



BRAZOS VALLEY AMATEUR RADIO CLUB



AMATEUR RADIO FOR SOUTHWEST HOUSTON AND FORT BEND COUNTY

APRIL 2016

VOLUME 40 ISSUE 4

BVARC GENERAL MEMBERSHIP MEETING, 7:30 PM, Thursday April 14 421 Eldridge Rd, Sugar Land, 77478, Sugar Land Masonic Lodge

Coax, or Coaxial Cable, is one type of RF feed line we probably all use. Our guest speaker in April is Marc Abramson, President of ABR Industries, who knows more about the topic than anyone I know. Don't miss this one, and show your support for one of our popular GHH vendors to boot.



March Madness

(It isn't just about basketball any more)

Club members saw homebrew projects ranging from antenna launchers to Tesla Coils at our March meeting. We had several participants showing off their creative juices at the meeting. The big winner from the contest was Reid, WA5ARI, with his tube based HF amplifier, (which I believe came from the set of "Young Frankenstein"). Reid's prize was a highly coveted can of RF Propagation Enhancing Spray. Other contestants were Roy, W5TKZ; Larry, K5LJ; Pete KD5PQX; Michael, AC0TX; John, K5IZO; and Le Moyne, AC5LB. If you brought something, you were a winner. (I wish I had more cans of the RF Propagation Enhancing Spray to hand out to all the participants; they're all winners.)

Start working on your ham radio projects for next year. de Jon, KF5TFJ



WA5ARI and the highly prized RF Propagation Enhancing Spray



The Prez Says

The 2016 Greater Houston Hamfest is over. I can only say one thing about the Hamfest – FANSTASTIC, WONDERFUL, UNBELIABLE! I know that I mentioned more than one adjective but this year's Hamfest was one of the best yet. Approximately 1300 attended this year's event making the 2016 event the largest ever. The only other thing I can say about the Hamfest is – On to the 2017 Greater Houston Hamfest!

There were many volunteers that helped make this year's Hamfest a success. I would like to personally thank the following who devoted their time to make the event an outstanding success.

John Chauvin, K5IZO

Rick Hiller, W5RH

Donovan Bali, KG5BDZ

Ron Litt, K5HM

Peter Sauermilch, KD5QPX

Eddie Runner, NU5K

Allen Brier, N5XZ

Jim Burroughs, N5DTT

Their hard work is what made the Greater Houston Hamfest a success this year. If you see them at a meeting, make sure you congratulate them on a job well done. There is more information elsewhere in the newsletter.

Coming up for this month's general meeting will be a program on coax cable and its lengthy properties that make it so useful. So come on out for April's program that will be presented by ABR Industries.

If you would like to help out on a public service event, The BP MS150 is coming up April 16th and 17th. There are still plenty of positions open for radio operators along the course so if you are interested, please contact me. Come on out and put your radio and license to a great use!.

Coming up for the first of June will be Museum Ships Weekend. A coordinator is still needed for Museum Ships for this year and if a coordinator cannot be found by the end of April, BVARC may need to by-pass this event for 2016. This would be unfortunate since we have received permission to operate on the USS Stewart again which would make the event a much "cooler" one than the last few years. So if you are interested or know someone that would like to step up to the plate, have them contact the BOD and let them know.

And don't forget the ARRL Field Day at the end of June. Plans are already underway for this year's event and there will be a planning meeting after the BOD meeting in May and June. If you would like to help on BVARC 2016 Field Day, let Mike, N5MT or Mike, N5VCX know.

73,
N5VCX



J.H. Bunnell & Co. Atlantic Cable Telegraph Key



**Results of the March 8th
BVARC Amateur License Examination Session by:
John Moore, KK5NU**

B-VARC sponsored and administered the ARRL's Amateur Radio Examination session that was held on Tuesday, March 8, 2016 at HCC's Scarcella Science & Technology Building in Stafford, TX.

MEMBERS OF THE VE TEAM:

Richard Goldy, K5GOL
Larry Jacobson, K5LJ
John Moore, KK5NU
George Ontko, KM5VP

Two examination elements were administered during the evening to two applicants. Two new Technician class licenses were attained, with the total number of elements passed being 2. The overall "pass rate" for the evening was 100%.

