



BVARC BEACON



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

FEBRUARY 2020

VOLUME 44 ISSUE 2

BVARC FEBRUARY GENERAL MEMBERSHIP MEETING

Thursday, February 13th, 2020 7:30pm, at the Imperial Park Sugarland Recreation Center at 234 Matlage Way, Sugar Land TX, 77478 – It's right across the street from the Post Office

Check out the President's corner for the meeting topic.



Report on the January General Membership Meeting

Hey, we didn't have one, it was supplanted by the annual awards Banquet on January 31st.



The Prez Says

The new year is moving fast with February almost here. The planning for the annual BVARC banquet is wrapping up and at this time we should have about 50 people attending. It is a smaller number that we have had but it should make for more enjoyable time.

Speaking of enjoyable time, our guest speaker for the banquet is one of BVARC's own. Daphne Rawlinson, K5VQY, will be presenting a program on her trip to Antarctica. She will be telling us all about the preparation for the trip and her time there. She will also be telling us why she will never go back! So hopefully you will be able to see her at the banquet.

With less than two months to go for the Greater Houston HamFest, everyone on the planning committee is working around the clock to organize another great event. There are still a ton of things that need to be done to make the HamFest successful.

To make the HamFest successful, the HamFest committee was able to get author Forrest Mims III. If you are not familiar with Forrest, he authored over 40 books of the Radio Shack series called "Engineer's Mini-Notebook" Series. Make sure you come out to the HamFest for a great presentation.

Besides balloon launches, and a fox hunt, we will have a one-day technician class. We decided to try and see if we could fit the class in and still make the testing work. So, if you know someone that is wanting to know more about ham radio and would like to learn more, have them register for the class.

Also, last but not least, the one thing that is needed to make a successful Hamfest is volunteers. If you are interested in helping, contact either myself or Jimmy Vance, NA5D or Jeff Greer, W5JEF or anyone on the BVARC BOD. There are still a few HamFest meetings left so keep checking your e-mail.

There is a last-minute change in the February meeting. Our original presenter was not able to make it so the program will be DMR 101 – Programming Your Code Plug.

Hope to see everyone at the February meeting. 73, N5VCX

A reprint of the June 2016 Beacon – inspired by Pete, KD5QPX, SK.

The Radio Hotel – Working with Aluminum **.....using an element to build elements**

By Rick Hiller – W5RH

Aluminum – Al -- Atomic Number 13 on the Periodic Table – a lightweight, silvery-white metal that is the most abundant metallic element in the Earth's crust and the most widely used nonferrous metal. Plus, for our Ham Radio benefit, it is electrically conductive.

If you have never worked with aluminum, you are in for a treat. It is easy to cut, drill and shape. You can work with it with just simple hand tools, a vice, a hack saw, a power drill, bits and files. Of course, having access to a band saw (with the proper blade), a drill press, a table saw, disc sander, a break, and a sheer will ease and speed your work a bit. But leave most of those tools to the big boys. Hand tools will do you just fine.

Most of the work with aluminum in Ham Radio will come in the form of the popular telescopic tubing. This T-6061 (a number denoting the makeup and characteristics of the aluminum) tubing is an extruded part with varying, stepped ODs (outer diameter), but with a constant wall thickness (.0625") to give it a telescopic property. One Ham Radio supplier, **DX Engineering**, (www.DXengineering.com) has a wide assortment tubing with solid or split ends. **Home Depot** or **Loews** have some aluminum stock (solid rod, angles, etc.). Check **Amazon** too.

Cutting aluminum tubing leaves a burred edge, so deburring must be accomplished by a deburring tool, a file (flat or round, depending) or sand paper. Use a small, round file on the ID (inside diameter) edge of the telescopic tubing, as the ID edges must be smooth and of the same diameter as the remainder of the tubing, so that the smaller tubing will slide in easily.

