



# BRAZOS VALLEY AMATEUR RADIO CLUB



AMATEUR RADIO FOR SOUTHWEST HOUSTON AND FORT BEND COUNTY

SEPTEMBER 2016

VOLUME 40 ISSUE 9

## BVARC GENERAL MEMBERSHIP MEETING, Thursday, September 8

—*Zounds Great*—

Digital sound card modes that is. If you haven't gotten on the air with any of the digital modes yet, you won't want to miss the September meeting. KF5TFJ is working hard on a presentation that will demystify the topic so you too can join in the fun. (Ancient secrets shall be revealed).

As it turns out, some of the sound card modes did not start out that way, so be prepared for a bit of light history.

And you won't need your magic decoder ring!



**About the August meeting...**

### **I Screamed. You Screamed. We all Screamed for ICE CREAM!**

And we got it. So the burning question is: How's the diet coming along? I did not hear of any complaints from anyone, so I deem our annual ice cream social a great success. Let's do it again next year, ok?

Ed: Both of the above submitted by VP/Program Chairperson, Jon Noxon, KF5TFJ



### **Critical Call To Arms to protect the lower portions of the ham bands.**

Be sure to read the article in this issue where "Big AI," N5XZ, describes in detail how many believe that a pending regulation by the FCC will essentially make the Data sections of the ham bands (corresponds to the "CW portions") useless to narrow band data (PSK 31, JT-65, CW, RTTY, and dozens more). Basically the FCC is preparing to put into place a rule allowing wide band data transmissions over the entire "CW" sections of the ham bands. These could take up to 25KHz of bandwidth. Yes, digital data is to be fostered, but, like SSB, it needs to be allocated to its own section of the band and not destroy the entire narrow band sections. Incredibly the Notice of Proposed Rulemaking cites "The purpose of separating emission types into groups is to relegate the transmission of certain inharmonious emission types to different segments of amateur service frequency bands, while still allowing great flexibility in the types of emissions that may be transmitted by amateur stations." Yet, this is precisely what RM-11708 violates. Furthermore Part 97.1 (c) cites "Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art." In virtually destroying the narrow band possibilities, it effectively eliminates a stepping-stone for amateurs to get a footing to achieve such advancing skills. These arguments can go on-and-on, but please read XZed's article; it is long, but it could be that a significant section of this hobby and public service and emergency comms could be destroyed with one regulation. Submitted by K5IZO

## The Prez Says

The end of summer is just a few weeks away. Time for cooler weather means one thing – time to build antennas! So get out your ARRL antenna book and build something new for the coming year. Try your hand at an end fed ZEPP or even an all band TASH vertical. Try something new and see how it works. That is the best way to learn this unique hobby of amateur radio.

We have now been at the Sugar Land Masonic lodge on Eldridge road for a year now. Even with the ups and downs (lights taking 3 hours to come on, bathrooms not working) the locations has not been a bad place. We no longer have to fight for parking spaces or share a location with 2000 of our closest friends. Socializing is now possible before the meeting since we do not have to wait in the parking lot for our appointed time. All of this makes the club meetings enjoyable and friendly. So with that said, BVARC has renewed the rental contract for one more year. Hopefully this year we can convince someone to start bringing hot dogs and coffee. Last year there was no Blue Bell. But that changed. Thank goodness. The Ice Cream social was a big success with over 60 club members and guests. I want to thank Michael Monsour for all of his hard work on putting the event together and I am glad he is doing much better. Thanks again Michael.

The September meeting will have Jon Noxon explain some of the forms of digital communications. Jon has stepped off in the digital world and has become one of the world renowned experts in digital communications. Just ask him. HI HI. Make sure you come out to the next meeting for Jon's presentation.

Club Elections are just around the corner in November. If you would like to help the club by volunteering your time to be on the board of directors, please contact someone on the board and let them know. You can also have someone nominate you from the floor before the elections. Please consider running for one of the positions on the BVARC board of directors.

73,  
Mike, N5VCX



### **BVARC BOD & Greater Houston Hamfest Meeting Schedules July to December 2016**

Meetings will be held at Bayland Community Center except for the September meetings due to the Labor Day Weekend. The BOD meeting will be a conference call that will be held on September 1<sup>st</sup>. The call-in information will be posted on the BVARC web site the week of the meeting.

