



BVARC BEACON



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

APRIL 2018

VOLUME 42 ISSUE 4

BVARC APRIL GENERAL MEMBERSHIP MEETING

Thursday, April 12th, 2018 7:30pm, 421 Eldridge

The upcoming general meeting will primarily be about Public Service. ARES, RACES and public service event support like the upcoming MS 150 (April 28th & 29th) and the recent Buffalo Bayou Regatta (March 10). We'll also talk about logistics and volunteer opportunities for Field Day (June 23-24) at Duhacsek Park.



REPORT ON THE MARCH GENERAL MEMBERSHIP MEETING

The "World's Biggest Buildathon" project was the main focus of last month's meeting – we had at least a dozen members construct this solderless transmitter – as created by Rex Harper (W1REX) of Tuna Tin fame. From what I can tell, we had a 100% success rate on completing the kits! In fact - Jon Noxon was working DX (with 50 mW) from across the room. We still have some kits available, if you would like to get one they are \$12.50 for each kit. Contact Mark Janzer to obtain one - at email K5MGJ@yahoo.com.

Here is a picture of Jon's construction:



The Prez Says

The magic day has finally come and gone. The 2018 Greater Houston Hamfest is over and it was very successful. Turnout was approximately the same as last year making the event really phenomenal. The hard work that was done over the last few weeks by the Hamfest committee turned into fun and learning for everyone. As always we had the golf carts picking up people in the parking lot and helping them back and forth to their vehicles. This year the tailgate area registered ZERO complaints, a wonderful first for the Hamfest!

Again the Greater Houston had TWO balloon launches which Andy said went very well. Andy told me the lift-off times were perfect since they had no wind at all. I told him that I had ordered it just for the Hamfest this year and he was very grateful.....Hi Hi. It was a great time for everyone.

This year we had Dan Henderson, N1ND from ARRL. Dan is ARRL's regulatory information manager and has been in that position for a number of years. He has also been the Field Day chairman serving in the position for a number of years as well. Dan's presentation was about the ARRL proposal for expanded privileges for Technicians. This a subject that has many people interested and I am curious of the outcome. We also had ARRL West Gulf Director, Dr David Woolweaver, K5RAV. David has been coming the Houston Hamfest since its third year and has really been interested in Greater Houston Hamfest growth and expansion

This year the grand prize, an Icom IC-7300, was won by Jerry Steward, N5FWB. Jerry has been in amateur radio for a number of years operates on a regular basis. He said he can put the 7300 to a good use (I talked to him a week later and he was still learning the finer points of the radio). Jerry also said that it was not a bad investment since it only cost him \$40 in raffle tickets. I asked him if he was willing to donate to the N5VCX radio fund and he said he would donate the next one!



**Jerry Steward, N5FWB with a new Icom IC-7300
(and yes I was trying to pull it out of his hands!)**

The Hamfest steering committee did a wonderful job this year organizing the event. From the front gate area to the ticket booth to the announcer's stand to the programs, everyone did a wonderful job. I just want to say thanks to the people that volunteered their time to help and make the event a wonderful success. So mark your calendar for March 22nd and 23rd, 2019 for the next Greater Houston Hamfest!

This month's general meeting we will have a presentation from Jeff Walter, KE5FGA. Jeff is the ARES District 14 Section Emergency Coordinator (SEC). Jeff's presentation will be about ARES and what they have done over the past few years for the flooding and Hurricane Harvey. It is great program so hopefully everyone can make it.

If you would like to help out on a public service event, the **BP MS150 is coming up April 28th and 29th**. There are still plenty of positions open for radio operators along the course so if you are interested, please contact me or sign up at <http://bpms150hams.org/>. Come on out and put your radio and license to a great use!

Museum Ships Weekend is coming up on June 1st, 2nd and 3rd. Mark Janzer, N5MGJ will be coordinating this year and is working on getting everything ready for a great event. There are still a few work parties between now and June so come on down and help get the radio room working for MSWE. Check the newsletter next month for more information.