Congratulations to the following who attained a license and/or passed an exam:

Paul B. Noll - {KG5MHD} - Technician
Keith L. Till - {KG5MHF} - Technician

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 everyone at HCC Scarcella Science & Technology Building for making these excellent classroom facilities available to us for our exams each month.

.... 73



**Brazos Valley Amateur Radio Club
Board of Directors Meeting Dates and Times for 2016**

April 2 nd , 2016	9 to 10:30 am	BOD meeting	Bayland Park
May 7 th , 2016	9 to 10:30 am	BOD meeting	Bayland Park
June 4 th , 2016	9 to 10:30 am	BOD meeting	Bayland Park
July 9 th , 2016	9 to 10:30 am	BOD meeting	Bayland Park
August 6 th , 2016	9 to 10:30 am	BOD meeting	Bayland Park
September 3 rd , 2016	9 to 10:30 am	BOD meeting	Location TBD
October 8 th , 2016	9 to 10:30 am	BOD meeting	Bayland Park
November 5 th , 2016	9 to 10:30 am	BOD meeting	Bayland Park
December 3 rd , 2016	9 to 10:30 am	BOD meeting	Bayland Park



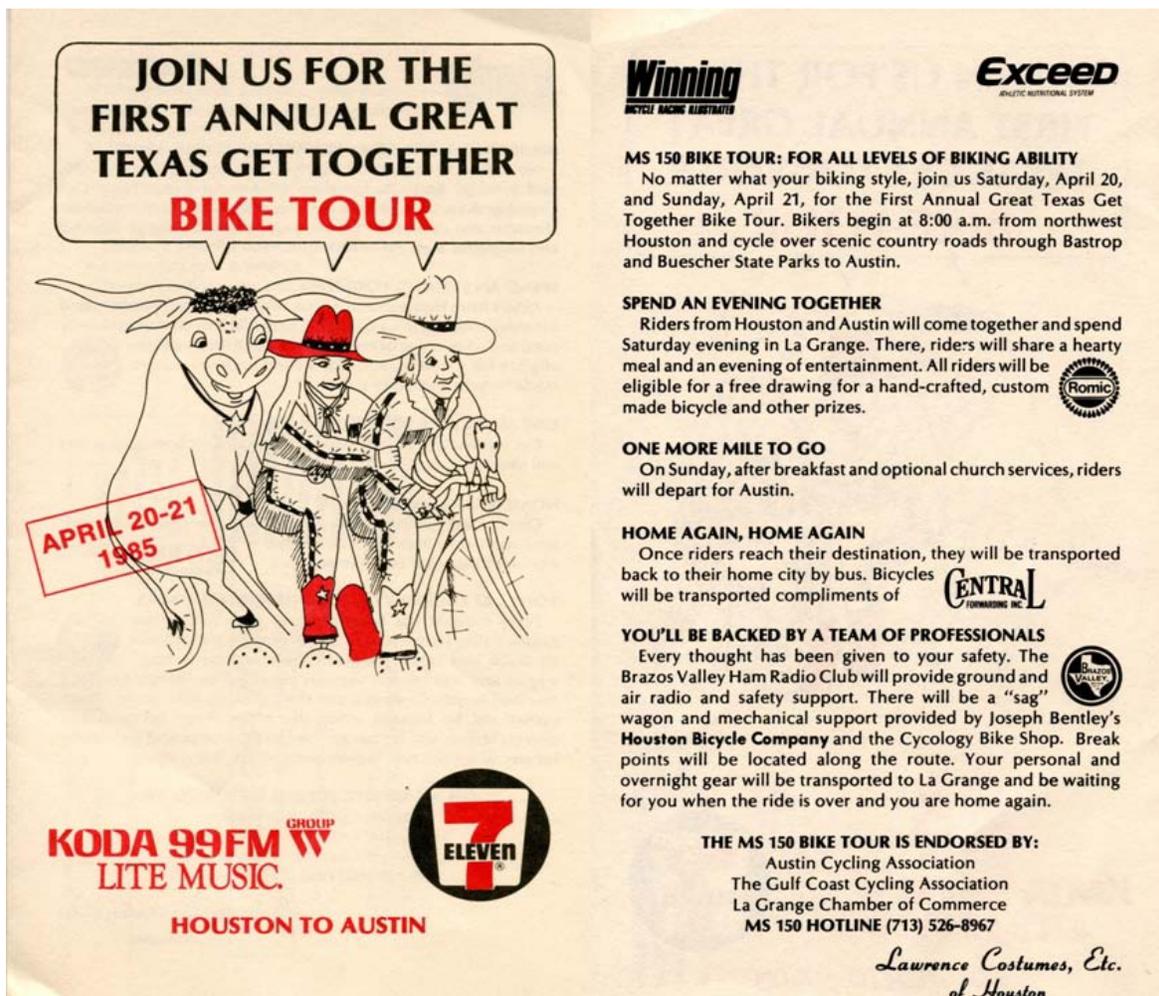
BVARC Historical Vignettes –

BVARC Historical Vignettes – BVARC and the First MS 150

Allen Mattis N5AFV, Club Historian

Probably the single most long-running public service event worked by members of the Brazos Valley Amateur Radio club is the MS 150 Houston to Austin bicycle ride. The first year the MS 150 was held was 1985 and BVARC was there.

The brochure for the 1985 MS 150 stated “Every thought has been given to your safety. The Brazos Valley Amateur Radio Club will provide ground and air radio and safety support.” Thank you to Steve Gottlieb, WA5OEN, for providing a copy of the 1985 MS 150 brochure.



The brochure is a promotional flyer for the 1985 MS 150 Houston to Austin bicycle ride. It features a central illustration of a cowboy on a horse, a woman on a bicycle, and a longhorn. Text boxes and logos are scattered throughout. At the top, a red cable with connectors spans the width of the page. The main title is 'JOIN US FOR THE FIRST