The Greater Houston Hamfest organizational meetings will be held immediately after the BOD meeting except in September. The Hamfest meeting will be held on September 3<sup>rd</sup>. The location will be published the week of the meeting on the BVARC web site.

September 1 <sup>st</sup>	Conference call	7:00 pm to 8:00 pm	BOD Meeting
September 3 <sup>rd</sup>	Location TBD	2:00 pm to 4:00 pm	Greater Houston Hamfest
October 8 <sup>th</sup>	Bayland Community Center	9:00 am to 10:30 am 10:30 am to 12 noon	BOD Meeting Greater Houston Hamfest
November 5 <sup>th</sup>	Bayland Community Center	9:00 am to 10:30 am 10:30 am to 12 noon	BOD Meeting Greater Houston Hamfest
December 3 <sup>rd</sup>	Bayland Community Center	9:00 am to 10:30 am 10:30 am to 12 noon	BOD Meeting Greater Houston Hamfest

**Results of the August 9th  
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, August 9, 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

Three examination elements were administered during the evening to three applicants. One new Technician class license, one upgrade to General class and one upgrade to Amateur Extra class were attained, with the total number of elements passed being 3. The overall "pass rate" for the evening was 100%.

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

Wesley P. Felter	-	K5WFP	-	General
Andre Kowalczyk	-	{KG5OYM}	-	Technician
Keith L. Till	-	KG5MHF	-	Amateur Extra

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 ...



**BVARC Historical Vignettes – BVARC and RFID Technology  
Allen Mattis N5AFV, Club Historian**

Throughout most of our club's history BVARC has participated in public service events. One of the public service events BVARC participated in was the Gulf Association Athletic Congress (GAAC) Marathon Warm-Up Series of three races that prepares runners for the Houston Marathon. BVARC provided communications for these races from 1987 through 1999.

In the early 1990s the GAAC was investigating the possible use of radio frequency identification chips (RFID) to track runners in races. This was new technology at the time and there was concern that the 2-meter radios used by BVARC members would interfere with the chips. A special race was held by the GAAC in Memorial Park with BVARC members providing communications. BVARC members at the finish line provided intense radio activity as the runners finished the race. The RFID chips were not affected by the radio transmissions.

Today RFID technology is used in the Houston Marathon and by the Harris County Toll Road Authority EZ Tag system. We take RFID technology for granted but 25 years ago BVARC played a role in evaluating emerging RFID technology.

## BLT-45 To The Edge of Space! – And BACK!

If you do the same thing for over a quarter of a century, can it still be fun? Can it still be exciting and worthwhile? Back when we started launching balloons as the South Texas Balloon Launch Team (BLT) in December 1990, that question never came up. It was supposed to be a single event just to see what it took to fly ham gear to the Edge of Space, and get it all back. We didn't have the internet, GPS and APRS. We just had a challenge from Bill Brown WB8ELK. He told us about his first ham-balloon launch in 1987, during a presentation at the Dallas Hamcom. We were hooked...

A few months ago members of the South Texas Balloon Launch Team met up with WB8ELK and others at the Great Planes Super Launch in Grapevine, Texas, to fly BLT 44.5 (AB5SS-11), an ingenious mix of our KT5TK Pecan APRS units and AB5SS experience-derived updates. We didn't get to Europe like BLT-42.1 (W5BTR-11), but it was a fantastic experience for those that could attend. I hope to attend GPSL next year. There are now so many groups around the world that fly ham balloons, and we are amazed to be a part of the early beginnings.

While the long-distance floater projects are fun and challenging, we still prefer the short-duration, high-altitude flights like BLT-45. Unlike floaters that disappear to the east at altitudes between 12,000 and 40,000 feet, our "normal" flights can go to 100,000 feet or higher, and only take a fun Saturday to prep, fly, recover and celebrate. If you took a roll call at a typical August BLT flight, you would find that well over half of the attendees are BVARC members. Does this mean that the BVARC members like outdoor events that are entertaining, or that they support projects at the "bleeding edge" of ham-radio endeavors? I think it is both. Rather than just sit in the shack and play with radios, most BVARC members want to be personally involved and learn about new facets of amateur radio.

During August I gave two talks about the AMSAT and the Amateur Radio Satellite Program at the Austin Summerfest and the Northwest Amateur Radio Society meeting. It was impossible to focus only on the HAMSATS. We had so many interesting payloads slated for BLT-45, that I had to interject information about our project and payloads. During the months before the August 20<sup>th</sup> flight, the list of items grew quickly. Back in February it looked like we might fly digital TV if we could replace gear that died during BLT-42 last August. Other payloads were only a guess. And then the torrent began.

