

the B-VARC BULLETIN

The Monthly Publication of The Brazos Valley Amateur Radio Club

Volume 18 Issue 10

October 1995



NOTES FROM THE PRESIDENT

by Carl Cunert—WB8SVR

There is, in everyone's life, a set of choices to make. That is part of life. Some of these choices we come upon are like a double-edged sword. While there is a good edge to the weapon, we must also remember that there is another edge that cuts equally as well.

Some time ago, I accepted an opportunity with my company in Ohio in order to be near my parents, in-laws and family. For this, I am very eager to get going and get my life and family back together again. This is, however, only one edge to the sword, and as I said earlier, the other edge is just as lethal. With much sadness, I will have to leave maybe one of the best associations in my life, and that is you, the Brazos Valley Amateur Radio Club. I very much want to and will remain a member in good standing. All of you have made this hobby even better for me than I thought possible.

What helps make this club special and fun is every member, regardless of the license held, and especially the board of directors that I had serving with me. Their dedication to the success of our club can never be underestimated.

To Bud King—who kept us on course every time, except when the Rockets were playing in the finals; then we kept him on course. My deepest wish for unending happiness. Thank you.

To Claude Sessions—for his guiding leadership and help with the newsletter. Thanks, even if you're not using a Xerox anymore. I think that will change again.

To Vic Richard—your presence on the board kept us focused on what this club really means to all of us.

To Donn Washburn—maybe the most fun I had agreeing to disagree with anyone, but who keeps books better than I dreamed of doing myself, and whose

fiscal management can never be questioned.

Billy Jones—thanks for unending work keeping up with all the club business such as the roster, which alone can be a task to scare brave men. Your work for us is outstanding.

To Louis—the welcome voice on the dark roads of Alabama, a night I will never forget. These meetings could not be possible without you.

Now to Ron Grimes—this is for those days of eating Bar-B-Q at the Texas Brisket. I feel that if you don't want to be the next President of B-VARC, it will be the club's loss. Think about it—it's more fun than work.

So, on September 27, 1995, I will be on the road, and as of that date, I will no longer be your President. That is depressing to think about. Louis and I will work something out for HF, so there is another reason to upgrade (Dwayne). I would truly like to hear from all of you at one time or another. With that, board of directors, I know that B-VARC is in good hands, both now and in the future. I thank all of you for allowing me to call you my brother and sister in amateur radio.

Carl—WB8SVR

SPECIAL THANKS

All of us at B-VARC 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.

We would also like to thank Claude Sessions—K5HFY, and all the other B-VARC members who volunteer their services in helping to put the bulletin together. It couldn't be done without you.

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Vice-President:

Ron Grimes—WA5SCE
(713) 341-7137

Recording Secretary:

Louis House—KD5GM
(713) 498-5639

Corresponding Secretary:

Billy Jones—KC5EVD
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Treasurer:

Donn Washburn—N5XWB
(713) 498-0569

3-Year Board Member:

Bud King—N5UOG
(713) 494-3741

2-Year Board Member:

Claude Sessions—K5HFY
(713) 242-6069

1-Year Board Member:

Vic Richard—N5NAS

Past President:

Doug Holley—KE5SR
(713) 342-8028

B-*VARC* BOARD MEETING*by Louis House—KD5GM*

A quorum of the B-*VARC* Board of Directors met at the Sugar Land Community Center on September 7, 1995. This was the ninth meeting of the calendar year. President Carl Cunert—WB8SVR, called the meeting to order at 7:35 p.m.

The following Board Members and guest were in attendance: Carl Cunert—WB8SVR; Louis House—KD5GM; Donn Washburn—N5XWB; Billy Jones—KC5EVD; Victor Richard—N5NAS; Claude Sessions—K5HFY; Bud King—N5UOG; Al Zermeno—KK5W; Jackie Burton—KC5OHJ; Mike Hardwick—N5VCX; Dwayne Jones—KB5YTA; and Jack Roberts—KB5TMY.

Treasurer Donn Washburn—N5XWB, presented the financial report, showing a balance of \$3,542.70 to this date. The report was approved with a unanimous vote.

Recording Secretary, Louis House—KD5GM, presented the minutes for the month of August. The minutes were approved with a unanimous vote.

Jackie Burton—KC5OHJ, in the absence of Sam Wilson—N5CPA, gave the report for the B-*VARC* Rag Chew Net. The Net meets on Wednesday evenings at 8:00 p.m. on 3960kHz, + or - 3kHz for QRM. The high check-in for the month of August was 16 on the 2nd and the low was 11 on the 30th. Phone check-ins are welcome, and the number to call is announced on the net.

Special Events Coordinator, Mike Hardwick—N5VCX, reported that the ALAMO Challenge bike ride is in need of volunteers. The event is on the 23rd and 24th of September. This is a Saturday and Sunday. Mike expressed his concern to the Board that too few of our members are volunteering to help with the public service events. These events are an excellent way to show amateur radio's worth as a public service to our communities. Mike said "B-*VARC* was built up on the basis of public service." There was much discussion on how to get B-*VARC* club members more interested in participating in the 14 events that B-*VARC* sponsors the communications for each year. The idea of awards, such as certificates for service, was discussed.

