



# BVARC BEACON



Newsletter of the Brazos Valley Amateur Radio Club  
AMATEUR RADIO FOR SOUTHWEST HOUSTON AND FORT BEND COUNTY

JULY 2018

VOLUME 42 ISSUE 7

## BVARC JULY GENERAL MEMBERSHIP MEETING

Thursday, July 12, 2018 7:30pm, 421 Eldridge

Kyle Brewer, KE5IJ, of NASA will be there to explain all the different communications system on the International Space Station and what is new in amateur radio for the ISS. Kyle came out to the club in 2016 and gave us an insight at that time of what was in place on the ISS. I hope everyone can make it to the meeting for Kyle's presentation. (Words are copied from Mike's article herein).

Certainly there will be a brief overview of Field Day results and possibly more info on the Museum Ships Weekend that took place in early June.



## Report on the June General Membership Meeting

Matt Cline, K3JMC, gave an enjoyable talk about DMR at the June BVARC meeting.

MSWE results and comments were discussed.



## Highlighting some upcoming events of interest to BVARC members.

Texas City Hamfest, July 7. More info is under "Hamfests" toward the end of this issue.

Monthly General Membership Meeting, Thursday, July 12.

See the article herein about a "Station In A Box." Get your tickets to sell or buy.



## **Prez Says**

We are well into summer and two of the club's biggest events are now behind us. Both were successful with great turnouts. However these events require, with a club as large as BVARC, planning, hard work and determination. The people that coordinated and helped with the events deserve thanks from BVARC members and the amateur radio community. Without them, the events would have not happened. So when you see one of the organizers, shake their hand and tell them thanks for a wonderful job they have done.

Museum Ships Weekend went well and Mark Janzer did a great job of putting everything together. There were operations in both the Stewart and Cavalla this year so it was a true "multi-ship" ship event. Work still needs to be done on the Cavalla antenna as John, K5IZO, found out with a low number of contacts (it will be better next year John). Mark Janzer is already thinking of some suggested operating events this Fall. He is also thinking about having a more "antenna parties" on both ships in the coming months so things can be better prepared for the 2018 event. Contact Mark and let him know if you would like to help out.

The 2018 Quad Club Field Day Event was a great success. The new location allowed us to "breathe and spread our wings" for the antenna farm as well as the operating areas. The four clubs, BVARC, TDXS, ECHO and KARS allowed us to operate as 10A this year with over 3000 contacts. There were a fair amount of people that came out. We had over 77 people come out on Saturday with nearly 25% of that being visitors and walk-ins. Thanks need to go to the chairs – Scott Medbury, Jimmy Vance, Jerry Mueller and Doug Seyler. Also thanks to Bill Cordell and the antenna guru, Glenn Anderson as the IT master and last but not least Dave Elsner for keeping us feed. Then there are the other 30 or so people that helped from lifting antennas to making German Chocolate cake. There are so many people that helped it is impossible to name everyone so I just want to say thanks for the best Field Day ever.

Last but not least, I want to thank KARS for coordinating and bringing out the Fort Bend county Emergency Management trailer. It was a great addition and I hope we can continue it in the future.

For those who missed Ham-Com this year, it was back in Plano and was a great success. Some people said that they had over 4000 people attend over the three day period. The increase in attendance is something that will help the hobby and hopefully make it grow.

The July meeting will have a returning speaker. Kyle Brewer, KE5IJ, of NASA will be there to explain all the different communications system on the International Space Station and what is new in amateur radio for the ISS. Kyle came out to the club in 2016 and gave us an insight at that time of what was in place on the ISS. I hope everyone can make it to the meeting for Kyle's presentation.

Hope to see everyone at the general meeting on the 12<sup>th</sup>.

73,

N5VCX



## Museum Ships Weekend

BVARC had under a dozen stalwart operators on board the Cavalla, Stewart and the Selma in view, for Museum Ships Weekend. The event is held annually at Seawolf Park on Pelican Island in Galveston. Generally, everyone seemed to have a good time. The Undersea Warfare (now Galveston Naval Museum) folk were very appreciative of our presence.