ANNUAL GREAT TEXAS GET TOGETHER BIKE TOUR' in a speech bubble. Below it, the dates 'APRIL 20-21 1985' are in a red box. Logos for 'Winning', 'Exceed', 'Romic', 'CENTRAL FORWARDING INC.', and '7 ELEVEN' are present. Text blocks describe the tour details, including dates, departure times, and support services. The bottom right corner has the signature 'Lawrence Costumes, Etc. of Houston'.

JOIN US FOR THE FIRST ANNUAL GREAT TEXAS GET TOGETHER BIKE TOUR

APRIL 20-21 1985

KODA 99FM GROUP LITE MUSIC. HOUSTON TO AUSTIN

7 ELEVEN

Winning
BIKE RACING EQUIPMENT

Exceed
ANALYTIC NUTRITIONAL SYSTEM

MS 150 BIKE TOUR: FOR ALL LEVELS OF BIKING ABILITY
No matter what your biking style, join us Saturday, April 20, and Sunday, April 21, for the First Annual Great Texas Get Together Bike Tour. Bikers begin at 8:00 a.m. from northwest Houston and cycle over scenic country roads through Bastrop and Buescher State Parks to Austin.

SPEND AN EVENING TOGETHER
Riders from Houston and Austin will come together and spend Saturday evening in La Grange. There, riders will share a hearty meal and an evening of entertainment. All riders will be eligible for a free drawing for a hand-crafted, custom made bicycle and other prizes.

ONE MORE MILE TO GO
On Sunday, after breakfast and optional church services, riders will depart for Austin.

HOME AGAIN, HOME AGAIN
Once riders reach their destination, they will be transported back to their home city by bus. Bicycles will be transported compliments of

YOU'LL BE BACKED BY A TEAM OF PROFESSIONALS
Every thought has been given to your safety. The Brazos Valley Ham Radio Club will provide ground and air radio and safety support. There will be a “sag” wagon and mechanical support provided by Joseph Bentley's **Houston Bicycle Company** and the Cycology Bike Shop. Break points will be located along the route. Your personal and overnight gear will be transported to La Grange and be waiting for you when the ride is over and you are home again.