Before assembling the tubing, clean up the OD surface of smaller tubing using Scotch Brite pad (non-ferrous), or steel wool (0000). Apply, to the inserted tube portion, some Ox-Gard or Nonalox. These are corrosion inhibiting, conductive pastes that ensure proper conduction between tubing sections. Ox-Gard or Nonalox are available in the electrical department of your DIY stores.

Fastening of the adjoining tubing sections can be accomplished with stainless steel hose clamps, rivets (with aluminum mandrels) or sheet metal screws. The method depends on the tubing end purchased – solid or split. (See N6BT's book, referenced below). Easy peasey, have fun!

For building larger aluminum antenna arrays (Yagi-Uda's and LPDA's, etc.), it might be best to have a read of either of these books: **Physical Design of Yagi Antennas** (ARRL) by David Leeson --W6QHS or **Array of Light** (self-publish) by Tom Schiller – N6BT.

Enjoy your hobby 73...Rick

Next time.... Wire – Simply Wire

Comment on the use of aluminum.....

Submitted by Ric Hiller, W5RH

Years ago radios were built using point to point wiring on the underside of a chassis made of aluminum (Drake gear was on a copper clad chassis). Building your own radios had you doing a fair amount of aluminum metal work. Now, we have 3D printers that are printing perfect plastic boxes. Plastics -- the way of the future. (Remember in The Graduate, Mr. McGuire's advice to Ben -- "one word, Ben -- Plastics".)



January 2020 VE - FCC TESTING SESSION RESULTS

Submitted by Mark Janzer, K5MGJ

For the Saturday's January 4th test session: We had 9 candidates.

New Licensees:

Holden, W. (General)
Xuting, L (Technician)
Sechi, G. (Technician)
Falcone, J. (Technician)
Johnson, K. (Technician)
Balzer, J. (Technician)

Upgrades

KI5GKZ (Extra)
KI5HNY (General)

Congratulations to all!

A great thank you to the VEs in attendance -- K5LER, K5LJ, K5GOL, and AK5G.

Examination sessions are held each month, usually on the same day as the Saturday BVARC Board meeting. These sessions are at the Bayland Park Community Center, 6400 Bissonnet St., Houston TX 77074

Details for candidates are found at www.bvarc.org/home/amateur-license/

If you'd like to volunteer as a VE, details can be found here: <http://www.arrl.org/become-an-arrl-ve>

Call Mark Janzer, K5MGJ at (832) 875-0526 or eMail: (k5mgj@yahoo.com) to pre-register for testing.

Where in the World is . . .
Democratic Republic of Congo (9Q)
CQ Zone 36 ITU Zone 52

Never has one country had so many names! The **Democratic Republic of the Congo** also known as **DR Congo**, the **DRC**, **DROC**, **Congo-Kinshasa**, or simply the **Congo** and before that it was the **Belgian Congo** and still earlier it was the **Congo Free State**. Can you say that all in one breath?



Where is it? In Central Africa. Right next to the Republic of the Congo. It is a country located in Central Africa. It was formerly called Zaire (1971–1997). It is, by area, the largest country in sub-Saharan Africa. With a population of over 84 million, the DRC is the most populous officially Francophone country, the fourth-most-populous country in Africa. The Eastern DR Congo has been the scene of ongoing military conflict since 2015. So not a good place for a DXpedition or a vacation.



In the 1870s, an exploration of the Congo Basin was carried out, first led by Henry Morton Stanley (as in Stanley meets Dr. Livingston, I presume) under the sponsorship of King Leopold II of Belgium. Leopold formally acquired rights to the Congo territory and made the land his private property, naming it the Congo Free State. It's good to be king, right?

During the Free State, his colonial military unit, forced the local population to produce rubber. Millions of the Kongo people died because of disease and exploitation. In 1908, Belgium, formally annexed the Free State, which became known as the Belgian Congo.