Also, the possibility of having our Section Manager speak at one of our general meetings might be a good idea.

President Cunert—WB8SVR, thanked Mike Hardwick—N5VCX, for all his hard work in the area of public service through amateur radio.

Donn Washburn—N5XWB, raised the question concerning the proposed dues structure amendment changes to be made to the by-laws. The changes sought would allow for 12-month membership to start on the date that dues are first paid and expire 12 months from that date. Billy Jones—KC5EVD, said that the appointed committee of Ron Grimes—WA5SCE, Harold Parker—ND5F and himself had not met to-date. Billy said the committee would meet soon. It was determined that the amendments could be published in the September bulletin and in a timely fashion, be voted on at the October general membership meeting. No further action was taken.

Donn Washburn—N5XWB, brought to the Board's attention the issue of selling the club's gin pole. After some discussion, a motion was made and seconded to sell the gin pole. The motion passed with a unanimous vote.

Dwayne Jones—KB5YTA, program chairman stated that John Moore—KK5NU, will speak at the September meeting. The program will be on the Internet. Louis House—KD5GM, will speak at the October meeting and that program will be on the ARRL's National Traffic System and the Public Service Honor Roll. There will be no program for the November meeting because that meeting will be the time for the nomination of officers for 1996. The December meeting is still open. There was also much discussion about a picnic for the club, followed by much discussion.

Al Zermeno—KK5W, responded to a previous request from President, Carl Cunert—WB8SVR, concerning teaching theory classes for novice and technician class amateur radio licenses. Al said he would be glad to teach the theory classes and that he would like other persons in the club to help out. The location and date had not been decided at this time. President Cunert thanked Al for volunteering to teach the theory classes.

Billy Jones—KC5EVD, stated that he is still working on finding vendors to do

badges for club members who may want them. After some discussion, President, Carl Cunert—WB8SVR, said that Billy could explain to the membership what he has found available in the way of badges.

Bud King—N5UOG, asked if there had been any further discussion about the B-*VARC* VE group being asked, formally, to sponsor a test session for the Gulf Coast Ham Comm. Al Zermeno—KK5W, stated that he could officially request the B-*VARC* VE group to put on a test session and that he would contact Harold Parker—ND5F, concerning this matter. No further action was taken at this time.

Louis House—KD5GM, presented a letter which he had received in care of the B-*VARC* Board of Directors. The letter expressed the disappointment, from one of B-*VARC*'s members, in the amount of distractions created by several side conversations taking place at the same time other members are giving club announcements during our club meetings. After much discussion about being courteous to speakers and listeners alike, President, Carl Cunert—WB8SVR, said he would cover this issue at the September general meeting.

Bud King—N5UOG, asked the Board's permission in making a donation to the City of Sugar Land Parks and Recreation Department for a "Halloween Night For the Kids" event that the City holds for the community children each year. The Board members all agreed that the donation was a good idea. The Board asked Bud to please make the donation and be reimbursed in the near future.

President, Carl Cunert—WB8SVR, read a letter of resignation to the Board. President Cunert's Resignation will take effect on September 27, 1995. The reading of the letter was acknowledged with a warm round of applause. A copy of the letter is attached to these minutes. [Letter follows on next page.]

A motion to adjourn was passed with a unanimous vote at 9:10 p.m.





OUT OF THIS WORLD HAM RADIO ACTIVITY

by Bruce Paige—KK5DO

Segment 3: Coax

Last time we talked about what type of radios to use for working satellites. Now that you have a radio in mind, you are going to need some coax to run to your antennas.

If you take a look at your total satellite station, we need to consider good antennas, good coax and a good receiver in the total solution. If you skimp on any one of these items, you could suffer tremendously by not being able to hear a weak DX station.

Coax is a very important part of a satellite station. It is almost as important as the antennas you choose. As you might know, all coax is not the same. Some of the common types of coax that you have probably heard of are RG-8, RG-58, RG-213, Belden 9913 and Hardline.

The biggest problem you will have with your coax is line loss. The loss is calculated based on a 100-foot piece of coax and then the type of dielectric, the size of the conductor and other variables. The best coax you could purchase that would have virtually no loss would be one where the center conductor is suspended in air with the shield not touching the conductor.

As this is impossible, various types of materials are used to hold the conductor. These materials are normally foam and plastic. Some of these look like spider webs and some are thin ribbons that spiral wrap the conductor.

Using 2m for downlink, RG-8 would have a line loss of 2db and on 70cm a loss of 3.8db. RG-58 has a loss of 7db and 15db, respectively. As you can see, between these two common types of coax you can have significantly greater gain by choosing RG-8 over RG-58, but the 2 and 3.8db loss is not acceptable in satellite work. We would like this loss to be as close to zero as possible, since the signals from the satellites are so weak.