THE MS 150 BIKE TOUR IS ENDORSED BY:
Austin Cycling Association
The Gulf Coast Cycling Association
La Grange Chamber of Commerce
MS 150 HOTLINE (713) 526-8967

*Lawrence Costumes, Etc.
of Houston*

1985 MS 150 Brochure – Note BVARC logo in lower right

Editor's Note: This year's MS-150 takes place on April 16 & 17. Be sure to see the information that Mike H has in his "The Prez Says." If you want to really have a great time and participate in providing comms for this year, contact him; his contact info is in the roster on the BVARC website.



Minutes of the March 5, 2016 Board of Directors meeting of the Brazos Valley Amateur Radio Club

Mike Hardwick called the monthly Board of Directors meeting for the Brazos Valley Amateur Radio Club to at 9:04 AM on March 5th, 2016, at Bayland Park Community Center, 6400 Bissonnet, Houston 77074. Attending were: Mike Hardwick N5VCX (President.), Jon Noxon KF5TFJ (Vice President), Donovan Balli KD5BDZ (Treas.), Michael Monsour ACØTX (Rec.Sec./Quart.), Scott Medbury KD5FBA (2yr At-Large Dir), Jerry Muller K9GEM (1yr At-Large Dir.), Eddie Runner NU5K Webmaster, Cameron Mitchell K5CAM, John Chauvin K5IZO Newsletter Editor/Parliamentarian, Jo L Keener KE7NSB (2yr At-Large Dir), Ron Litt K5HM (Radio Sport)

Emergency Business:

- 1.1 A motion was made and passed to accept the resignation of the Corresponding Secretary, Stephanie Vessey. Steve Friedman KF5YYZ is a possible candidate for the Corresponding Secretary position.

Reports:

- 2.1 A motion was made and passed to accept the February Minutes.
- 2.2 A motion was made and passed to accept the Treasurer's Report

Old Business:

- 3.1 A motion was made and passed to tentatively accept Steve Friedman as Corresponding Secretary.
- 3.2 The Hamfest is moving forward with a couple of loose ends; with advance admissions and table sales income is around \$2400.
- 3.3 March meeting: Home Brew contest
- 3.4 April meeting: Coax and Transmission Lines presented by ABR Industries
- 3.5 May meeting: to be determined. Museum Ships will be discussed. Need to get a MSWE coordinator.
- 3.6 June Meeting Field Day, Mike Davidson will be one of the coordinators
- 3.7 The annual audit has been completed and Randy Pollard will file the appropriate paperwork.
- 3.8 Membership levels seem to be level.
- 3.9 A motion was made and passed to remove SKs from the main roster.
- 3.10 Finding a coordinator for the donation committee has been tabled.
- 3.11 The Banquet has been costing less each year. Last year there were 80 attendees. Maybe next year members may have to pay slightly more.
- 3.12 A motion was made and passed to obtain the ARRL flag.

New Business:

- 4.1 By Law change: A motion was made and passed that certain modifications regarding the duties of the Treasurer and Corresponding Secretary be made. Tabled till after the Hamfest.
- 4.2 Masonic Lodge contract is up for renewal in June, this is tabled till after the Hamfest
- 4.3 Mike Hardwick will take care of the memorial checks for Bud King, with a mention in the Newsletter.
- 4.4 Ron Litt would like to put together a special event of a August 21 2017 total solar eclipse across the United States and would like for the club for support for QSL cards. A motion was made and passed to support this event.

The meeting was adjointed at 10:10 AM

Submitted by Recording Secretary, Michael Monsour ACØTX



The Radio Hotel - Antenna Origins -- Part 2

How the Audion Vacuum Tube Changed Antenna Design

By Rick Hiller -- W5RH

Amateur Radio stations in the days of spark resembled nothing like what we have today or even gear from 75 years ago. In the 1900's, Ham spark equipment was rudimentary. Typically, nothing store bought. Most hams borrowing the spark ignition coils from a Ford Model T vehicle. Antennas were strung up with whatever "iron wire" was available and then fed with single wire feeders directly from the transmitter LC output. The transmitter was also grounded to Earth. The antenna wire and this earth connection formed, as stated in Part 1, a capacitor that not only radiated, but formed part of the frequency determining LC output network. Just by dumb luck these stations did "get out", but barely.

