmission are very poor, if not non-existent, even with my J-pole on the roof. I then put up an 11 element high gain yagi, again vertically polarized, on the top of my 50-foot tower I have up for my HF yagi antenna. I return again to normal operation into the repeater due to the increased gain and height of the yagi.

Now, I can continue this scenario by moving further out and putting up bigger antennas until I have phased/stacked yagi's on a 90-foot tower running a receive preamplifier and a linear amplifier on transmit, but I will stop here. You get my point, which is that you have to apply the correct antenna to the desired operational situation. Of course, you could put up a yagi while living in Houston right near the repeater, but this would be overkill and money wasted. However, if you wanted to work other repeaters that are on the coverage fringe at your house in Houston, you still may want to put up the yagi on a rotator to achieve the necessary gain and directionality to work these fringe repeaters.

An HF Antenna Scenario

(My Sharpstown city lot QTH)

Most hams would agree that the most popular and useful antenna for HF work is the rotatable yagi or quad beam. These antennas, used mostly on 20 meters and up, provide gain on both receive and transmit. They are able to be pointed toward the station or area to be worked, and interfering signals off the sides or back of the beam will be attenuated. Beams come in various sizes and configurations. Some have 2 elements, some 3, 4, or even 6 elements, depending on the physical size restrictions of the support structure. Most HF work is not like the above VHF scenario. Most of the time, we are not

looking for constant reliable communication. What we are looking for is an antenna system that performs the best in the propagation conditions that exist any time we turn on the radio.

HF Yagis are horizontally polarized and their radiation launch angle varies with their proximity to the earth. If we want to work close in stateside contacts, we would probably place the yagi less than 1/2 wavelength high for a high launch angle. If we want a majority of DX signals, a yagi must be placed at least 1/2 wavelength or more above the ground at the operational frequency. The higher up we place the yagi, the lower the launch angle; therefore, we can work DX that is further and further away. So, my 50-foot tower with a tri-bander yagi at 50 feet works great for 20, 15 and 10 meter DX. Monoband yagis would provide better performance, but I have to compromise due to my tower's wind load restriction.

Now if I also want to work the lower bands of, say 40, 80 and 160 meters, I need to apply a little thought to my antenna situation. Although beams are made and used for these lower bands, they are big and actually too large for my lot size and too heavy to support on my tower. I therefore need to utilize alternate antennas for these bands. My low band antenna farm design goal has the following criteria: 40 meters—work DX, 80 meters—work both DX and local contacts, and 160 meters—work local contacts. 40 meters DX requires an antenna that has a low radiation launch angle so that my signal travels as far as possible before it is reflected back to earth. On 80 meters, I need this DX low launch angle situation, but I also need a high launch angle for the BVARC Ragchew Net. 160 is a high launch angle situation.

On 40 meters, I decide to place a full-wave triangular delta loop hanging vertically from my tower at 46 feet, just under the tri-bander. The bottom corners of the triangle are at 15 feet and are tied off to support poles. By feeding the delta loop at one of the bottom corners, it will give me vertically polarized, low launch angle radiation in an omnidirectional pattern. Loops also provide a slight

increase in gain over a vertical or dipole and they are inherently quieter than other antenna types on receive.

On 80 meters, a loop would not fit under the yagi, so I decide to use my tower as a top loaded (the yagi acts as a capacitive hat) 1/4 wavelength vertical using elevated radials. I feed my tower directly with the coax center wire at the 10 foot level (an equation from the *Low Band DXing* book helped me figure this 10-foot feed point), and then I connected four elevated 1/4 wavelength (65') radials to the coax shield. This "quasi-inverted sloper" makes a fine 80 meter vertically polarized omnidirectional DX antenna. On receive, the noise level of natural static (QRN) on 80 meters is very high. Vertically polarized, man-made noise is also received just as well as signals. Because of these noise factors, I decide to place a full size (245') horizontal 80 meter loop mounted on poles at the 25 foot level around my property line. This loop makes a great low noise receiving antenna for 80 meters (and other bands), and will also work great as a horizontally polarized, high launch angle and ground wave 80 meter antenna for local QSOs.

On 160, I only want a local signal, so I load my 80 meter loop as a long wire through my tuner by removing one end of my feed line from the tuner and let it hang loose (away from the tuner chassis, of course). This is a compromise, but good enough for the little ragchewing I do on 160.

Why?

So by now you're asking why different antennas for each band and why go to all of the trouble? Well, what I am trying to do is get the best compromise between my operational goals, antenna performance, physical size and compatibility with the other antennas, towers and support poles.