Now, let's look at Belden 9913. On 2m, it has a loss of 1.6 and on 70cm, the loss is 2.8db. Half-inch hardline has a loss on 2m of only .9db and on 70cm, 1.9db. This, when compared to RG-8 or RG-58, would be a fantastic gain. Belden 9913 is a solid core coax. I use coax that is similar to Belden 9913, but is a stranded

core that makes it easier to manipulate and won't crack as easily when cold.

If you are going to work 1.2G, Belden 9913 loss would be 5.8db and half-inch hardline loss is 3db. RG-58 would be useless because its' loss is 25db. You can see that the better the coax, the more signal you will save from the antenna to the receiver. If you were to add a pre-amp to your antenna, and you had a high signal loss, you would wind up amplifying the noise and basically you would hear nothing.

When making your selection for coax, it would be easy to select hardline but the cost might be more than you could afford. 9913 type cable runs about \$1 per foot; however, hardline might run \$1.50 to \$2.00 per foot. This might not be affordable, therefore the 9913 cable would be more cost effective. You should not consider using RG-8 or RG-58 for your satellite station—the losses are simply too high; however, they might work as a starter coax to get you on the air while you decide which coax to purchase.

Choose the best coax you can at a price you can afford. Remember, every connector you add to the middle of your coax will add 1/2 db loss. Therefore, you do not want to purchase 4 pieces and hook them together with connectors. Don't forget that 3db is also a significant loss on the transmitter side as well. Just think how much more effective radiated power you would have using coax that has 3db less loss than another.

One final thing to keep in mind. The shorter your coax run, the less loss. As you can see, if you have a 6db loss on a 100-foot run and you move your equipment closer to the antenna and save 50 feet, you will also effectively double your power and the received signal. That could make for a very impressive station if you can get the signal loss as close to zero as possible.

Remember, you can have all the linears and all the coax and the highest tower in town. But, if you can't hear the other guy, it's all useless. Keep the coax short, keep the power low, and build the best receive station you can. You'll be surprised. If you keep this in mind, you will be able to work everyone with minimal power and hear them even better.

LETTER OF RESIGNATION

Letter dated September 7, 1995:

It is with deep regret that I announce to the Board of Directors my resignation as President of the Brazos Valley Amateur Club on this day commencing on the 27th day of September, 1995.

All of you my fellow board members have made this one of the greatest moments in my life. Your unwavering trust in me as the President, and your support and direction has made this a difficult thing for me to do. And, I only hope and pray that if an opportunity of this nature is ever bestowed on me again that I will do this fine body of members proud.

Thank you, in some cases is never enough and this is one such occasion. All of you will be going with me in my fondest of memories for the rest of my life. I do plan on staying a member even in Ohio and will occasionally visit. I hope to stay in touch via HF as time goes on, for the little bit of Texas I take with me is due to all of you.

Thank you again for allowing me to be a part of it all.

/s/ Carl F. Cunert—WB8SVR

MEMBERSHIP REPORT

by Donn Washburn—N5XWB

As of September 14, 1995, the current membership for the club is:

218

THE INTERNET

by Jackie Burton—KC5OHJ

At the September regular meeting, John Moore—KK5NU, gave a presentation on the Internet. The following article is the first in a series of articles he has written for publication in the B-VarC Bulletin.

Also, Billy Jones—KC5EVD, is in the process of adding e-mail addresses to the roster. If you have an e-mail address, please relay that information to him via e-mail at his Internet address, bjones@aramco.com, for inclusion in the next printing of the roster.

The Editor

All You Want to Know About the Internet and More

by John W. Moore—KK5NU

We've all heard all the hype and fervor over the newest thing that promises to be the best since sliced bread: the Internet—the "Information Superhighway"—that everyone must have access to and that's going to solve all of our problems. It lets us instantly have access to online shopping, worldwide communications and basically plug America into the 21st century. So, just what is this "Internet"—what exactly is it, how did it get started, where do you find it, and most of all, why do you just have to have it for yourself and aren't able to live without it?

What is the Internet?

That's a seemingly simple question and of course, can be answered in a few short words...wrong! Well, can you define the Internet? Perhaps the best way to delineate just what we're talking about is to tell you that the Internet is just an incredibly large, vast, huge network of networked computers. Hmm. Think of your own amateur radio station/computer and let's get back to that in a few minutes) as a standalone point on this planet, at a fixed little place in the universe. By itself, even with you at the controls as the operator, unless and until someone else is out there somewhere in space listening, you cannot communicate with any person or place. Imagine Marconi, as he put the first crude transmitter on the air for the very first time—"Is somebody out there?" Why, even old Samuel F.B. Morse had to have another operator on the other end of the line when he tapped out the famous "What hath God wrought" over the first

telegraph line between Baltimore and Washington, DC. And, who can forget Thomas Alva Edison's companion who went down in history after "Come here, Watson—I need you." Surely we all remember "Houston—Tranquility base here. The Eagle has landed." Sent chills down my back when I heard that message live from the surface of the Moon a little over 25 years ago.

So, in and by itself, the telephone, radio or computer is almost worthless. With the network to connect to and through, the horizons get vastly enlarged. And, so it is with the Internet. No matter how you get the connection, it's just a matter of where the path leads and what you can find in your electronic travels.