Side Note: Due to the limited transmit and receive distances of the spark mode, the ARRL was formed in 1915 due to the need to "relay", across the country, these weak radio signals that just didn't go very far.....actually, at times, tens of miles between stations. So it was quite true, as one author put it, "*Once it did take a garage full of fairly frightening equipment to say almost nothing to almost nobody almost no distance away*".

However, things for the Hams in the 1920's were about to change. As Ward Silver calls it, the period of "CW and the Short Waves" 1921 thru to WW2. The vacuum tube triode, called The Audion" was invented by Lee De Forest in 1904 and it had slowly made its travels into the hobbyist realm in the later teens and early 1920's. With this new thermionic based device, one could devise an electronic based oscillator that could produce an uninterrupted stream of cycles at a defined frequency, literally a continuous wave – CW. Another important aspect of the electronic oscillator is that it had a much higher frequency generation capability than the mechanical spark machines. Shorter and shorter wavelengths (high and higher frequencies) were obtainable. Because of the Audion oscillator's improved spectral purity and its' ever expanding use for both commercial and Ham transmissions, the Spark method was declared illegal in 1924.

Frequency Generation Shifts from the LC network/Antenna Combination to an oscillator.

From an antenna standpoint, since the output frequency was now determined by the oscillator before it even got to the antenna, there was no need for the antenna to be part of the "frequency determining" network (See Part 1). The size of the antenna needed was based on the resonant frequency and not on the amount of capacitance required by the transmitter's output circuitry. QST, October 1926, contains an article that shows empirical measurements being made for determining the equation -- *Wavelength / 1.56 = antenna length of the Hertz (half wavelength) antenna*. Hence, antennas got smaller and the move toward resonant, single wire antennas was afoot. Dipoles, doublets, verticals, started being the norm in the late 1920's. Experimentation into "short wave" antennas blossomed. QST, July 1925, asked questions of antennas and feed systems to which we know the answers implicitly today..... "*There is certainly plenty of room for experiments along this line. Is one wave length the best for the length of the wire, or would 1/2 wave be better (or twice the wave)? Would there be any advantage in inserting a little resistance to give more flexibility in tuning? Where is exactly the best point for connecting the feeder on to the aerial?*" Interesting questions, indeed. (Continued in May – Part 3)

FYI -- Two additional facts from this "CW and the Short Waves" period:

- 1924 - First "ham bands" (80, 40, 20, and 4-5 meters) designated legally.
- 1926 - Frequency control via quartz crystals was invented

Next time.... Antenna Origins Part 3 Yagi and Uda and Beverage, Oh My!

*The purpose of **The Radio Hotel** is to give you a practical kick-start into exploring the workings of antenna systems. It is a series, so go back and read the previous columns to get the whole picture, as one month relies on the previous month's information. Google the buzz words and find out what they mean. Read up on antenna system theory to see how it all works together. You will be glad you did.*



BVARC Rag Chew Net

Below is the BVARC Rag Chew Net check-in information:

02/24/16, K5LKJ (NCS), W5TKZ, W5TOM, W5HFF, KF5TFJ, K5LJ, KF5YYZ, K5EKW, AF5T, W5RH, AF5XL, AA5OA, KF5PHA, WB9FOP (Katy).

(14 Check-Ins) Solar Cycle 24: SFI = 88, SN = 27, A = 6, K = 1

03/02/16, K5LKJ (NCS), WB9FOP (Katy), W5HFF, W5TOM, KD5O, K5IZO, AA5OA, K5LJ, N5EKW, W5TKZ, AA0ST (Dickinson), W5RH, AF5T, K5WRN.

(14 Check-Ins) Solar Cycle 24: SFI = 98, SN = 39, A = 8, K = 3

03/09/16, W5TKZ (NCS), W5HFF, KF5TFJ, W5TOM, K5IZO, K5LKJ.

(6 Check-Ins) (Thunder Storms and Lightning)

Solar Cycle 24: SFI = 97, SN = 48, A = 7, K = 2

03/16/16, K5LKJ (NCS), W5TOM, KF5TFJ, W5HFF, W5TKZ, K5LJ, WA5KXG, AA5OA, K5CAM/5 (Cat Springs), AF5T, W5RH, N5EKW (Katy), AF5XL, KE5OBY, WD6CQO (Nederland). (15 Check-Ins)

Solar Cycle 24: SFI = 91, SN = 44, A = 24, K = 1

(M) = mobile (P) = Portable (R) = Relay (RCS) = remote controlled station (T) = telephone check-in

Come join in the conversation each Wednesday evening.