We operated the SSB portion of the event from inside the back part of the USS Stewart, in the bunk and kitchen area. This was due to the power fluctuations and heat in the actual radio room. We were comfortably able to run in transmission lines for a K4KIO hex beam (lashed to the deck of the ship on a push-up pole) and Jon's (KF5TFJ) remotely tuned loop (hoisted via the yard arm). For a while we used John's (W1XQ) Buddipole vertical – which despite it's location near the ship, performed remarkably well.

The USS Stewart HF station with a Elecraft K3 and remotely tuned loop worked amazingly well. We had QSO's with stations from both east and west coast to Canada and south to central America. The CW operation, headed by John (K5IZO), in the USS Cavalla was multiples better than the previous year. The Reverse Beacon Network (RBN) showed that his signal was getting well into the Midwest and the east coast. Dan's (KS5V) ICOM IC-7100 was used for a while, before KF5TFJ's K3 was set-up.

The SS Selma is a concrete hulled WWI merchant ship that was scuttled, just offshore from the park – we've recently been able to add it on as a museum ship and operate her as W5MSQ – with permission from the ship's owner (he's about to make a run of official caps for SS Selma radio operators). We had a huge pile-up when we got on the air with her call. We expect she'll be as good a draw for wallpaper chasers as the twofer of the Seawolf Park ships.

We are not one ship, at Seawolf Park, but offer a twofer with KK5W, for both the Stewart and Cavalla being on the same site. If you haven't experienced operating the good side of a pileup, you really should take advantage of the opportunity next year and attend MSWE and operate.

We found that 20 meters was the most active and remained open late into the evenings. Several times we were swamped by pile-ups from stations searching for ships to log. Conditions on the other bands were marginal. We made close to 500 QSOs.

We had Whatburgers on Friday night, with the traditional hearty BBQ dinner (from Leon's) on Saturday afternoon. Sunday morning, we munched on kolaches and glazed donuts.

The Galveston Naval Museum allowed us to stay overnight (both nights) – in the air conditioned bunk area (in the stern of the Stewart). With more participants we could have easily worked 24 hour shifts. The kitchen area had fridges with cold beverages and coffee was always available – quite the Navy life....

We had several casual ham visitors (one pair actually operated for a short while).

Many thanks to:

John Chauvin K5IZO

Mike Hardwick N5VCX

Tom Larsh K5TNK

Jon Noxon KF5TFJ

John Pate W1XQ

Mike Teers KG5SXG

Dan Villalanti Ks5V

Thersa Williams KE5MUX

We're developing a lessons learned and wish list for next year. These include a better way to route the transmission lines so they don't get crimped in the hatch door. Getting the logging computers squared away earlier and more elmering for operational consistency. Given the success of the vertical antenna – we'll seek to put a larger vertical on the deck at the stern. There are several significant items we'll want to work on for the next event, including getting the Cavalla's antennas in ship shape condition.



One of 3 operating stations



Setting up the spider beam

**Where in the World is . . .**  
**Rwanda (9X)**  
**CQ Zone 36 ITU Zone 52**

Rwanda; a strange name for a country. It is surrounded by a few other countries with strange names; Rwanda is south of Uganda, north of Burundi and east of The Democratic Republic of the Congo Well, at Least I can pronounce that one). Notice the liberal use of the letter “u” in other names but not in Rwanda. Why isn’t it spelt Ruwanda? Ok, I get it, they don’t like u’s. Fine, how about Roowanda or Rooanda, or even Rouxanda. Guess no Cajuns rule in Rwanda.



From 1894 to 1918, Rwanda, along with Burundi, was part of German East Africa. After Belgium became the administering authority under the mandates system of the League of Nations, Rwanda and Burundi formed a single administrative entity; they continued to be jointly administered as the Territory of Ruanda-Burundi until the end of the Belgian trusteeship in 1962. Officially, the country is the Republic of Rwanda. It is in East Africa, part of what 19<sup>th</sup> Century Europeans called, “The Dark Continent.”