More to come...

John Moore—KK5NU

**VE EXAM RESULTS
SEPTEMBER 1995**

by Harold Parker—ND5F

B-VarC again sponsored and administered the ARRL's Amateur Radio Examinations that were held on Tuesday evening, September 12, 1995 at Strake Jesuit College Preparatory in Houston.

The VE Team consisted of:

Harold Parker -	ND5F
Randy Pollard -	AK5G
Mike Strong -	KT5H

The Assistants were:

Carl Albrecht -	AA5JW
Cass Germany -	KG5IT
Irene Gordon -	N5AYX
Don Schexnailder -	AB5IV

A total of 18 exams were administered during the evening to 11 applicants. Three (3) unlicensed candidates received their new licenses—1 technician plus and 2 technicians. One (1) other upgraded, with a total of 10 elements passed. The overall "pass rate" for the evening was 56%.

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

John Dryton - Technician Plus
 Gene Goings—KC5NMN - General
 James Haynes - Technician
 Lanny Poteet—KB5VTB - Element 4B
 James Roach—KK5OT - Element 4B
 Justin Roach - Technician
 Robert Warren—KC5QIP - Element 3B

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—WA5ETS, and everyone at Strake Jesuit College Preparatory for making these excellent classroom facilities available to us for our exams each month.

73, Harold Parker—ND5F

**B-VarC RAG CHEW NET
CHECK-INS**

by Sam Wilson—N5CPA

The B-VarC Rag Chew Net is held on Wednesdays at 8:00 p.m. on 3.960MHz, +/- 3kHz. The following check-ins were reported for the month of August:

August 2, 1995

N5CPA (NCS), W5GHK, N5ECP, KE5SR, N5OAC, KB5ION, W5IHV, W5GLD, WD5CJL, KJ5SS, AB5OK, W5EFB, KF5NU, KG5KV, KC5HJ, K5HFY

August 9, 1995

N5CPA (NCS), KB5ION, N5UOG, KK5RL, KJ5SS, N5OAC, W5GLD, W5IHV, KK5DO, KC5HJ, WN5A, WASTWL, W5RIY

August 16, 1995

N5CPA (NCS), KJ5SS, WASTWL, N5OAC, KE5SR, W5GLD, KG5KV, KF5NU, N5RSJ, KC5HJ, W5IHV, WB5VYR, WD5CJL

August 23, 1995

N5CPA (NCS), KJ5SS, KG5KV, N5OAC, KI5SC, KB5PAJ, KK5DO, W5EFB, W5IHV, KB5VTB, KK5RL, W5GLD, KB5TBZ, KC5MBV, WN5A

August 30, 1995

N5CPA (NCS), KB5ION, W5EFB, WD5CJL, KK5DO, KC5MBV, KK5RL, KC5HJ, KG5KV, W5IHV, W5RIY

THE WORLD OF TEN TEN INTERNATIONAL

by Al Mattis—N5AFV

The Ten Ten International 1995 Fall CW QSO Party will be held October 21-22, 1995. The SHOT (Space Houston on Ten) chapter plans to participate in the event, and we hope that a number of Houston area stations will join us in the chapter nets held on 28.488MHz on Friday and Saturday evenings during the contest weekend.

Check-ins to the Houston SHOT chapter's weekly net have dropped a little in the past month, but still average 8 to 10 for each net. The chapter is pleased to welcome Dave Topp—KK5QR, and Terry McCoy—KK5RL, as the newest local members. A number of other Houston area stations recently received their Ten Ten numbers, and we hope they will also join the chapter.

Despite the poor propagation of recent weeks, paper chasers continue to be active on 28.345Mhz. Chapters with specials for paper chasers this month include: Branding Iron (TX), Peach State (TX), and Speedway (OR). Pirates of the Mississippi (IL), Twin Cities (MN) and Kansas Trails (MN) continue to be the most actively worked certificate programs. John Drozdowski—WB2LLH, is the new certificate manager of the Trotter and Pacers (NJ) raceway upgrade program. Dave Becker—K7PRZ, certificate manager of the Portland Bridges program of the City of Roses chapter, has moved from Oregon to Colorado. Dave will continue to perform the certificate manager duties for Portland Bridges.

Propagation on the 10m band has been poor the past month. There continue to be a few domestic openings, as well as occasional propagation to Latin America. These poor conditions should be expected because we are in the bottom of the sunspot cycle. Propagation should begin to improve in late 1996.

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.

VOLUNTEERS NEEDED

by Al Mattis—N5AFV

This year's 25K Marathon Warm-Up Series Race will be held on Sunday, November 12, 1995, and volunteers are needed to provide communications for the event. Providing communications at a public service event is a lot of fun, and it helps provide a positive image of amateur radio in the community.

For the fourth consecutive year, the 25K race will be run along Memorial Drive, with the start and finish lines being located in downtown Houston. Amateur radio communications has played an important role in previous years. Houston area race directors still talk about the year that a hot air balloon landed on the 25K course, just as the race was about to start. The course was blocked, and amateur radio operators were able to notify the race director and delay the start of the race until the balloon was cleared. Amateur radio also played a key role in past years in passing medical traffic. The race covers a distance of 25 kilometers (15.5 miles) and is a serious athletic event rather than a "fun run." In six of the last eight years, injured runners from the 25K race have been taken to the hospital by ambulance.