Regards. John K5LKJ



BVARC Monday Night NET Updates

Don't forget the BVARC Monday Night Net starts at **8 pm** on 146.94 (167.9). The order of check-ins starts with mobile units first then fixed stations. If you have something for the net, make sure you let Net Control know about it when you check in. We are looking for Net Control Operators. Contact Rick, w5rh, if you are interested. Here are recent check-ins with control-ops:

12/14 - 23 - Steve, kf5yyv	1/19 - 22 - Ron, k5hm	2/22 - 22 - Clint, kf5hdf
12/21 - 25 - Ron, k5hm	1/25 - 24 - Clint, kf5hdf	2/29 - 22 - Terry, k5pgf
12/28 - 19 - Clint, kf5hdf	2/1 - 29 - Dave, n5ekw	3/7 - 17 - Rick, w5rh
1/4/16 - 20 - David, n5ekw	2/8 - 23 - Steve, kf5yyv	3/14 - 23 - Steve, kf5yyv
1/11 - 18 - Steve, kf5yyv	2/15 - 23 - Ron, k5hm	3/21 - 19 - Ron, k5hm



BVARC QUICK STATS

Date	Members	Newsletters	Life Members
3/27/2016	204	208	65



The 15th Annual Greater Houston Hamfest – A Brief Report

We had well over a 1300 folks show up at the BVARC sponsored Greater Houston Hamfest a few Saturdays ago, breaking last year's record crowd by 30%. That is pretty amazing! What's even more amazing is that we had a record number of speakers on our technical presentation agenda. The STBLT, balloon guys launched a record 2 balloons. We had a record number of Boy Scouts attend and participate with the 'on the air' KK5W HF station and also with the satellite QSO and Fox Hunt activities in order that they could complete their Radio Merit badge. Our raffle was a record too. Over \$3000 worth of prizes. Plus, all of the door prizes and the CW Pile-up contest prize added significantly to the overall GHH prize cache value, making that a record breaker too.

More records were set on Friday due to the "free day" and the fabulous workshops for kit building, soldering and antenna building. Close to 100 folks attended these workshops put on by Joe, the CQ Kit building cat and our own Donovan, BDZ, an expert in SMT soldering. The Salvation Army EmCom vehicle showed up and there was even a remote HF station lecture, all of which added to the array of activities for Friday.

This year the GHH was expanded into 2 vendor buildings, increasing our total square footage. We also expanded the hours of operation, not only adding Friday afternoon, but increasing the length of time for the overall event Saturday. Tech talks went until 3:30.

One other record that cannot not be quantified is the level of enthusiasm of the volunteer staff. The ticket booth was hopping with entry and raffle ticket sales. The main platform, taking door prize tickets and selling raffle tickets, was constantly abuzz with activity. The local volunteer speakers really stepped up to the plate this year with a plethora of topics from RF Safety and noise reduction to remote Ham radio operation. Speaker introductions and GHH 2015 personalized coffee mugs were presented to each speaker by the volunteer MC's. Bob, AT, volunteered to video the various speakers for the archives. Setup and tear down went fast with volunteers pitching in as they were able.

A full report with pictures will be in the May newsletter, but we wanted to give you a taste of the overall Hamfest, as unfortunately, it was just too big and had too many activities for you to take it all in on your own. That is a problem we would like to have every year.

Rick Hiller, W5RH



2016 Officers and Directors:

Note: Approximately every 3 months, this complete list of contact information as well as other activities are listed in the BVARC Newsletter. For other months, go to www.bvarc.org and click on "Club Newsletters" on the left column. At the bottom of that linked page will be this complete information.