And don't forget **ARRL Field Day June 23rd and 24th**. Plans are already underway for this year's event and everything is in full swing. We will be at new location this year that should really help with antenna placement, parking and operating. There will be planning meetings after the May and June Board of Directors meeting. If you would like to help, please come to the meetings or contact anyone on the board of directors.



Where in the world is . . .

**Ducie Atoll (VP6D)
CQ 32 ITU 63
IOTA OC-182**

After the failed Bouvet Dx-pedition, with its terrible weather and the mounds of elephant seal dung, do you want to try a tropical place? Ducie stands at No. 21 on the Club Log DXCC Most Wanted List.

Ducie is in the Eastern Pacific, about 300 miles west of famed Pitcairn island. Like Bouvet it is south of the equator, so seasons are reversed, and like Bouvet, it is uninhabited and desolate, but the climate is warmer. The comparison ends there. It is not really an island, but an atoll with a central lagoon with a coral reef and several small islets. Only 1.5 square miles in area, the atoll's maximum elevation is about twelve feet.



The few trees there grow to about fourteen feet at the most, so bring your sunscreen and a big floppy hat. Up for a swim? Forget it. While the lagoon is deep, it is noted for its poisonous fish and extremely dangerous sharks. Think *Jaws*.

The atoll was discovered by a Spanish expedition in January 1606. Then rediscovered and named Ducie Island on March 16, 1791 by Captain [Edward Edwards](#), of [HMS Pandora](#), who had been dispatched from Britain a year earlier to arrest the [Bounty mutineers](#). If he had maintained course, he would eventually have run smack into Pitcairn and found the them. Instead, HMS *Pandora* turned northwards

from Ducie and missed Pitcairn altogether.

Although Captain Edwards discovered the atoll in 1791, Ducie was not considered a British possession. In 1867 Ducie was claimed by the United States under the [Guano Islands Act](#), which established that an uninhabited territory with [guano](#) deposits could be claimed as a US possession, so long as it was unclaimed by any other country.

Despite claims on several other territories, based on various documents such as the Guano Islands Act, neither the United States nor the United Kingdom recognized the sovereignty claimed by each other. Neither of the two considered that the mere discovery of an island was sufficient to claim sovereignty over it. Ultimately, the United States did not assert sovereignty over most of its claimed territories and Ducie remains under the British flag today.

The Perseverance DX Group will land on Ducie sometime in the Fall this year. The group is a veteran of successful DX trips to Chesterfield Reef (TX3X) and Mellish Reef (VK9MT). A team of 14 operators will be on the island for up to 14 days. Seven operating positions are planned for 160-10 meters, SSB/CW/Digital, including FT8. Work VP6D for an ATNO.



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:

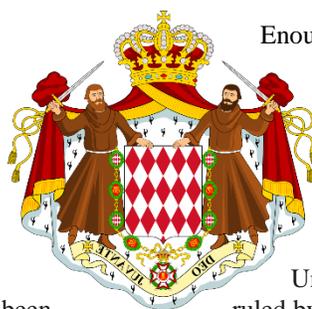
6/19 - 16 - Jo, ke7nsb 7/24 - 16 - Dave, k5ekw 7/31 - 14 - Terry, k5pgf 8/7 - 20 - Dave, k5ekw 8/14 - no net	8/21 - 10 - Jo, ke7nsb 8 - Harvey 9/4 - 9 - Jo, ke7nsb 9/11 - 22 - Luke, k0ltb 9/18 - 14 - Jo, ke7nsb	9/26 - 10 - Clint, kf5ndf
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BVARC QUICK STATS

Date	Members	Newsletters	Life Members
2/25/18	189	186	67

Where in the world is . . .

Monaco (3A) CQ 14 ITU 27



Enough with desolation and discomfort. Out of the Pacific and to the Mediterranean. For a ham radio destination, Monaco has almost no equal in comfort and style.

Officially, the Principality of Monaco ranks 154th on the Club Log's Most wanted DXCC list. Monaco is governed as a [constitutional monarchy](#), with [Prince Albert II](#) as [head of state](#).