If you wish to help provide communications at this year's 25K race, please contact me at 609-5711 during the daytime, or 721-3637 in the evening before 9:00 p.m.

UPCOMING SWAPFESTS

Belton, Texas

Ham Expo '95, held at the Bell County Expo Center, Saturday, October 7, 1995. Begins at 7:00 a.m. For more information, contact Mike—WA5EQQ, at (817) 773-3590 or Eric—N5WFU, at (817) 986-1257.

Biloxi, Mississippi

Swapfest held at the Mississippi Coliseum and Convention Center, Saturday and Sunday, October 7 and 8, 1995. For more information, contact Ken Burton at (601) 872-1804.

SCANNER JACK'S CORNER

by Jack Roberts—KB5TMY

Here are some frequencies for area police and fire departments:

Alief Community FD TACS

38.52 - Dispatch
868.8875
867.8875
868.7375
867.7375
868.6375
867.6375
868.3875
867.3875
868.1375
867.1375
154.280 - High band Mutual Aid
155.340 - HAHERN
866.0125 - TAC 1
866.5125 - TAC 2
867.0125 - TAC 3
867.5125 - TAC 4
868.0125 - TAC 5

Stafford/Sugar Land/Missouri City PD and FD

860.9625
859.9625
858.9625
857.9625
856.9625
488.7625 - Ft. Bend School Bus
154.220 - Ft. Bend Co. Dispatch
154.235 - Ft. Bend NE 1
159.235 - Ft. Bend NE 2
154.205 - Thompsons 2
154.445 - Pecan Grove FD
45.320 - Richmond/Rosenberg FD
37.260 - Katy/Brookshire FD

West I-10 FD

33.92 - Dispatch
855.9625 - Trucks

Houston FD

453.425 - Dispatch
453.500
453.675
453.950
460.575
462.950 - Ambulance Dispatch
462.975
460.625

Cy-Fair FD

33.88 - Dispatch
33.98 - Low band Mutual Aid

LOW BAND DX ANTENNAS

by Rick Hiller—KF5NU

Low band DX season is just around the corner, so it is time to get things set up and tuned up for winter time DX'ing.

DX versus Local Performance

Antennas may be broken down into many categories. For this article, let's look at antennas as DX versus local performance. The differentiator between local and DX performance is the radiation angle. This is defined as the angle, referenced to the earth, at which your transmitted signal leaves the antenna. For local or close in contacts up to 1,000 miles or so, a high angle of radiation (straight up) is needed. The transmitted energy travels up to the ionosphere and is reflected right back down to the earth. DX requires a low angle of radiation in that the transmitted signal travels a long distance towards the horizon before being reflected by the ionosphere back toward the earth's surface again.

A single reflection of a signal between the earth, the ionosphere and back to earth is called a "hop." The signal's field strength is attenuated with every foot traveled through the atmosphere. High radiation angles give us short hops and low radiation angles give us long hops. High radiation angle energy can make it to the DX, but because many more hops are required to get there, the signal will be weak or non-existent. If we can make the signals go furthest with the least hops, we will have less attenuation and hence the strongest signal at the DX end. Low radiation angles give us lower attenuation of our signal, but how do we generate this low angle of radiation?

Horizontal Antennas

An antenna will exhibit differing characteristics based on the deployed location. For example, a horizontally-polarized antenna, such as a dipole, has a radiation angle that is dependent on its height above ground. Any antenna book will have charts that give these radiation patterns to antennas that are 1/8, 1/4, 3/8, or so wavelengths above the ground. You will see that as the antenna height above the ground is increased, the radiation angle gets lower and lower. A 10m, horizontally-polarized, dipole antenna exhibits low angle radiation at about 16 feet above the ground. Translate

that down to 40, 80 or 160m, and the height of the dipole becomes 65, 130 or 260 feet above ground. Piece of cake, right? Just build yourself a low-band dipole and, depending on the band, hang it at 65, 130 or 260 feet, respectively. Not exactly an easy task for most of the hams I know.

Vertical Antennas

Horizontally-polarized antennas can cause a large logistics problem on the low bands, but with apologies to the cat lovers—there is more than one way to skin a cat. DX wise, it is called vertical polarization. This type of radiation is generated by vertically-polarized antennas such as ground planes, monopoles, 1/2 wave verticals, 5/8 wave verticals, delta loops, quad loops and other antennas. Vertical polarization is the only way to achieve low-angle radiation from an antenna that is close to the ground. Yes, there are those rare occurrences that hams have worked a BV in Taiwan on 15m with a 40m dipole laying in their spouse's vegetable garden. But, what I am talking about is consistent, low-angle DX performance that you can count on day in and day out. For working DX on the low bands, the best antennas to use are those that are vertically polarized.