Rwanda is in the Lakes region of Africa; its geography is dominated by mountains in the west and plains to the east, with numerous lakes throughout the country. The climate is temperate to subtropical, with two rainy seasons and two dry seasons each year. Its renowned Volcanoes National Park is home to mountain gorillas and golden monkeys. The park encompasses 14,786 ft tall Mt. Karisimbi and 4 other forested volcanoes. In the southwest is Nyungwe National Park, with ancient montane rainforest that's a habitat for chimpanzees and other primates.

The population of the nation is young and predominantly rural, with a density among the highest in Africa. Rwandans are drawn from three groups: the Hutu, Tutsi and Twa. The Twa are a forest-dwelling pygmy peoples descended from Rwanda's earliest inhabitants. Some believe the differences of the other two groups are because they come from different social castes or perhaps migrated from different places.

Rwanda has a presidential form of government. Rwanda today has low corruption compared with neighboring countries, Rwanda is one of only two countries with a female majority in the national parliament.

The economy is based mostly on subsistence agriculture. Coffee and tea are the major cash crops for export. Tourism is a fast-growing sector and is now the country's leading foreign exchange earner. Rwanda is one of only two countries in which mountain gorillas can be visited safely, and visitors pay high prices for gorilla tracking permits. Music and dance are an integral part of Rwandan culture, particularly drums and highly choreographed dance. Traditional arts and crafts are produced throughout the country, including *imigongo*, a unique cow dung art. Phew!!! Don't step in the imigongo.

In late September of this year, the Italian Dxpediton Team plans to launch a serious effort to Rwanda. Check DX News for more details.



Rwanda stands 104<sup>th</sup> on the Clublog most wanted DX list



### FLASH . . . Baker Island – KH1/KH7Z

For those of you who may not know, an American DXpedition has landed on Baker Island in the Pacific. If you don't know where Baker island is, see photo at left. Baker stands No. 5 on the Clublog most wanted list.

Keep your eye on the DX Clusters, they are currently QRV through July 5. Check out their web site at <http://baker2018.net/>.

Reporting from the Dark Side,  
Ron, K5HM



## STATION IN A BOX

Special BVAC Raffle

Submitted by Donovan Balli, KG5BDZ, BVARC Treasurer,

At the club Chili Supper on November 8, 2018, BVARC is raffling off a "Station in a Box": Icom 756 Pro 3, MFJ 35 Amp Power Supply, LDG Auto-tuner, Heil Proset Elite Headset, J-38 replica straight key, 40 meter dipole with coax, all accessories, cables and manuals included. Used, but in excellent condition. All from the shack of K5YDO, Bill McNally (SK).

Tickets are \$2 each.

All club members are invited to sell tickets at another club meeting, a hamfest, your church, or anywhere interested hams can be found. Pick up a stack of tickets and sell them to support BVARC!

Ticket stubs with buyer information filled out, ticket money, and any leftover tickets need to be returned to a club officer by Saturday, October 20, 2018 so we have time to get the raffle organized.



## HAM RADIO Night at the Skeeters - 2nd of the Season!

I am planning the 2nd gathering of HAMS for an evening at the Sugar Land Skeeters for SATURDAY, AUGUST 25th. Tickets are \$13 each without a food voucher and \$18 with a food voucher. - Skeeter DOG, Chips and a soda.

You can order your tickets by sending me a text or email. 281-543-8376 / smedbury@windstream.net . The email or text needs to let me know the # of tickets and with or without food.

Payment should be by cash, check or PayPal. If you use PayPal make payment to smedbury@windstream.net .

I am extending this invitation to members of BVARC, KARS, ECHO, TDXS, AMSAT, and ARES. I would like to see a BIG group in attendance.

I ask that anyone ordering tickets please list your call with your name. Pass this information on to these other clubs if you know their email. I need to give the ball club an initial number by August 1st.

73.... PLAY BALL!