The [House of Grimaldi](#) has ruled Monaco since 1297 surviving various disputes and conquests with surrounding states of France, Aragon, Sardinia, the Holy Roman Empire, the Germans and Italians. Unrest continued until Holy Roman Emperor [Charles III](#) gave up his claims to the principality that had been ruled by the Grimaldi family for over 500 years. Eventually, France was paid the sum of 4,100,000 francs which along with the [Franco-Monegasque Treaty of 1861](#), [guaranteed the little principality its independence](#). In 1869, the principality stopped collecting income tax from its residents—an indulgence the Grimaldi family could afford to entertain thanks solely to the extraordinary success of the casino! This made Monaco not only a playground for the rich, but a favored place for them to live. The official language is French, but [Monegasque](#), Italian, and English are widely spoken and understood.

The area of Monaco is squeezed into 0.78 square miles along the coast of the Mediterranean Sea and surrounded on three sides by France. By Comparison, Galveston, Texas whose 208 square miles sprawls along the Texas coast. Galveston's 50,000 inhabitant's dwarfs Monaco's roughly 38,000 but in the little principality, one out of every three citizens are officially millionaires. It is the



second smallest country in the world; only Vatican City is smaller. The citizens of Monaco pay no taxes.



In the late 19th century, the now famous Monte Carlo Casino opened along with a railway connection to Paris. And WHOOSH!!! Since then, Monaco's mild climate, scenery, and gambling facilities have contributed to the principality's status as a tourist destination and recreation center for the rich. In more recent years, Monaco has become a major [banking center](#) and sought to diversify its economy into the services sector and small, [high-value-added](#), non-polluting industries. The state is well known for being a [tax haven](#). It is also the host of the annual street circuit motor race [Monaco Grand Prix](#), one of the original Grands Prix of [Formula One](#).

Ham radio in Monaco is supported by the ASSOCIATION DES RADIO AMATEURS DE MONACO (ARM). Its members number approximately 30 amateurs. As Monaco is a signatory to CEPT it is relatively easy to get operating privileges for foreign hams. Transmit power is limited to 100 watts but space for antennas can be a problem since the principality is almost entirely urban.



Reporting from the Dark Side,

Ron, K5HM

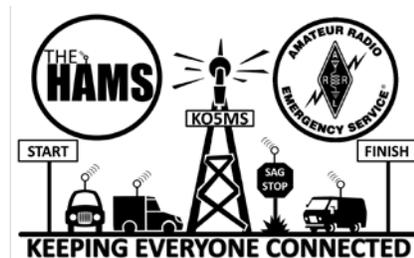
2018 BP MS150 Bike Tour Amateur Radio Volunteer Information

Do you think you can handle emergency communications for a large incident? Can you quickly install your radio equipment into emergency vehicles to help provide communications disasters? If you would like to find out if you have the "right stuff" and learn how to be better prepared for emergency communications then sign up to help with event communications for the 2018 BP MS150 Houston to Austin Bike Tour. This year's event will be held on April 28th and 29th, 2018. Amateur radio communications provided reliable and needed communications for the entire 2-day bike ride that has over 9,000 riders. Operators are assigned at many locations along the route relaying important radio traffic between the Houston Command Post and event officials. Some of the positions that need communicators are:

- **Break points** – Providing communications for supplies, medical problems and SAG control at break points on the route. – This can be just a few hours to a full day commitment. It is dependent on the location.
- **MS150 Staff** – Operators ride with MS150 staff to provide communications for important issues and problems during the ride. – **This is 2 day commitment**
- **SAG vehicles** – Provided communications for the SAG drivers who are on the course picking up riders that have mechanical problems or that can no longer ride. – **This is 2 day commitment**
- **Supply Trucks** – Provide communications for the supply trucks so supplies can be routed to the needed locations to deliver supplies and materials. – **This is 2 day commitment**
- **Houston Command Post** – The command post interacts with medical incidents, and other problems on the ride. The command post monitors the ride on VHF and UHF amateur bands. Medical vehicles are tracked with APRS and commercial tracking units along the entire course and the information is relayed to the course medical coordinator. The command post is set up to receive calls from event personnel and emergency services along the route through an 800 telephone number to coordinate emergency calls and situations. - This can be a one hour commitment to two days. The command post is open from noon Friday to midnight Sunday so many operators are needed to fill this long time period.