Vertical Problems

Vertically-polarized antennas come with a few compromises. Man-made noise, particularly of the RF interfering variety, is vertically-polarized and WILL(!) get to even the best of the receivers made today. If you chase DX, you will find that it is better at times to use a vertically-polarized antenna to transmit and a horizontally-polarized antenna to receive. A horizontally-polarized antenna close to the ground will receive the DX. The signals won't be as strong, but the noise that you hear on the vertically-polarized antenna won't be there either. Thus, your signal-to-noise ratio improves drastically, enabling you to hear the DX. Therefore, it might take 2 antennas to work some of this DX that is going to start coming through in the next few months.

Some people use three or more antennas because not every antenna is great for all of the DX. DX stations located at different distances have different characteristics, so you need different antennas to have the best chance of working them all.

The Ideal Antenna Farm

To bring this to a conclusion, I will state that you don't want to "place all of your eggs in one polarization basket." If, in any way, you can get up an efficient, vertically-polarized antenna such as a full-wave loop, a top-loaded 1/4 or 1/2 wavelength monopole, a Cushcraft R7, or a Butternut 1/4 wavelength vertical, etc., you will be better off.

On the receive side of things, a shortened dipole, a helically wound dipole, a horizontal loop or even a coaxial loop will provide you with a lower noise atmosphere on your receiver so that you can hear the DX through the noise. A two-position coaxial switch will allow you to switch between the vertical and horizontal antennas and chose the one that does the best for the particular DX circumstance. Have fun working low-band DX this winter. This is the time in the sunspot cycle to chase it, as more people move to the low bands due to bad propagation on the higher bands.

A final note. I wish to thank Carl—WB8SVR, for his enthusiasm and effort these past months as President. I, as a newcomer to B-VARC, think he did a bang-up job, and I wish him well with the Big X up there in W8 land. When we finally find out his departure schedule, we'll arrange some HF sked times and keep him entertained (or should that read, he'll keep us entertained, Louis?) during his mobile trip north. CUL CARL HVE FUN ES GUD DX BT 73 DE KF5NU.

FOR SALE

The gin pole which is owned by B-VARC is now being offered for sale, at a price of \$450.00. For more information please contact Donn Washburn—N5XWB, at 498-0569.

THE EPICUREAN HAM

by Carl Hacker—KB5LDY

[Not available. Watch for an article about dutch ovens appearing in the November issue.]

RFI, EMI AND OTHER STUFF: An Analysis

by Pete Norris—KJ5SS

Last time, interference with desired RF signals caused by a small DC motor was described. This EMI (electromagnetic interference) was broadband covering CB frequencies (just below our 10m band) through upper UHF frequencies. As this was interfering with radio signals, it is often referred to as RFI (radio frequency interference).

EMI may cause interference in three ways: by radiation, conduction, and magnetic induction. Magnetic induction is usually a result of magnetic coupling where interfering and affected devices are physically close to one another. Conducted interference occurs on wires carrying the undesired signals to the affected device. Radiation interferes with the affected device as a radio signal. The first step, then, is to determine the type(s) or mode(s) of interference present.

Induction was not considered significant, as the chest was many feet away from the radio equipment. Furthermore, the magnetic fields were contained inside the motor case and also within the permanent magnets which provided the field flux.

The motor and radios were operated both from common and separate 12-volt sources. No difference was detectable at these levels of interference and so it was concluded the significant interference was not conducted.

When a base station HF receiver was tuned to 28MHz, sufficient leakage in the receiver antenna coax cable allowed radiated interference to be detected and various "fixes" to be evaluated, without disturbing the shack wiring. If lower level signals were to be evaluated, a short piece of coax could have been fashioned as a "sniffer" to trace the RFI to its source. A VHF handheld, with its flexible antenna connected, was used in this manner to determine that the motor power cord was acting as the radiator.

The first step in controlling the RFI, then, was to stop the undesired signals from entering, or radiating from, the power cord.

Next time: Some "Fixes."

SCHEDULE OF WEEKLY NETS

Monday

- 7:30 p.m. 34.94 Swap Net
146.94MHz
8:00 p.m. Ft. Bend Cty EM Net
145.49MHz
9:00 p.m. B-VarC
145.47MHz

Tuesday

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

Wednesday

- 7:30 p.m. B-VarC Rag Chew
3.960MHz (+/- 3kHz)
8:30 p.m. B-VarC Code Practice Net
146.47MHz (receive only)

Friday

- 8:30 p.m. B-VarC Code Net
146.47MHz (receive only)

Saturday

- 9:00 a.m. Houston Emer. Mgmt. Net
3.905MHz

Sunday

- 7:30 p.m. ARES Net
147.30MHz

2nd & 4th Sundays

- 1:30 p.m. TX State RACES Net
7.248MHz

B-VarC THEORY CLASS

by Al Zermeno—KK5W

B-VarC will begin offering a class on theory for those wishing to obtain either a Novice or No-Code Tech amateur radio license. The classes will be held on Mondays at 7:00 p.m., beginning October 16, 1995, at Strake Jesuit High School, and will run for approximately 9 weeks. For more information, contact Al Zermeno—KK5W, at (713) 667-1840.