On the evening before the flight of BLT-45 the list included DVB-T 4-MHz-wide Digital ATV, a Cross-Band UHF-up, VHF-down voice repeater, four APRS units, Slow-Scan TV on 144.5 MHz, new Hi-speed WiFi on WiFi Channel -2 (minus 2) in the 13-cm ham band, two GoPro recording cameras, a Balloon-Burst recording camera, the audio beeper, and an RC Glider (scale model of the Space Shuttle) for release within sight of the airport. We got close to the FAA limits for payload weights, but did not exceed them.

David Allen, the Wharton Intergalactic Spaceport Manager, made it a point to attend the flight of BLT-45. We have been working with David via email and phone for many years, but Saturday, August 20, 2016, was our first in-person meeting. We have been flying from Wharton since 1994, so this was a real delight. The hospitality and cooperation from the folks at what they call the Wharton Regional Airport has been stellar. When we arrived at 9 AM, we had free run of the office, outdoor patio and the perfect hanger adjacent to the office. It doesn't get any better. They even had fresh coffee.

Our ground-station wizards set up all of their gear with Kirk KK2Z and Tom K5SAF leading in the patio area. Payload Coordinator Mike WA5TWT began stringing the many payloads together in the hanger while Helium Czar Darrel KC5JAR had the donated helium from PRAXAIR on tap for the filling fun. Bill WA5VQH from Los Alamos, NM and Andy W5ACM got things going with the 1600 gram (big) latex balloon from Scientific Sales in New Jersey. Long-time balloon-fill member Mike W5MAB was in ICU for heart issues, but texted in his support. The good news is that he has escaped the hospital and is doing fine. He promises to be back next year.

It was now 9:30 AM and time for payload testing. If it doesn't work, the Payload Coordinator literally throws it out. Amazingly, everything worked! Yes, there were a few marginal units, but that's what we do. We experiment. We try new ideas and hardware. We stress them at virtually zero psi and temperatures that you just can't find down here, as low as -90 degrees F. Even good gear simply can't take too many cycles to the edge of space. We were fully tested and gassed up but... Wharton we have a problem. The rain cell that crossed the airport had shut down the ground-station crew. They needed to dry their gear and set it all back up. Kirk phoned the update to the FAA, and the crew, with new volunteers, got to work. Antennas, preamps, power systems, computers, receivers, monitors all had to be tested and vested.

At 10:35 AM we began the WALK. This is when we carefully bring the payload string out of the hanger to the most distant runway. Darrell led the way while the rest of us followed, being careful not to tangle the lines holding the payloads together. We had the balloon, parachute, camera payloads, cross-band repeater payload, University of Texas at Dallas payload and the Space Shuttle glider all in tow. Darrel began a slow and careful deployment until Tony N5RPQ arrived with the glider. Let it GO! The long string rose into the sky while Bill KG5FQX recorded it all with his quad copter from above, while others recorded the event from below. A cheer and applause could be heard. Yes, it is still exciting!

Next we collected data and played. For those things that had downlinks, we recorded everything possible. The SSTV was great fun. The new UT Dallas WiFi links provided distance input on how far we can go with modified WiFi. I still want 400 miles, but we are not there yet. The glider almost went out of sight prior to release, but it was found and survived. The DVB-T video became difficult above 22,000 feet, but was vastly better than last year. We will improve on this amazing digital-video format. Our experiments will help with video via HAMSATS since limited bandwidth has precluded satellite video on 70-cm in the past. We think we can now do viable video in a two-MHz bandwidth. More tests are

needed. The cross-band repeater and the W5ACM-7 APRS Sain-Sonic payloads worked flawlessly for the whole flight. Bill KG5FQX's GoPro did also. We have fantastic video links of burst and landing available via <http://www.w5acm.net/b45.html> . Check it out!

The usual recovery team led by Eddie NU5K and Suzanne KF5GWZ was not available this year. Dwayne KB5YTA attended the launch, but couldn't stay for the chase. Payload Masters John AB5SS and Andrew KE5GDB began the trek to the west just before the balloon reached the final burst altitude of 105,000 feet. The rise rate had been just short of 1000 feet per minute. We were delighted to note that the final drop rate was about 1400 feet per minute. The expertly crafted parachute by previous Helium King Charlie K5ENG had performed perfectly. However, the payload string had come down on private property beyond commercial property with lots of gates, locks, barb and concertina wire. John and Andrew decided to wait for the other chasers to catch up and help out.