Yes, there are other antennas that will work. For example, a multi-band vertical will function nicely on 80 thru 10m, but I will get much better performance with the individual antennas that I have chosen. Verticals are susceptible to interference from man-made noises and the city is full of man-made noise. A receive loop would be a necessary

addition. Now, I could also use a multi-band 80 thru 10 wire dipole, but due to the horizontal polarization the radiation launch angle is a function of its height above the ground. This dipole hung at 50 feet would be a good DX antenna on 20 and above but the DX performance on 40 and 80 would suffer; however, if you only work stateside contacts on these bands, this dipole will work just fine.

So, in order to attain the best overall station performance, it is best to spend some time beforehand thinking about the frequencies on which you want to operate and what kind of contacts you would like to make. Read a few of the amateur or shortwave antenna books which are either available for loan at the Houston Public Library, or for purchase at your local ham emporium. Also, talk to your Elmer about the different antenna types. Learn the pluses and minuses of each antenna before spending your hard-earned cash. If you have a deed restriction or physical space problem, there are other antennas that can be put up. They will be a compromise and not work as well as the full size antennas, BUT they will get you on the air.

I hope this article has given you some insight into how to choose an antenna by looking at your requirement(s), studying the different antenna types and then selecting a skyhook that will provide you with the best performance and the most fun from your particular amateur radio station.

73 Rick Hiller—KF5NU

WHY AN AMATEUR RADIO OPERATOR IS CALLED A HAM

The word "ham" was applied in 1908, and was the call letters of one of the first amateur wireless stations operated by some members of the Harvard Radio Club. They were: Albert S. Hyman, Bob Almy and Peggie Murray. At first, they called their station "Hyman—Almy—Murray." Tapping this out on code called for a revision, and they changed it to "Hy—Al—Mu," using the first two letters of each name. Early in 1909, some confusion resulted between

signals from these amateurs. "Hyalmu," and a Mexican ship named "Hylamo," so they decided to use only the first letter of each name. Thus, the call became "HAM." In the early pioneer unregulated days of radio, amateurs picked their own frequency and call letters. Some had, as now, better signals than some commercial stations. The resulting interference came to the attention of congressional committees in Washington, and they gave much time to proposed legislation designed to critically limit amateur activity. In 1911, Albert Hyman chose the controversial wireless regulation bill as the topic for his thesis at Harvard. A copy was sent to Senator David Walsh. The Senator was so impressed, he sent for Hyman to appear before the committee. He was put on the stand, and described how the little amateur station was built, and he almost cried when he told the crowded committee room that if the bill went through, they would have to close up the station because they could not afford the license fees and all the other requirements which were set up in the bill. The debate started, and the little station "HAM" became a symbol of all the little amateur stations in the country crying out to be saved from menace and greed of the big commercial stations who didn't want them around. Finally, the bill got to the floor of Congress and every speaker talked about the poor little station "HAM." That's how it all started. You will find the whole story in the Congressional Record, "Nationwide Publicity Associated Station 'HAM' with Amateurs." From that day to this and probably to the end of time, in radio, an amateur is a "HAM."

(The preceding article was donated by Bud King, N5UOG, reprinted from Mike and Key, and Florida Skip, Frank (KB7LYM).)

THE EPICUREAN HAM

by Carl Hacker—KB5LDY

This month's column features directions for feeding a sizeable crowd such as would be assembled at a Field Day exercise or a relief shelter. The dinner described here did in fact feed about 50 people at BVARC's 1995 Field Day outing. Do not attempt this recipe without the proper burners, pots, and stirring spindles. Keep the beef at 40 deg. or less until you are ready to cook.

Spaghetti Dinner for 50

Sauce

- 14 lbs of ground beef
- 12 onions (10 lbs)
- 10 green peppers (6 lbs)
- Mushrooms (if cost is not a concern)
- 11 cans of crushed tomatoes (28 oz)
- 3 cans of tomato paste (12 oz)
- 3 cans of tomato sauce (15 oz)
- Garlic powder (3 oz)
- Oregano (1.6 oz)
- Black pepper (1 oz)
- Salt (To taste)
- Sugar (to taste)
- Olive oil (to saute onions and peppers)
- Parmesan cheese

Brown meat with spices, and saute onions, peppers, and mushrooms in olive oil. Combine with tomatoes and paste in large pot (at least 60 quarts). Add water as needed and simmer uncovered for at least 2 hours. Stir often to prevent scorching. Skim off grease as it rises.

The amount of spice above gives serviceable flavor. More spices should be added to taste. A couple of bottles of tabasco sauce is popular in this area.

This recipe provides about 70-75 12 oz. servings. Nine pounds of pasta should be sufficient for parties with moderate appetites. Pasta is cheap and stores well, so an extra 3 to 6 pounds will assure seconds for the larger appetites. A 30-qt. pot with basket is needed for the pasta.