CLUB PICNIC

B-VarC is having a club picnic, tentatively set for Saturday, October 14th. The location has not yet been confirmed. This will be a potluck event, so everyone come and bring something for all to enjoy. Please RSVP with the number of people in your party and what you will be bringing to: Terri Van Slyke—N5KID, at (713) 344-0938. More information will be provided on the Monday night net and also at the October general membership meeting. Stay tuned for details...

B-VarC CODE PRACTICE NET

by Louis House—KD5GM

The Brazos Valley Amateur Radio Club sponsors a Morse Code Practice Net, called BCN, on Monday, Wednesday and Friday nights at 8:30 p.m. The purpose of this net is to offer a consistent code practice schedule for all amateurs who are working on their upgrades. The text is sent at approximately 5, 8, 10, 13 and 18 wpm. The signal source is modulated tones on FM (MCW). The source of the text is announced in CW before the text is sent. The length of the net is usually 25 to 30 minutes. Voice check-ins are welcomed at the start of the net, but are not necessary to participate. Just tune in on 146.47 (simplex), with a desire to increase your code proficiency and have a good time.

The net roster for the month of August lists a total of 13 stations checking in. They were: NSUOG, KK5RL, KC5HNJ, KC5KGG, KC5EUS, KC5MBV, KB5WZI, KC5EUX, NSLYB, KB5DXP, ND5F, KJ5SS and KO4QX.

Have fun and... 73 de KD5GM AR SK

ALAMO CHALLENGE

by Mike Hardwick—N5VCX

On September 23rd and 24th, the American Lung Association held the ALAMO Challenge Bike Ride from Houston to San Antonio. The ride went extremely well, utilizing 7 repeaters and approximately 45 amateur radio volunteers. Even though the weather was excellent, the number of riders was low (150) compared to that of previous years. All amateurs demonstrated a professional attitude, which made the traffic flow very smoothly.

I would like to thank each and every member of B-VarC who participated in the ALAMO Challenge Bike Ride, as well as volunteers from Katy Amateur Radio Society, Gonzales Amateur Radio Club, Chaparral Amateur Radio Club and the San Antonio Repeater Organization. I would also like to give special thanks to Bud King—N5UOG, for filling in and doing more than his assigned task, and Darrell Kirk—KC5JAR and Anita for volunteering to be the turtle sag.

The ALA was very pleased with our efforts, and it couldn't have been done without you. Thanks for your participation.

PUBLIC SERVICE EVENTS

by Mike Hardwick—N5VCX

Volunteers are needed for the following events:**Oct. 8th—Sunday**

20K Marathon Warm-up

Contact: Open—volunteer needed. Please contact me if you are interested

Oct. 7th & 8th—Saturday/Sunday

Moonlight Bicycle Ramble

Contact: Paul Owen—894-7758; need coordinator and volunteers

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) 483-4552 hm or
(713) 338-2918 wk

Oct. 28th—Saturday

MS Enduroskate

Contact: Dwayne Jones—KB5YTA
(713) 498-8786 or Mike
Hardwick—N5VCX
(713) 771-4625

Oct. 29th—Sunday

Texas Coastal Bike Ride

Contact: Bret Prichard—N5VOY
(713) 645-5400

Dec. 9th—Saturday

30K Marathon Warm-Up

Contact: Don Wade—WB5IBT
(713) 242-6706

Mar. 10th (1996)—Sunday

K-9 Fun Run

Contact: Steve Dunkelberger—N5JBL
(713) 781-6703

Please note: You can always contact Mike Hardwick—N5VCX, for ANY event listed above.

PROPOSED FCC BUDGET CUTS

by Allen R. Brier—WB5BIR

Legislation in Congress proposes to cut the budget of the FCC by 20%. Even though the FCC has not as been much help lately as they used to be, the prospect of completely deregulating amateur radio is scary. It could become

another CB radio! I would like to suggest that all members of B-VARC (and any other hams) write their Senators and Congressmen to tell them that we are against this and any other legislation that is detrimental to amateur radio. Also, membership in the ARRL is useful in providing a more powerful voice in Congress. Even if that is the only reason to join the ARRL, it is a good reason.

The following are the names and addresses of our U.S. Senators and Representatives:

Senator Phil Gramm (R)
370 Russell Senate Office Bldg.
Washington, DC 20510
(202) 224-2934

Senator Kay Hutchison (R)
703 Hart Senate Office Bldg.
Washington, DC 20510
(202) 224-5922
(202) 224-0776 (fax)

Rep. Jim Chapman (D) District 1
2417 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-3035
(202) 225-7265 (fax)

Rep. Charles Wilson (D) District 2
2256 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-2401
(202) 225-1764 (fax)

Rep. Sam Johnson (R) District 3
1030 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-4201
(202) 225-1485 (fax)
E-mail:
INTERNET:samtx03@hr.house.gov

Rep. Ralph M. Hall (D) District 4
2236 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-6673
(202) 225-3332 (fax)