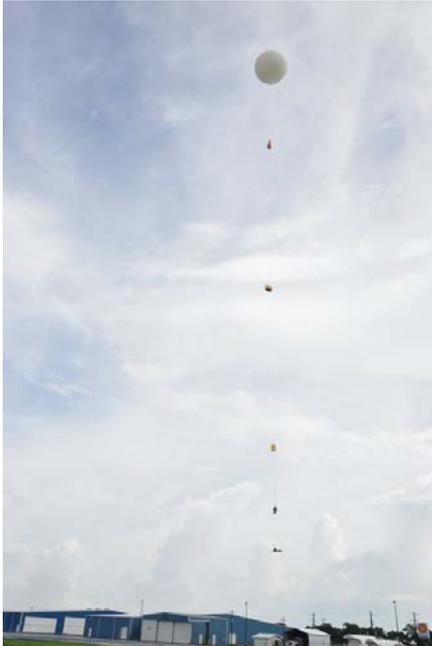
The folks that owned the private property just happened to be headed in to their land and a few of us were escorted to the site where the BLT-45 string was hanging across a tree about 50 feet off the dirt road. It took some work to get the string out of the tree, but we had success and everything was in excellent condition. The chasers finally got their chance for BBQ at Hinze's in Wharton. It was a Great Day! Thanks to all that were a part of the BLT-45 team and the support of BVARC and PRAXAIR.



Hanger to launch site.



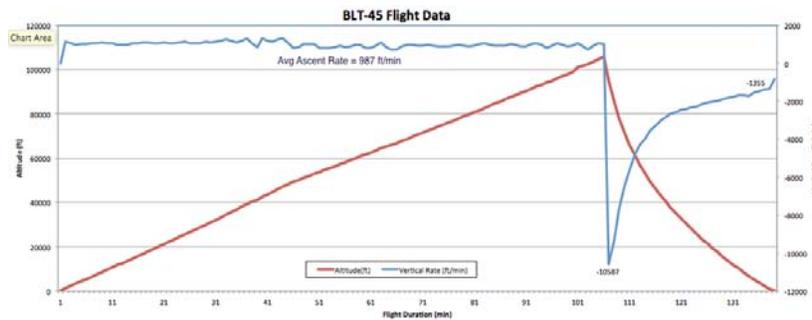
Recovery team



Away she goes!



We got it!



## Minutes of the August 6th, 2016 Board of Directors meeting of the Brazos Valley Amateur Radio Club

Jon Noxon called the monthly Board of Directors meeting for the Brazos Valley Amateur Radio Club to at 9:04AM on August 6th, 2016, at Bayland Park Community Center, 6400 Bissonnet, Houston 77074. Attending were: Jon Noxon KF5TFJ (Vice President), Donovan Balli KD5BDZ (Treas.), Michael Monsour ACØTX (Rec.Sec./Quart.), Jo L Keener KE7NSB (2yr At-Large Dir), Jerry Muller K9GEM (1yr At-Large Dir.), Scott Medbury KD5FBA (2yr At-Large Dir), Steve Friedman KF5YYZ (Cor. Sec.)

### Reports:

- 1.1 A motion was made and passed to accept the July Minutes
- 1.2 A motion was made and passed to accept the Treasurer's Report. There was discussion regarding two antenna's that are 'missing' the Treasurer will look into what the insurance will cover.

### Old Business:

- 2.1 Letters of Appreciation need to be crafted and sent to Fire Department, the donor and the cook with regards to Field Day.
- 2.2 August: Ice Cream Social
- 2.3 September: Jon Noxon will put on a presentation on digital techniques.
- 2.4 October: There will be a presentation of HF antennas
- 2.5 Masonic Lodge contract: BVARC is committed for another 11 months; issues seemed to have gotten resolved. A motion was passed to authorize payment to the Masonic Lodge.
- 2.6 Winter Field Day: All sports venues have been booked up. There was discussion having a special event station. There is need to obtain NFL approval for a Super Bowl special event station.
- 2.7 Next Board meeting will be conference call because the center is closed.