Scott - KD5FBA



### BVARC Rag Chew Net

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

05/30/18, K5LKJ (NCS), K5JPP, K5IZO, KF5TFJ, K5LJ, W5TKZ, W5VOM, AA0ST (Dickinson), W5TOM, KJ5Y (RCS)(W5FMH/club)(Angleton),  
(10 Check-Ins) / Band Rpt: Good / MUF: 8.37 MHZ  
Solar Cycle 24: SFI = 73, SN = 22, A = 4, K = 1

06/06/18, K5LKJ (NCS), W5TKZ, K5LJ, W5TOM, WA5CYI, W5RH, W5VOM, K5IZO, AA5OA (Ft. Smith, AR), KJ5Y (RCS)(W5FMH/club)(Angleton), KA5GCB (Round Rock), W5VOM. (10 Check-Ins) / Band Rpt: Good  
Solar Cycle 24: SFI = 72, SN = 12, A = 4, K = 1

06/13/18, K5LKJ (NCS), W5TKZ, KF5TFJ, K5IZO, W5TOM, AA5OA (Ft. Smith, AR), W5RH, W1BG (Katy), KA5MEI (R), K2MPP. (13 Check-Ins)  
Solar Cycle 24: SFI = 70, SN = 25, A = 14, K = 3 / Band Rpt: Good

06/20/18, K5LKJ (NCS), W5TKZ, W5TOM, W5VOM, K5LJ, W5RH, K2MPP.  
(7 Check-Ins)  
Solar Cycle 24: SFI = 80, SN = 41, A = 6, K = 1 / Band Rpt: Good / MUF: No Rpt.

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

Net conditions have been fair to good this month. Check out your station.  
Come join in the conversation each Wednesday evening.

Regards.  
John K5LKJ



# The Purpose of Field Day and Amateur Radio

This is some information that was printed a few years ago about Field Day. It describes why we have the radio privileges we do and what we should do to support those privileges. It may be great to just talk on the radio during drive time but amateur radio is here to support the community in several ways such as ARES, Emergency communications, Disaster communications, RACES, Public Welfare communications.

There are several non-technical reasons for amateur radio. The government, both US and internationally, made the decision in 1934 to allow individuals to operate radio transmitting equipment as a hobby during none emergency times for the availability of having communications for emergencies. For the folks that have never seen any part of the concerning amateur radio, here is the first part explaining the basis and purpose of amateur radio.

Code of Federal Regulations  
Title 47, Volume 5  
TITLE 47--TELECOMMUNICATION  
PART 97--AMATEUR RADIO SERVICE--Table of Contents  
Subpart a--General Provisions

## Sec. 97.1 Basis and Purpose.

The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

- (a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.
- (b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.
- (c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.
- (d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.
- (e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

As you can see, the first item for the purpose of amateur radio is on emergency communications. Even with cell-phones and the Internet, amateur radio can still provide a very reliable source for emergency communications. With the products today, amateur stations can be set up anywhere and provide a never-ending stream of communications for disaster and emergency communications. There is only problem, the amateur operator.

If we are to be a value to the public, we have to be prepared. Whether prepared through equipment or through operational capabilities, we need to be prepared. Do you know how to operate your radio on more than one or two channels? Can you change your PL tone without getting the manual out? Do you know where other repeaters are in your area? Can you take your equipment and setup operations in different locations? My feeling is if you cannot do any of the things that I have listed, you cannot successfully help during an emergency situation.

Hurricane season is upon us and knowing how to operate your equipment is something you need to do. We had fun working Field Day but we need to put that activity to a good use. This is the time that we should work on being prepared for emergencies and able to help out in a moments notice. If you want amateur radio to survive, help out during event such as Field Day, the BP MS150, and the Houston Marathon. With everyone working together the hobby will continue.

Mike  
N5VCX





## BVARC Monday Night Public Service 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:

9/11 - 22 - Luke, k0ltb	4/9 - 15 - Bill, kg5fqx	5/28 - 13 - Clint, kf5ndf
9/18 - 14 - Jo, ke7nsb	4/30 - 24 - Dave, k5ekw	6/4 - 18 - Dave, k5ekw
3/19 - 16 - Chris, wb5itt	5/7 - 15 - Dave, k5ekw	6/11 - 16 - Bill, kg5fqx
3/26 - 15 - Clint, kf5ndf	5/14 - 15 - Clint, kf5ndf	6/18 - 14 - Dave, k5ekw
4/2 - 14 - Dave, k5ekw	5/21 - 21 - Dave, k5ekw	6/25 - 16 - Dave, k5ekw

### BVARC QUICK STATS

Date	Members	Newsletters	Life Members
6/27/18	176	178	68



## *MINUTES of the BVARC Board of Directors' Meeting*

There was no BOD meeting in June.