The Belgian Congo achieved independence on June 30, 1960, with more name changes and an ongoing cast of notoriously corrupt people like Patrice Lumumba, Joseph Kasa-Vubu, Moise Tshombe, Joseph-Désiré Mobutu, who later renamed himself Mobutu Sese Seko, officially came into power through a coup d'état. In 1971, he renamed the country Zaire. The country was run as a dictatorial one-party state.

After two civil wars, led to the deaths of 5.4 million people, the two wars devastated the country. President Laurent-Désiré Kabila was assassinated by one of his bodyguards in January 2001 and was succeeded eight days later as President by his son Joseph.



What makes this country such a prize to fight over? The DRC is extremely rich in natural resources but has political instability, a lack of infrastructure, issues with corruption and centuries of both commercial exploitation with little development. Congo's largest export is raw minerals, with China accepting over 50% of DRC's exports in 2016. In 2016,

DR Congo's level of human development was ranked 176th out of 187 countries by the Human Development Index, So, no McDonald's by the roadside.

As of 2018, around 600,000 Congolese have fled to neighboring countries from conflicts in the center and east of the DRC. Two million children risk starvation, and the fighting has displaced 4.5 million people.

As a result of its equatorial location, the DRC experiences high precipitation and has the highest frequency of thunderstorms in the world. The annual rainfall can total upwards of 80 in in some places, and the area sustains the [Congo Rainforest](#), the second-largest rain forest in the world after the [Amazon](#). This massive expanse of lush jungle covers most of the vast, low-lying central [basin](#) of the river, which slopes toward the Atlantic Ocean in the west

There is a very sizable Christian population, the largest proportion of which is Roman Catholic. Other Christians include Protestants and followers of the local sect of the Church of Jesus Christ on Earth. Their prophet, Simon Kimbangu, was reputed to heal the sick and raise the dead. Thousands came to hear his preaching. He was called Ngunza, the word for "prophet" in the Baptist translation of the Bible. Although Kimbangu's preaching had no overtly political content, Belgian



Figure 1 Simon Kibangu

authorities, alarmed by the disturbances that he provoked, arrested him and his immediate followers in September 1921. He was condemned to death, but his sentence was commuted; he spent the rest of his life in prison.



Figure 2 Kinshasa Pop. 11 million

commerce and on the radio.

More than 200 languages are spoken in Congo. There are four "national" languages: Swahili, Tshiluba, Lingala, and Kongo. French is the official language and the language of instruction, business, administration, and international communications. The national languages are used in regional

The Democratic Republic of Congo is number 173 on the Club Log Most Wanted list. Have fun in the Jungle. There are 76 listings in QRZ.com for the 9Q prefix but many are for foreigners. Currently Italian Ham Paolo Pristipino, 9Q1C is on the air from Kinshasa, the capital.

Reporting from the Dark Side, Ron, K5HM

Cutting Through the Static – A Column for Newbies

JP Pritchard, K5JPP

FT8 – A Mode for Solar Minimum Propagation

It can feel lonely out there in High Frequency land. Not only are sunspots still few and far between, but unless there's a contest going, you'll usually have to call CQ on SSB for a long time before you get a reply. Kinda feels like standing in a dark room and hollering, "Hey, is anybody out there?"

Because of that, FT8 digital has become the most popular mode these days. It's certainly a big help in pursuing Worked All States and DXCC awards. So, if you're newly licensed for HF operations, FT8 is a fun way to get going.

The place to start is on line, right here, <https://www.physics.princeton.edu/pulsar/K1JT/> Nobel Prize astrophysicist Joe Taylor's home page.

You'll want to go there to read about the mode, find a link to download the WSJT-X software and collect your copy of the latest manual that goes with it. Your second step – READ THE MANUAL.

Thanks to the finally-cratering minimum Solar Cycle 24, the sunspots that facilitate HF communications are still rare, making propagation an iffy proposition. Joe Taylor and Steve Franke, the F and T in FT8, answered the call for that problem by developing FT8 to deal with very weak signals -- the WS in WSJT-X.