### New Business:

- 3.1 A motion was made and passed to authorize the Treasurer to pay the insurance bill.
- 3.2 Determine whether the insurance will pay for the 'missing' antennas.
- 3.3 There was discussion what to do with memorials sent to the club and new members
- 3.4 There was discussion to recognize recent SKs at the banquet, to get Ron Litt feedback concerning this.
- 3.5 There was discussion to replace the two 'missing' antennas- this is being tabled for now.
- 3.6 A motion was made and passed to donate \$500 for the balloon group.
- 3.7 The next Board meeting will be a conference call and the next Hamfest meeting is to be determined.

Meeting adjourned at 10:03 AM

Submitted by Recording Secretary, Michael Monsour ACØTX



## BVARC Rag Chew Net

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

07/27/16, K5LKJ (NCS), W5TKZ, K5IZO/5 (Jasper), W5HFF, KF5TFJ, K5LJ, W5TOM, AF5T, K0NM, WA5KXG. (10 Check-Ins). Solar Cycle 24: SFI = 71, SN = 0, A = 5, K = 0

08/03/16, K5LKJ (NCS), KF5TFJ, W5TKZ, K5LJ, W5HFF, K0NM, WA5KXG, K5IZO, AA0ST (Dickinson), AF5T, AF5XL, KK5IS (R), KF5PHA, KC5JAR (Katy). (14 Check-Ins) Solar Cycle 24: SFI = 74, SN = 11, A = 34, K = 3

08/16/16, K5LKJ (NCS), W5TKZ, WA5CYI, W5HFF, N5EKW (Katy), K5IZO, KD5O, W5RH, K5LJ, KF5TFJ. (10 Check-Ins) Solar Cycle 24: SFI = 94, SN = 72, A = 14, K = 3

08/17/16, K5LKJ (NCS), K5IZO, W5TKZ, K0NM, KF5TFJ, W5TOM, W5RH, WA5KXG, WW5PA, K5LJ, KG3JPP (Alvin), AA0ST (Dickinson), KE5OBY. (16 Check-Ins) Solar Cycle 24: SFI = 83, SN = 81, A = 6, K = 0

(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

## To my fellow CW, RTTY, and other narrow band digital mode users:

I mentioned at the last BVARC meeting that I would provide additional details regarding RM-11708. I have been in contact with Ted Rappaport N9NB regarding this, and I would like to copy to you what he sent me:

>>  
“Today's ham radio RTTY stations use a well-known signaling convention based on the baudot code, and this code uses a speed of up to 300 baud, the maximum signaling speed allowed in the FCC rules for HF. This coding scheme has a natural emission bandwidth of just under 500 HZ. A fast CW signal has an emission bandwidth less than 200 HZ. Psk31 uses less than 100 HZ. Jt65 uses about 200 HZ bandwidth or so.

By asking the FCC to remove the 300 baud rate limit on HF, the ARRL was simply asking the FCC (in their petition 11708 filed in November 2013) to remove an antiquated term and remove the baud rate speed limit (which was naturally about 500 Hz bandwidth). That seemed fair enough. But, sadly, the ARRL asked the FCC to replace the existing 300 baud rate limit with a 2.8 kHz emission bandwidth limit, the same bandwidth limit as SSB signals!

Thus, the ARRL asked the FCC in Rm 11708 to allow any data signal, including future RTTY or pactor or new wideband marine modem data signaling types to be introduced with up to a 2.8 kHz emission bandwidth! This would wipe out the narrow RTTY and CW signals of today, and hog the low end of all the HF bands. The ARRL tried this same thing in 2005 but in the SSB spectrum with its failed RM 11306. In 2007 the ARRL withdrew its petition to the FCC since hams were very upset.

Unfortunately, what's really bad now about RM 11708 is that the ARRL never withdrew it, and last week the FCC took it as a proposed rulemaking. This is the last stage before accepted law!

What is abysmal is the FCC took the ARRL's ideas of eliminating 300 baud limit in HF, but has tentatively ruled that any data signal may use an UNLIMITED bandwidth. This means wide band signals of arbitrary bandwidth will key up on CW and RTTY stations!

A published NPRM means the FCC is about to enact it as law, so unless there is MASSIVE outcry to both ARRL officials and the FCC in both the commenting period and the "reply to comment" period, the precious HF lower CW/data/RTTY bands may be lawfully overrun by serial tone military modems and digitized voice signals and lots of other stuff with vicious signal bandwidths of 2.8, 5, 10, 20 and 25 kHz!!!! Big walls of impenetrable QRM!! Good bye CW and RTTY and DX! Hello Internet and Facebook for boaters -:( “

<<

What we are asking you to do is to contact the FCC and express your disapproval of this proposed rule. We have until October 11, 2016 to submit comments and reply comments by November 10, 2016.