Salad

- Lettuce (6 heads or bunches; mix iceberg with leafy varieties)
- 10 tomatoes
- 10 cucumbers
- 3 bunches of scallions
- 5 cans of black olives

Shred lettuce and cut other ingredients to appropriate size. Mix in clean 30 gallon garbage bag. A crowd of 50 will use less than 3-12 oz. bottles of dressing.

Eight loaves of French bread and 2 bottles of squeeze margarine will complete your meal.

The next column will feature an enchilada recipe prepared in a Dutch oven.

PUBLIC SERVICE EVENTS

by Mike Hardwick—N5VCX

We need volunteers for the upcoming Alamo challenge. Please call NOW if you want to participate in this event so that sleeping arrangements may be guaranteed.

The following events are scheduled:

Sept. 23rd and 24th—Saturday/Sunday
 ALA Alamo Challenge Bike Tour
 Contact: Mike Hardwick—N5VCX
 (713) 771-4625

Oct. 8th—Sunday
 20K Marathon Warm-up
 Contact: Open—volunteer needed

Oct. 21st and 22nd—Saturday/Sunday
 Houston Symphony Classic
 Contact: Bret Prichard—N5VOY
 (713) 645-5400

Oct. 21st and 22nd—Saturday/Sunday
 Wings Over Houston Air Show
 Contact: Bill Terrell
 (713) 486-4552

Oct. 28th—Saturday
 MS Enduroskate
 Contact: Open—Volunteer Needed

Oct. 29th—Sunday
 Texas Coastal Bike Ride
 Contact: Bret Prichard—N5VOY
 (713) 645-5400

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WEEKLY NETS

MONDAY

- 7:30 p.m. - 34.94 Swap Net
146.94 MHz
- 8:00 p.m. - Ft. Bend Cty EM Net
145.49 MHz
- 9:00 p.m. - BVARC Net
145.47 MHz
and Linked Repeaters

TUESDAY

- 8:00 p.m. - Ten Ten SHOT Net
28.488 MHz
- 10:00 p.m. - AMSAT Net
147.10 MHz

WEDNESDAY

- 7:30 p.m. - BVARC Rag Chew
3.960 MHz (+/- 3 kHz)
- 8:30 p.m. - BVARC Code Net
146.47 MHz - Receive Only

FRIDAY

- 8:30 p.m. - BVARC Code Net
146.47 MHz - Receive Only

SATURDAY

- 9:00 a.m. - Houston Emergency
Management Net
146.84 MHz
- 9:30 a.m. - Houston Emergency
Management Net
3.905 MHz

SUNDAY

- 7:30 p.m. - ARES Net
147.30 MHz
- 2nd & 4th Sundays
1:30 p.m. TX State RACES Net
7.248 MHz

BVARC VE EXAMS

6:00 p.m. - CHECK IN
Second Tuesday Each Month
Strake Jesuit College Prep School
Room 503

PLEASE CALL TO REGISTER:
Harold Parker - ND5F
(713) 464-9044 or
Cass Germany - KG5IT
(713) 682-6897

\$5.90 Exam Fees
Photo ID plus one other
Original License and one copy
Original Credit Certificates and
one copy of each cert held
2-4 Sharp Pencils
One Fee covers all exams taken
during the same test session.

No Fee for Elements 2 & 1A Only

Code Exams - 20, 13, & 5 WPM
are given in that sequence.
Written Elements given in lowest
to highest sequence
Written exams may be taken
while the code exams are given
Quiet Please
OR
Written exam(s) may be started
after all code exams have been
completed - your choice.

CODE/THEORY CLASSES

Classes for the Morse Code and
Novice and Tech No-Code exams
are scheduled throughout the year.
Currently no classes are being
conducted, though with interest,
that can and will change.

BVARC MEETINGS

7:30 p.m. August 3rd at Sugar
Land Community Center
Board of Directors Meeting
Open to All BVARC Members

7:30 p.m. August 10th at Sugar
Land Community Center
Program: Ice Cream Social

CW PRACTICE NET

QST QST QST de KD5GM BT /
A Morse code practice net has
been established in response to the
last BVARC Code Class's desire to
have a common place to practice.
The net meets on Wednesday and
Friday nights at 8:30 p.m. on the
simplex frequency of 146.47 MHz.

The BVARC CODE NET will
have a voice check in, though no
check in is necessary. A text will
be transmitted by modulated tones
on FM (MCW) with the source
announced in Morse code; speeds
of 5 to about 9 WPM are presently
sent.

As many as eight check-ins an
evening participate, but that does
not count the "just listening"
bunch. Join the fun, check in if
you wish, or just tune in and copy
along.

CUL ES 73 de KD5GM AR SK