The aforementioned website will answer many of your questions and get you started. But let's go into this adventure with eyes wide open. You'll need to have a decent computer, the proper CAT cable to connect your transceiver to the computer, and probably, an external sound card, such as the Signalink USB. If you own the right transceiver, you won't need the external soundcard (Kenwood 590sg comes to mind. (You can also use the soundcard included with your computer, but that's a little more complicated.

BVARC's own Bill Cordell W5VOM has a lot of experience with FT8 and he's offering up some best practices...

1. Time is everything. Or more precisely, the exact time is everything. Your computer clock must be within two-tenths-of-a-second of the exact time, so you'll need to download and install the free software package Dimension 4 or something similar, to sync your computer to the exact time. Let Dimension 4 run in the background and you'll always be synced. Avoid using the Windows Time Service. It may not be accurate enough. You can check your computer's current time against the standard by going to <https://time.is/>
2. Follow the instructions in the WSJT-X manual to get set up, paying special attention to the level of the audio signal driving your transmission. Use your ALC meter to keep your signal in check. If you don't constrain your input levels, you'll overdrive your signal, causing splatter and severely annoying other FT8 operators. Rule of thumb -- don't push for the highest possible power output by ramping up your audio input. Careful operators up their audio just to the point where it registers on the ALC meter, then back it off a smidge.
3. Turn off your AGC. Not everyone agrees with this, but here's the reasoning -- If you have a strong signal in the receiver passband (or nearby), this will cause the AGC to reduce the gain for ALL signals in the passband, meaning one strong signal can easily wipe out the weak

signals. Turning off the AGC will often improve copy on weaker signals by eliminating this action.

4. As a newbie, you might want to start out using the auto-sequencing in WSJT-X. That means the computer automatically does all the back and forth in a single QSO. But once you get the idea, try to operate in manual mode. Because propagation is often sporadic at the current solar minimum, (signals fading in and out), you may not be able to complete a Q. In other words, you'll lose the signal before you get to "RR73." By operating manually, especially when you're working DX, you'll be able to skip unnecessary steps, pushing to complete nothing more than an exchange of signal strengths. Those readings all that's necessary to claim a complete QSO. But keep in mind, some inflexible operators will get really irritated if you don't send that final 73.
5. Download and install JTAlert and initiate it right after you start WSJT-X. JTAlert is a wonderful free utility that alerts you when a condition that you've specified shows up in WSJT-X. It's an easy setup and it will let you know when, for instance, it sees that an operator from a specified state or country is sending a CQ. JTAlert also assists in transferring QSO's from WSJT-X to your favorite logging software.

All of this having been said, start with the computer setup, making sure you have functioning CAT control. Special cables and drivers specific to your transceiver need to be installed on your computer. Baud rates must also match up. You can test it during the setup process for WSJT-X. (If you're already using computer control software like Ham Radio Deluxe, you've probably already made the link between computer and transceiver.) WSJT-X Setup also includes entering your personal data, i.e., call sign, grid square, name, location, etc. and selecting the proper audio drivers.

This seems like a lot to absorb, but in addition to the Joe Taylor website, there's plenty of help available on the web and on YouTube, including a nice setup power point available from the ARRL. And you can always ask for help on the BVARC reflector.

It's a mode that moves very quickly and that keeps it fun. Give it a shot. It will add a new dimension to your operations and will give you an enhanced chance to earn ARRL awards.

73, K5JPP, JP Pritchard



Questions/Subtopics request for inclusion in Raspberry Pi article to be published in March.

Our general membership meeting in March will include a presentation on the Raspberry Pi, a credit-card sized computer. Please send any questions/subtopics that you would like to see addressed in that presentation to Jeff at W5JEF@outlook.com.