You may submit comments, identified by WT Docket No. 16-239, by any of the following methods:

- *Federal Communications Commission's Web site:* <http://apps.fcc.gov/ecfs/>. Follow the instructions for submitting comments.[CLICK ON “SUBMIT A FILING”]

**Editor's Note:** “Submit a Filing” is for those comprehensive filings of a lengthy nature with supporting documents attached. If your submittal is 2 or 3 paragraphs long without attachments, do the following: Go to the above link, then under “Filings and Proceedings Search” CLICK ON “Browse Popular Proceedings” then find RM-11708 and click on “Express Reply.” It will populate the Proceedings Number automatically. This is where the vast majority of comments are made.

- *Mail:* Federal Communications Commission, 445 12th Street SW., Washington, DC 20554.
- *People with Disabilities:* Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by email: [FCC504@fcc.gov](mailto:FCC504@fcc.gov) or phone: 202-418-0530 or TTY: 202-418-0432.

There is a 60 day "comment" period after NPRM 11708 published in the federal register, and then after that 60 day window, there is a further 30 day "reply to comment" window where everyone can critique and agree or disagree with some of the previously filed comments.

“If we are to successfully revise (it's too late to repel) this frightful proposal, which is in the very last stages of official approval at the Commission (gulp!), we must have tens of thousands of well-reasoned replies that specially call for bandwidth limits!!! Both during the reply period, and then ALSO during the Reply to Comment period, we need tens of thousands of comments so the FCC sees this is a problem ! Otherwise, there is no hope and they will accept the NPRM as written and published in July 28,2016!”

What to say? Well, I have a sample letter I can provide to each and every one of you. I can also provide a list of top ARRL leaders to contact also with your concerns.

If Ted Rappaport N9NB sounds familiar, he is the Founding Director of NYU Wireless and New York University's Tandon School of Engineering and was mentioned in the latest issue of QST on page 9 on his work in millimeter waves.

So please, if you are concerned about this at all, contact the FCC via one of the methods above as soon as possible. If you have any questions, feel free to contact me via email.

BTW, here are some other websites for additional information:

<https://aa4xx.com/2016/08/19/formulating-a-coherent-response-to-nprm-11708/>

<http://www.learnmorsecode.com>

<http://wireless-girl.com/>

Submitted by Allen Brier, N5XZ

If you wish to get a suggested detailed letter, e-mail Allen at [n5xz@earthlink.net](mailto:n5xz@earthlink.net) for a sample. Please use it, edit it or write it and also include some of the comments from the Editor's article elsewhere in this newsletter.



## Where in the World is . . .

### The North-est North and the South-est South?

The North-est North QTH's on Earth are quite possibly **Ellesmere Island (VY0, CQ Zone 2, IOTA NA-008)** in the Canadian Arctic and **Svalbard Island (JW9, CQ Zone 40, IOTA EU-026)** in the Arctic Ocean



One of the most remote places on Earth, Ellesmere Island has experienced little human activity. It is the third largest Canadian Island and the world's tenth largest. Located to the Northwest of Greenland, its estimated population is 146 souls. The largest is the town of Griese Fjord (Pop. 130). Canada maintains High Arctic Weather Stations at Alert (Pop. 5) and Eureka (Pop. 0).

For amateur radio, the magic begins at Eureka. In addition to the weather station it is the club station of the Eureka Amateur Radio Club, VY0ERC, possibly

the northernmost radio club in the world.

VY0ERC operates from the Polar Environment Atmospheric Research Laboratory (PEARL) Ridge Laboratory (RidgeLab) located approximately 11 km as the crow flies from the weather station; at 80 degrees 3 minutes N and 86 degrees 25 minutes W.



East of Greenland lies Svalbard Island in the Arctic Ocean; it is halfway between Norway and the North Pole. By contrast Svalbard is a veritable metropolis with almost 3000 humans and several thousand polar bears. Located at approximately Latitude 74 degrees north, it enjoys a relatively balmy climate ranging from 43 degrees in summer to 3 degrees (Fahrenheit) in winter.