Amateur radio volunteers need a minimum of a dual band VHF/UHF radio that has a minimum of 25 watts output and a gain type magnetic mount antenna (1/4 wave antennas do not work). If assigned to an event vehicle, you must be able to easily transfer between vehicles since assignments do change during the event. Food and sleeping areas (bed linens not provided) are provided for volunteers along the route on Saturday and Sunday by the NMSS organization. A secure parking area will be provided for your vehicle in Houston or Austin if needed. Transportation is available back to Houston for the volunteers that are assigned to event vehicles.

Volunteer hours begin at **4:00 am sharp on Saturday morning and will end between 8 and 10 pm on Sunday**. If you would like to volunteer or find out more information, please go to <http://bpms150hams.org> or call Mike Hardwick, N5VCX, at 713-826-6917 or Charlie Matthew, N0XFD, at 713-498-9802.



The 2018 Greater Houston Hamfest Balloons

Andy MacAllister W5ACM

Launching amateur-radio balloon payloads at the Greater Houston Hamfest has become a part of the flight schedule for the South Texas Balloon Launch Team. Although the 2018 plan was originally supposed to be a simple payload on one latex balloon, things got a bit more complicated and interesting, during our monthly dinner meetings and remailer conversations.

Our simplest payload dates back to an article in a 1990 "73 Amateur Radio" magazine. It described a minimalist 10-Meter transmitter using one 5-Volt 28.322 MHz PC oscillator. Bill Brown, WB8ELK and others, achieved CW contacts with these 20-50 mW devices. Bill later devised some additional circuitry to key the device on and off according to a simple low-frequency oscillator circuit that included a thermistor. At room temperature the transmitter would beep up to 150 times per minute, but at extremely low temperatures, the repetition rate would decline to only a few beeps per minute.

We have been flying these "beepers" as disposable payloads for many years, but Payload Master John AB5SS wanted something better. He has been through several iterations and improvements since 2010. The Rev. 5.1 result is a dual-band transmitter that sends a CW ID and temperature data in both Fahrenheit and Celsius. No more hassle counting beeps and looking up temperatures on a chart! We still have to record time and values for later analysis, but it works well, and has been dubbed the Smart Beeper.

Perhaps one of our most complex payloads is the Pecan Pico APRS (Automatic Packet Reporting System) transmitter. It is also one of our smallest devices. Originally designed by Thomas KT5TK, John AB5SS has made some modifications and builds the units. When populating a bare board care must be taken not to breathe near the parts. Many of the resistors and capacitors are microscopic. When a board is successfully populated, John carefully puts the Pecan Pico in his homebrew reflow oven to heat the board so the solder paste can melt and attach everything in just a few minutes. The finished Pecan Pico receives GPS and transmits 1200-baud APRS packets on 144.390 MHz with 100 mW FM output. The transmitter will adapt the output frequency to any standard 2-Meter APRS frequency depending on location. This way it will be on the local APRS frequency anywhere in the world. The unit also sends several channels of telemetry and carries a rechargeable Li-Ion Polymer battery and solar cells to charge the battery during the day.

We flew both the Smart Beeper and the Pecan Pico on separate balloons at the 2018 GHHF. After Andy W5ACM had completed his early-morning Saturday BLT presentation, balloon filling and payload preparations began. The first balloon to fly was BLT49-2, the latex "popper" at 9AM. Since its rise rate would be faster than the other balloon, it was decided to send it up before the APRS payload. When we got outside we discovered three electric drones waiting to record video from above. Andrew KE5GDB, Marty W5MF and Joe W5BSA were the drone pilots. It looked like something out of a science fiction movie. As the first balloon was released, the drones attempted to follow, at least for a while. Due to the light, early-morning winds, it was an easy launch. BLT Payload Coordinator Mike WA5TWT and Payload Master Bill KG5FQX did a superb job with the fill operation and subsequent sealing and attachment process.