Submitted by Jeff Greer, W5JEF

BVARC Rag Chew Net

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

12/25/19, K5LKJ (NCS), AA5UY (Pearl River, LA), K5LJ, W5VOM, WW5PA, W5FJF.
(6 Check-Ins) Solar Cycle 24: SFI = 72, SN = 0, A = 13, K = 2 / Band Rpt: Fair

01/01/20, K5LKJ (NCS), W5TKZ, K5JPP, K5IZO, N5EKW (Katy), W5TKZ, W5VOM, AA5OA (Fort Smith, AR), WB8PMX (Columbus, OH), KG5SXG, W5RH, K2MPP. (9 Check-Ins)
Solar Cycle 24: SFI = 74, SN = 11, A = 5, K = 2 / Band Rpt: Fair

01/08/20, K5LKJ (NCS), W5VOM, K5LJ, K2MPP, W1BG (Katy)(R), KN5USO (FL), KJ5Y (RCS)(Angleton). (8 Check-Ins)
Solar Cycle 24: SFI = 71, SN = 0, A = 4, K = 0 / Band Rpt: Fair to Poor

01/15/20, K5LKJ (NCS), N5EKW (Katy), W5VOM, W5TKZ, W5RH, WW5PA, AA0ST/5 (Oklahoma City, OK), (M), K5IZO, K2MPP, W5TOM, KF5ONT, K5JPP, AA5OA (Fort Smith, AR), KF5EYX (14 Check-Ins)
Solar Cycle 24: SFI = 70, SN = 0, A = 4, K = 0 / Band Rpt: Good

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

Net conditions have been fair to good this month. Tune up and tune in and learn what others are doing and share in the experiences. Come join in the conversation each Wednesday evening.
Regards. John K5LKJ



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MINUTES
Board of Directors Meeting
Brazos Valley Amateur Radio Club

January 4, 2019 9:00 AM
Bayland Park Community Center
6400 Bissonnet, Houston, Texas

Board Members Present:

Mike Hardwick N5VCX (President)*
Jon Noxon KF5TFJ (Rec. Secretary)
Mark Janzer K5MGJ Vice President
John Chauvin K5IZO Parliamentarian

Jeff Greer W5JEF (Cor. Secretary) via
telecon
JP Prichard K5JPP (incoming Director
2Yr)
Eddie Runner NU5K Web Master
Scott Medbury KD5FBA (Director 2 yr)

Donovan Bali KG5BDZ (Treasuer
outgoing)
David Ely N5EKW (Treasuer incoming)
Rick Hiller W5RH Director At Large

Recorded by Jon Noxon, KF5TFJ Recording Secretary

- 1) Call to Order: The President called the meeting to order at 9:07.
- 2) Establishment of Quorum: A business quorum was established. (Five of eight officers and board members present.
- 3) Approval of Agenda: The Agenda was approved
- 4) Club President's Opening Statement: The President thanked those present for attending the meeting.
- 5) Emergency Business: None
- 6) Approval of Minutes from Previous BOD Meeting: The Board approved the minutes for the December 2019 BoD meeting.
- 7) Approval of Treasurer's Report: The Board tabled the Treasurer's Report, pending resolution of an issue with the Certificate of Deposit cash out QuickBooks entry. Current bank balance is about \$18000.00.
- 8) Corresponding Secretary: (verbal report) One membership check received
- 9) Old Business:

General Membership Meetings scheduled as follows, with topics not listed to be determined:

January 31 Banquet

February 13 SKYPE meeting "across Africa" with Janzer's friend.

March 12 Raspberry Pi (Jeff Greer)

Discussion regarding the January Club Awards Banquet. Speaker to be selected.

Status of donations to Stewart (A/C and electrical improvements). Emphasis needed to get Cavalla antennas working. Mobilization party to be determined.

Topics suggested for future meetings:

SDR radio receivers.

Antenna modeling.

DMR "Hot spots"

"Marty Blaise" list of potential topics (to be reviewed)

Other speakers via SKYPE or other social media. (TBD)

Centerpoint Powerline Safety Demo

- 10) New Business:

GHHF, March 6 & 7 2020 without I-Spark participation.