This early straight lever key was made by the Caton Instrument Co., Ottawa, Ill. The long legs pass through holes in the operating table and wires are attached to binding posts at the end of each leg. Circa 1860's

The editor has a similar one in my collection from the 1870s. If I were to acquire one of these, I would have to refinance my house.

# The Radio Hotel- The CCD Antenna

## Controlling Standing Wave Current

by W5RH Rick Hiller

We all know that by loading an antenna with  $xL$ -- inductive reactance (an inductor) the antenna becomes physically shorter. It maintains the electrical length by the bulk inductor cancelling the  $xC$ -- capacitive reactance of the physically shortened electrical length. So, an inductor can make an antenna shorter, but, how do you make an antenna longer? If we just add wire, then the physical length becomes electrical length, thus changing the radiation characteristics, sometimes to the detriment. The G5RV is a good example of this, as it adds length to make it 3 half wavelengths long on 20 meters and provides a beneficial patterns of multiple lobes....exactly why Louis, G5RV, put the darn thing up in his garden.

What happens to an antenna when we add  $xC$ -- capacitive reactance (a capacitor) to it? It shortens the electrical length of the antenna. A few hams many years ago took advantage of this fact and made antennas that were 1 wavelength long, but resonant at the  $\frac{1}{2}$  electrical wavelength frequency. By placing many capacitors spaced equally along the length of the antenna they could achieve this phenomena. By doing so, the normally (on a dipole) sinusoidal current standing wave would be changed and a fairly constant current value was formed across the whole length of the 1 wl wire. The big benefit comes from this constant current re-distribution across the wire length.

Remember my “not so often quoted and referenced” **83/63 Rule** – which reads “on a standing wave antenna 83% of the current amplitude happens in the middle 63% of the  $\frac{1}{2}$  wave element”. So, if we could replicate a majority of this 63% section over and over along the length of the wire and eliminate the 23.5% of the reduced antenna radiation current at each end of the sinusoid curve, we could build a gain antenna that is much smaller than the usual gain antenna. Enter the CCD...Controlled Current Distribution Antenna. Unfortunately, the CCD has not taken off as a popular antenna, as it is not as straight forward as putting up a wire or aluminum element. A fair amount of calculations and intense building (measuring, soldering, stretching, etc) is required. It is an interesting implementation, so let’s take a look at the benefits and where you can go to further your knowledge of the CCD. I did further research, and only research; I have not built one of these yet.

Some benefits of the 1 wl CCD are numerous and a few of them are listed here:

- Greater gain than a conventional dipole
- Reduction in the end effects and coupling to the local environment
- Higher antenna resistance than a normal dipole
- Very broadband
- Has an independence from ground so that height above ground has little influence versus a dipole.

To learn more you can visit my CCD Bibliography at <http://bvarc.org/home/tech-pages/>. The easiest accessible articles are in the ARRL Antenna Compendiums # 2 and #3: (others in Ham Radio and 73 Magazines)

The best, all encompassing “cookbook” article is:

**The CCD Antenna – Improved, Ready to Use Construction Data** found in the Antenna Compendium #3.

There is a lot to learn about the CCD antenna and it might just be worth it. The hams 20 years ago put forth a fair amount of effort to experiment and test this CCD antenna. But, since then it has fallen out of favor. Other antennas, which are easier to make and erect have taken its’ place. If you are looking for esoteric, the CCD might just be what you are looking for. If the benefits can be proven it just might be that Holy Grail antenna which we have all been looking for.