Rep. John Bryant (D) District 5
205 Cannon House Office Bldg.
Washington, DC 20515
(202) 225-2231

Rep. Joseph Barton (R) District 6
1514 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-2002
(202) 225-3052 (fax)

E-mail:
INTERNET:barton06@hr.house.gov

Rep. William Archer (R) District 7
1236 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-2571
(202) 225-4381 (fax)

Rep. Jack Fields (R) District 8
2228 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-4901

Rep. Steve Stockman (R) District 9
Washington, DC 20515

Rep. Lloyd Doggett (D) District 10
Washington, DC 20515

Rep. Chet Edwards (D) District 11
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(202) 225-6105
(202) 225-0350 (fax)

Rep. Preston M. Geren, III (D) District 12
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Washington, DC 20515
(202) 225-5071
(202) 225-2786 (fax)

Rep. William Thornberry (R) District 13
Washington, DC 20515

Rep. Gregory H. Laughlin (D) District 14
236 Cannon House Office Bldg.
Washington, DC 20515
(202) 225-2831
(202) 225-1108 (fax)

Rep. E. De La Garza (D) District 15
1401 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-2531
(202) 225-2534 (Fax)

Rep. Ronald D. Coleman (D) District 16
440 Cannon House Office Bldg.
Washington, DC 20515
(202) 225-4831

Rep. Charles W. Stenholm (D) District 17
1211 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-6605
(202) 225-2234 (fax)

Rep. Sheila Jackson Lee (D) District 18
Washington, DC 20515

Rep. Larry Combest (R) District 19
1511 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-4005

Rep. Henry B. Gonzalez (D) District 20
2413 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-3236
(202) 225-1915 (fax)

Rep. Lamar S. Smith (R) District 21
2443 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-4236
(202) 225-8628 (fax)

Rep. Thomas Delay (R) District 22
407 Cannon House Office Bldg.
Washington, DC 20515
(202) 225-5951

Rep. Henry Bonilla (R) District 23
1529 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-4511
(202) 225-2237 (fax)

Rep. Martin Frost (D) District 24
2459 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-3605
(202) 225-4951 (fax)

Rep. Ken Bentsen (D) District 25
Washington, DC 20515

Rep. Richard K. Armey (R) District 26
301 Cannon House Office Bldg.
Washington, DC 20515
(202) 225-7772
(202) 225-7614 (fax)

Rep. Solomon P. Ortiz (D) District 27
2136 Rayburn House Office Bldg.
Washington, DC 20515
(202) 225-7742
(202) 226-1134 (fax)

Rep. Frank Tejeda (D) District 28
323 Cannon House Office Bldg.
Washington, DC 20515
(202) 225-1640

Rep. Gene Green (D) District 29
1004 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-1688
(202) 225-9903 (fax)

Rep. Eddie Bernice Johnson (D) District 30
1721 Longworth House Office Bldg.
Washington, DC 20515
(202) 225-8885

If you are a member of CompuServe, you can also send Congress Grams. Even though they cost a little more than regular mail, I believe they will stand out more than regular letters.

Please make an effort to participate in protecting our hobby.

73 Allen R. Brier—WB5BIR

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REMINDER . . .

The deadline for articles to be placed in the B-VARC Bulletin is the 15th of each month. Please make every effort to have your article(s) to me by that date. If you know that you will not be able to meet the deadline but are planning to contribute to the newsletter for that month, you may call me to make special arrangements. Otherwise, if I do not have your article(s) by the deadline, it/they will not be published in that issue. Thank you for your cooperation.

—The Editor





the B-VARC BULLETIN

The Monthly Publication of the
BRAZOS VALLEY AMATEUR RADIO CLUB
Serving the Greater Houston Area
(Club Call Sign—KC5OIG)

Editor-in-Chief: Jackie Burton—KC5OHJ (713) 460-1968

The Brazos Valley Amateur Radio Club (B-VARC) 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, B-VARC has grown and expanded its activities to become the most active HAM radio club in the southwest Houston area.

Today, B-VARC is truly a general-interest club with an impressive record of Public Service. The commitment to service has been recognized by the Amateur Radio Relay League (ARRL) 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 p.m. on the second Thursday of each month, at the Sugar Land Community Center. Talk-in assistance is available on the 145.47, 444.55 and 442.5 MHz repeaters.

To obtain information about the club, its activities, or about joining B-VARC, contact Betty Wilcox—KA0TEN, at (713) 859-6512

B-VARC MEETING SCHEDULE

Thursday, October 5th 7:30 p.m.	Board of Directors Meeting Sugar Land Community Center Open to <u>All</u> B-VARC Members
Thursday, October 12th 7:30 p.m.	B-VARC Membership Meeting Sugar Land Community Center Program: National Traffic System/Public Service Honor Roll

B-VARC EATING SCHEDULE

Saturdays—7:00 a.m. to 9:00 a.m.—Kettle Restaurant, Chimney Rock and Westpark/NE corner

3rd Friday Dinners—6:30 p.m. SHARP!
Locations announced each month

Volume 18 Issue 10

October 1995

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ADDRESS CORRECTION REQUESTED



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