President
Michael Hardwick, N5VCX
n5vcx@att.net

Vice President
Jon Noxon – KF5TFJ
jon@noxon.cc

Corresponding Secretary
Stephanie Vessey K5SFV
K5SFV@att.net

Treasurer
Donovan Balli, KG5BDZ
dballi@mail.com

Recording Secretary:
Michael Monsour, AC0TX
msircq@gmail.com

2 Year At-Large Board
Jo Keener – KE7NSB
jo.l.keener@juno.com

2 Year At-Large Board Member B:
Scott Medbury KD5FBA
smedbury@windstream.net

1 Year At Large
Jerry Muller, K9GEM
gmuller885@aol.com

Club Happenings:

General Meeting
Second Thursday each month, 7:30 PM
Sugar Land Masonic Lodge, 421 Eldridge Rd, Sugar Land,
77478.

Board of Directors Meeting
First Saturday of each month, 9:00 AM (For Sept., check website)
Bayland Park Community Center
Bayland Park, 6400 Bissonnet,

Volunteer Examiner Program
BVARC administers Amateur License Exams on the 2nd Tuesday
of each month at the HCC Scarcella Technology Campus, 10141
Cash Rd. in Stafford. Contact John Moore, KK5NU [jwm@hal-
pc.org](mailto:jwm@hal-pc.org)

Rag Chew Net
3910 KHz +/-3KHz Wednesdays
at 7:00 p.m.

Public Service Net
Monday night on 146.94 (167.9) at 8:00 PM



Advertising in the BVARC Newsletter

Rates are as follows; \$25 per monthly for ½ page, \$125 for six months and \$250 for one year. The rates for a full page are as follows; \$50 per month, \$250 for six months and \$500 for the year.



BVARC EATING SCHEDULE

SATURDAY MORNING BREAKFAST
IHOP, 7:00a.m., SW Freeway inbound service road,
near Kirkwood.

OTHER HAM GROUPS:

WEDNESDAYS – WEDNESDAY LUNCH BUNCH
LUBY'S CAFETERIA, 10:30a.m. to 12:00Noon +,
South Post Oak Road, just south of the I-610 Loop in
Meyer Park Shopping Center.

WEDNESDAYS – AMSAT & QRP GROUP PAPPAS
BARBECUE. 11:30a.m., SW corner Westheimer &
Gessner





The Newsletter is a Monthly Publication of the Brazos Valley Amateur Radio Club,
Serving Amateur Radio for Southwest Houston and Fort Bend County
Club Call sign KK5W
BVARC Website: <http://www.bvarc.org>
Editor: John Chauvin, K5IZO, k5izo@yahoo.com
Production Team: Cameron Mitchell, K5CAM, k5cam@arrl.net

Brazos Valley Amateur Radio Club

BVARC is truly a general interest amateur radio club with an impressive record of public service. The American Radio Relay League (ARRL) has recognized the club's commitment of service with the coveted status of Special Services Club. We are proud of our members who represent some of the finest in amateur radio. Membership is not limited to licensed operators, but is open to anyone with an interest in amateur radio. Club meetings are held on the 2nd Thursday of each month at 7:30 p.m. at Sugar Land Masonic Lodge, 421 Eldridge Rd, Sugar Land, 77478.

General membership dues are \$25.00 per year, with student dues \$12.50 per year, additional family members \$5.00 per member per year and life membership \$250.00.

BVARC also administers amateur radio license exams on the 2nd Tuesday of each month at 7:00 p.m. at the Houston Community College Scarcella campus in Stafford. A Public Service Net is held each Monday at 8 p.m. on the 146.94 (minus offset, PL 167.9 tone) repeater & a rag chew net is held each Wednesday at 7 p.m. on 3910 KHz +/- 3 KHz. **BVARC** or its activities, contact the club's Elmer, Ross Lawler, W5HFF at 281-281-7602 or w5hff@yahoo.com or see the BVARC website: www.bvarc.org

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APRIL 2016

**BRAZOS VALLEY
AMATEUR RADIO CLUB
P.O. BOX 2997
SUGAR LAND, TX 77487-2997
ADDRESS SERVICE REQUESTED**

FIRST CLASS POSTAGE

**BVARC Board of Director's Meeting and Final Hamfest Debriefing – Saturday, April 2, 2016
BVARC General Membership Meeting – Thursday, April 14, 2016**

*If your mailing label is
highlighted in color, it's time
to renew your membership!*