Enjoy your hobby. 73...Rick – W5RH

**Next time.... The Impedance of Space**

*The purpose of **The Radio Hotel** is to give you a practical kickstart into exploring the workings of antenna systems. 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.*



## 2018 Officers:

President (2018-2019)  
Michael Hardwick, N5VCX  
[n5vcx@att.net](mailto:n5vcx@att.net)

Vice President (2017-2018)  
Mark Janzer K5MGJ  
[k5mgj@yahoo.com](mailto:k5mgj@yahoo.com)

Recording Secretary  
Jon Noxon KF5TFJ  
[jon@noxon.cc](mailto:jon@noxon.cc)

Corresponding Secretary  
Open

Treasurer (2017-2018)  
Donovan Balli, KG5BDZ  
[dballi@mail.com](mailto:dballi@mail.com)

2 Year At-Large Board Member A: (2018-2019)  
Jo Keener – KE7NSB  
[jolkeener25@gmail.com](mailto:jolkeener25@gmail.com)

2 Year At-Large Board Member B: (2017-2018)  
Scott Medbury KD5FBA  
[smedbury@windstream.net](mailto:smedbury@windstream.net)

1 Year At Large (2018)  
Scott Royall W5RUA  
[Royall@conchbbs.com](mailto:Royall@conchbbs.com)

### Regularly Scheduled Club Happenings:

General Meeting  
Second Thursday each month, 7:30 PM  
2511 Eldridge Rd, Sugar Land, 77478, Eldridge Park Conference Center (Check page 1)

Board of Directors Meeting  
The Saturday before the 2<sup>nd</sup> Thursday, 9:00 AM (For Sept., check website)  
Bayland Park Community Center  
Bayland Park, 6400 Bissonnet, Houston.

Volunteer Examiner Program  
At this time, this program is suspended and being reestablished. Please check the September BVARC Newsletter for more information.

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 month 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.



## **Hamfests**

(typically within 200 miles of Houston)

Hamfest info for the next few months. More information at:  
<http://www.arrl.org/hamfests.html#listing>

### **07/07/2018 | Texas City Hamfest**

**Location:** Texas City, TX

**Type:** ARRL Hamfest

**Sponsor:** Tidelands Amateur Radio Society

**Website:** <http://www.tidelands.org>

### **08/03/2018 | Texas State Convention (Austin Summerfest 2018)**

**Location:** Austin, TX

**Type:** ARRL Convention

**Sponsor:** Austin ARC & Texas VHF-FM Society

**Website:** <http://www.austinsummerfest.org>

### **October 4 & 5 | HamEXPO**

**Location:** Belton, TX

Mark the date; Info forthcoming

# BRAZOS VALLEY AMATEUR RADIO CLUB

**This newsletter, the BVARC BEACON, is a monthly publication of the Brazos Valley Amateur Radio Club. For a full listing of officers and information about BVARC, please go to [www.bvarc.org](http://www.bvarc.org). Detailed information will be published in the BEACON every 3 or 4 months. Similarly, the "Eating Schedule" will be published every 3 or 4 months unless there is a change.**

General membership dues are \$25.00 per year, with student dues \$10.00 per year, additional family members \$5.00 per member per year.

Club meetings are normally held on the 2<sup>nd</sup> Thursday of each month at 7:30 p.m. at the Sugar Land Masonic Lodge, 421 Eldridge Rd, Sugar Land, 77478. Check the above website for any possible changes.

**BVARC** amateur radio testing is being reorganized. Check upcoming newsletters or the BVARC website for developments.

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.

To obtain information about joining **BVARC** or its activities, contact the club's "Elmer," Ross Lawler, W5HFF at 281-701-7602 or see the BVARC website: [www.bvarc.org](http://www.bvarc.org)

Other contacts include:

President., Mike Hardwick, N5VCX, [n5vcx@att.net](mailto:n5vcx@att.net)

Newsletter Editor, John Chauvin, K5IZO, [k5izo@yahoo.com](mailto:k5izo@yahoo.com)

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Daphne Rawlinson, K5VQY, [daphne\\_rawlinson@hotmail.com](mailto:daphne_rawlinson@hotmail.com)

Keith Stolle, KE5ITH, [keith@ke5ith.com](mailto:keith@ke5ith.com). Jo L. Keener, KE7NSB, [jolkeener25@gmail.com](mailto:jolkeener25@gmail.com) ;

NOTE: Officers, advertising and eating schedule are on the website. They will only be published in the Newsletter every few months.

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JULY 2018

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

FIRST CLASS POSTAGE

**BVARC General Membership Meeting – Thursday, July 12**



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