The island is the home of the Svalbard Global Seed Vault. Sometimes called the Doomsday Vault. The project is an attempt to insure against the loss of seeds during large-scale regional or global crises. It is 400 feet inside a mountain and stored under moisture free conditions. The temperature is kept at a frigid zero degrees Fahrenheit



For the South-est South QTH? It is not in dispute. Situated at the geographic South Pole, is the **Amundsen-Scott South Pole Station (KC4AAA, IOTA AN-016)**. Part of the U.S. Antarctic Program, and smack at the bottom of the world. Yes, there is a barber pole that marks the exact spot where all the longitude lines converge. So do several CQ Zones. According to the CQ WAZ rules. If you work KC4AAA, you can claim credit for any one of the following zones: 12, 13, 29, 30, 32, 38 or 39.

The station is named for Norwegian Roald Amundsen who was the first to reach the South Pole on December 14, 1911 and Robert Scott, a British Naval Officer. Following a different route, Scott reached the pole on January 17, 1912; 34 days after Amundsen. Tragically, during the return to his base camp, he and his team perished from exhaustion, starvation and extreme cold.

The U.S. has had a permanent presence at the South Pole since 1957, when the station was established during the International Geophysical Year. Since then, it has undergone expansion and rebuilding to support its activities.



The Antarctic Treaty of December 1, 1959, established the legal framework for the management of Antarctica, including allocation of amateur call signs. Prior to 1959 the FCC assigned KC4USx, McMurdo station on Ross Ice Shelf (IOTA AN-011), still uses KC4USV.

Since 1959, the FCC reserves call letters in the block KC4AAA to KC4AAF for the National Science Foundation's use at the South Pole. South Pole uses KC4AAA and Palmer (IOTA AN-012) uses KC4AAC.

Reporting from the Dark Side, Ron, K5HM.



### A Funny Thing Happened on the Way Home from Vacation

Last month, my wife and I were in Wiscasset, Maine...a small coastal town, one of hundreds along Maine's coast... tripping around the streets and shops when I came upon a book store with a discount bin out front. I am always looking for antenna and electronics books of interest and this day did not disappoint. I picked out the only electronic book in the bin, a theoretical book about AC electricity. Upon opening, I saw a penciled signature of "Forrest Gehrke". Now, if it would have said Bill Smith I would not have taken second notice, but Forrest Gehrke is not your everyday name. Diverging a bit – Forrest Gehrke, was K2BT and the author of a Ham Radio magazine 6 part series on the 4 Square Array, amongst other technical articles. He also helped invent the proximity fuse back in the WWII era. So, the signature name hit me hard and I staggered into the store to ask the owner where he got the book. Long story short, the owner was Forrest's Son-in-law, and this book was the last book he had to sell out of a huge library of electrical books sold after Forrest, K2BT, became an SK. Now, I wouldn't consider this fate, but I do consider this serendipity at its' finest. Years ago, when I was a neophyte antenna aficionado, I found the Ham Radio 4 Square Article series quite fascinating and I corresponded with K2BT about it. I am still looking for that letter he sent me, so I can match it up with the book to place it with my many other antenna and technical books, as a warm reminder of the ghosts of SK's past.

Rick -- W5RH



### 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:

5/16 - 24 - Ron, k5hm	6/20 - 22 - Ron, k5hm	7/25 - 20 - Clint, kf5hdf
5/23 - 23 - Clint, kf5hdf	6/27 - 23 - Clint, kf5hdf	8/1 - 24 - Rick, w5rh
5/30 - 12 - Terry, k5pgf	7/4 - 13 - Dave, n5ekw	8/8 - 20 - Steve, kf5yyz
6/6 - 23 - Dave, n5ekw	7/11 - 18 - Steve, kf5yyz	8/15 - 20 - Rick, w5rh
6/13 - 18 - Steve, kf5yyv	7/18 - 20 - Ron, k5hm	8/22 - 27 - Clint, kf5hdf