- 11) Cost Saving Measures:

Status Continue looking into this on an on-going item.; Storage Locker is the one remaining major expenses. Banquet costs will be reduced with selection of Sharon Moore to cater the banquet. Suggestion to reduce Beacon issue to bi-monthly discouraged by the President based on ARRL experience.

- 12) Next BOD meeting date: February 1, 2020

- 13) Comments: Nothing to report

- 14) Adjournment: Meeting adjourned at 10:25 am

2020 Officers:

President (2020-2021)
Michael Hardwick, N5VCX
n5vcx@att.net

Vice President (2019-2020)
Mark Janzer K5MGJ
k5mgj@yahoo.com

Recording Secretary (2020-2021)
Jon Noxon KF5TFJ
jon@noxon.cc

Corresponding Secretary (2019-2020)
Jeff Greer, W5JEF
greerjw@hotmail.com

Treasurer (Finish 2019-2020 term)
David Ely, N5EKW
Davidely@prodigy.net

2 Year At-Large Board Member A: (2020-2021)
Rick Hiller, W5RH
Rickhiller73@gmail.com

2 Year At-Large Board Member B: (2019-2020)
Scott Medbury KD5FBA
smedbury@windstream.net

1 Year At Large (2020)
JP Pritchard, W5JPP
jppnews@comcast.net

Regularly Scheduled Club Happenings:

General Meeting

Second Thursday each month, 7:30 PM
Imperial Park Sugarland Recreation Center at
234 Matlage Way, Sugar Land TX, 77478

Board of Directors Meeting

The Saturday before the 2nd Thursday, 9:00 AM (For Sept., check website)
Bayland Park Community Center
Bayland Park, 6400 Bissonnet, Houston.

Volunteer Examiner Program

The monthly ham testing session takes place on the same day and location as the BOD Meeting, but at 10:30 AM. However, please check the BVARC website for any last minute changes or updates.

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>

02/21/2020 | Orange Hamfest 2020

Location: Orange, TX

Type: ARRL Hamfest

Sponsor: Orange ARC, Jefferson Co. ARC, Beaumont ARC

Website: https://www.qsl.net/w5nd/index_files/HAMFEST%20NFO/hamfest%20info

03/06/2020 | Greater Houston HamFest

Location: Rosenberg, TX

Type: ARRL Hamfest

Sponsor: Brazos Valley Amateur Radio Club

Website: <http://houstonhamfest.org/>

03/14/2020 | HamEXPO Spring 2020

Location: Belton, TX

Type: ARRL Hamfest

Sponsor: Temple Amateur Radio Club

Website: <https://www.tarc.org/>

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. 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 2nd Thursday of each month at 7:30 p.m. at the Imperial Park Sugarland Recreation Center at 234 Matlage Way, Sugar Land TX, 77478. Check the above website for any possible changes.

BVARC amateur radio testing has resumed. It takes place typically on the Saturday before the 2nd Thursday of each month at 10:30 AM. Location: Bayland Park Community Center, 6400 Bissonnet, Houston, 77074. BEFORE GOING, please check the BVARC website for any changes.

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, see the BVARC website: www.bvarc.org

Other contacts include:

President:, Mike Hardwick, N5VCX, n5vcx@att.net

Newsletter Editor, John Chauvin, K5IZO, k5izo@yahoo.com

Newsletter Printing, Assembly and Mailing: Daphne Rawlinson, K5VQY, daphne_rawlinson@hotmail.com.

Cameron Mitchell, K5CAM, k5cam@arrl.net ; Mike Teers, KG5SXG, miketrs@windstream.net

JP Pritchard, K5JPP, jppnews@comcast.net; Esther Pritchard, elop@comcast.net

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

VOLUME 44, ISSUE 2

FEBRUARY 2020

**BRAZOS VALLEY
AMATEUR RADIO CLUB
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FIRST CLASS POSTAGE

**January 31, Annual BVARC Awards Banquet
February 13, Monthly General Membership Meeting**



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