#### BVARC QUICK STATS

Date	Members	Newsletters	Life Members
8/25/16	192	196	66

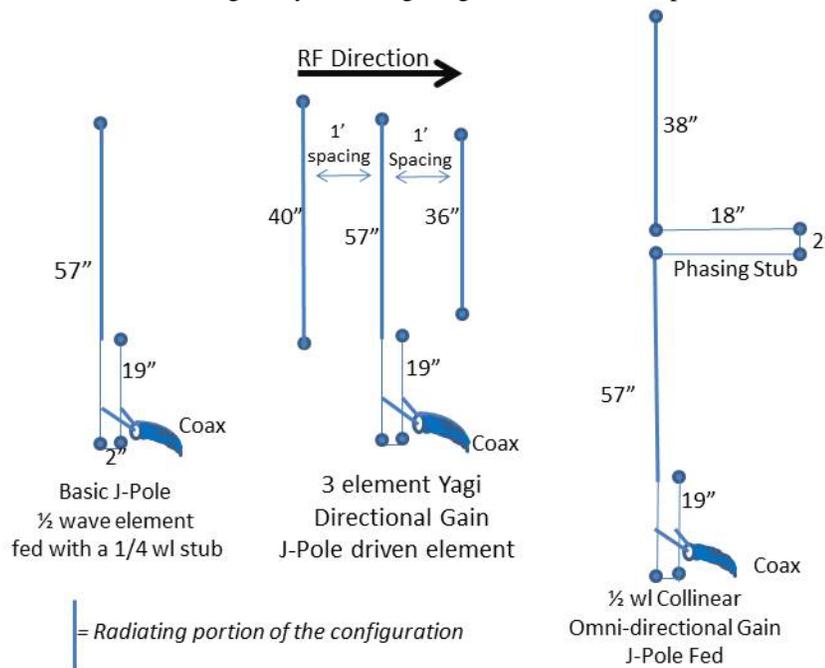
# The Radio Hotel - VHF Antennas from Thumbtacks and Wire

## By Rick Hiller -- W5RH

Listening on YVQ's 94 machine these days you can hear the wonderful sound of the ever increasing number of call prefixes of newly licensed Hams...KE's, KF's and KG's. Most new Hams start out on the VHF bands using handhelds to get into the repeater. They listen a lot to learn the proper etiquette, procedures and who the local folks are and what they like to talk about. Checking into the various local 2 meter nets is also a way for them to start to enjoy our hobby. But, sometimes that "rubber duck" antenna on top of that handheld just does not cut it. For a few dollars and a few minutes, these newbies can have easy up, full size antennas for 2 meters. Even some with gain and directionality. My suggested antennas, pictured below, are all vertically polarized for repeater use and easily put together on a sheet rock wall in your shack using thumbtacks (or push pins) and bare wire #14 or smaller. They all use the J-Pole, 1/4 wavelength stub, "end fed" feed system and are easily fed with 50 ohm RG-8X coax. By keeping the coax reasonably short, you should have no feedline loss issues, which typically occur at these higher frequencies.

**Notes:** 1) The longest antenna – the 1/2 wl Collinear fits into an 8 foot high wall space. 2) Keep all antennas away from any vertical AC distribution wires hidden within the wall. 3) You will need to adjust the location of the feed point coax connection to get the best SWR. The 1/4 wl stub section varies in Z, from close to 0 Ohms at the bottom to about 1K Ohm at the top. You have got to find the sweet spot for that 50 ohm match. 4) Lengths are noted for distances between the thumbtacks and that means that the wires need to be cut about 1" longer to have extra to wrap around the thumbtacks. The J-Pole element can be cut as one single long wire wrapped around the thumbtacks at the end. For reference: 1/4 wl = 19.1" and 1/2 wl = 38.2" – for 146.94 MHz.

The drawing below has 4 items: 1) dots for the location of the thumbtacks; 2) lines for the wires; 3) the feed point where you connect the coax; and 4) thick lines indicating the radiating portions of the elements (just as an FYI). Connecting the coax inner and outer conductors to the feed point can be accomplished by a) twisting the wire around the j-pole wire; b) sliding to get the best match using your SWR meter; and finally, c) soldering the wires. Or, you can use alligator clip leads and just leave it like that. A bit of ingenuity on configuring these antennas helps a lot and will make it your own.



Enjoy your hobby. GL ES 73 DE W5RH

**Next time.... Antennas for the Wednesday night 3910 KHz Rag Chew Net**

*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.*

# BRAZOS VALLEY AMATEUR RADIO CLUB

**This newsletter 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 newsletter 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** also administers amateur radio license exams on the 2<sup>nd</sup> Tuesday of each month at 7:00 p.m. at the Houston Community College’s 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.

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

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

---

**VOLUME 40, ISSUE 9**

**SEPTEMBER, 2016**

**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, September 8**



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