The second balloon looked more like a Mylar party balloon, mostly because it was a party balloon. John AB5SS had carefully filled it to ensure only enough lift to send it to an altitude between 25,000 and 30,000 feet, without popping. He succeeded. His launch went well also and BLT49-1 drifted slowly into the sky. Many with smart phones tracked the APRS unit via <http://aprs.fi>. The call sign was AB5SS-11.

The goal for the Smart Beeper on BLT49-2 was to allow reception by interested hams at the GHHF so that they could watch the altitude change by comparing the temperature data to a chart. The key to the chart is the thermocline around 60,000 feet. This is where the temperature is coldest. Above the thermocline, the temperatures get warmer. This helps establish how long it took to get that high. Everything beyond that can be calculated based on rise rate and further data inspection. Bill KG5FQX collected the most data points at the GHHF. After close study of his data the end result was a calculated record altitude for one of our small "popper" balloons between 120,000 and 125,000 feet. The time to burst was 140 minutes. Reception of the CW beacons on 14.318 MHz and 28.322 MHz was easy with small antennas throughout the flight. BLT49-2 landed somewhere off the coast of Galveston.

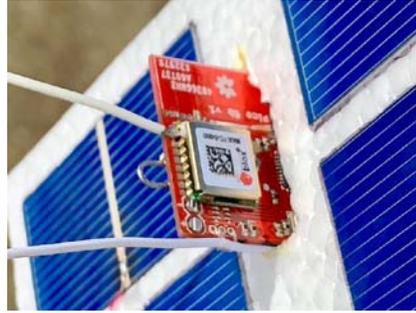
Although we were hoping to get to Europe or North Africa with the APRS "floater" BLT49-1, we know that we at least got to the Atlantic Ocean off the coast of Florida. The path was smooth and fast, sometimes over 100 MPH in the Jetstream. There were some storms in the mid-Atlantic that may have been problems for our small balloon and ultra-light payload. It was however a great flight. Videos from the drones have appeared at the usual sites on the internet. More payload information and many photos and data gleaned from previous BLT flights can be found at <http://www.w5acm.net>.

Some have asked why we didn't use BLT-50 and BLT-51 for the 2018 GHHF launches. Two reasons. We often use "decimal" numbers for the small payloads, although the successes of these flights would probably warrant full integer designators. The other reason is that we hope to save BLT-50 for the BIG flight from the Wharton Intergalactic Spaceport at 10AM on August 25, 2018. Join us!

Photos by W5ACM, KG5FQX, AB5SS and K5SAF



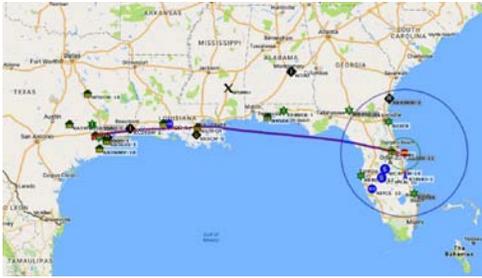
BLT Presentation Andy W5ACM



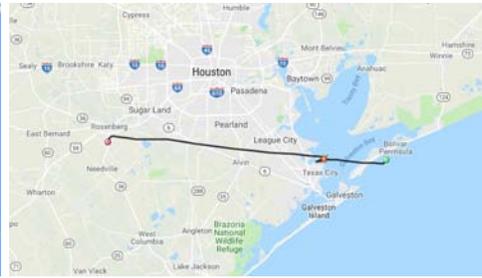
BLT49-1 Ready Close Up



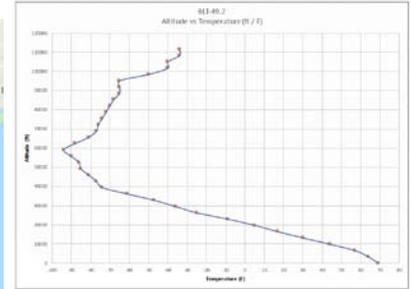
BLT49 Drones
Andrew KE5GDB Marty W5MF Joe W5BSA



BLT49-1 Track



BLT49-2 Early Prediction



BLT49-2 Height vs Temp



BVARC Rag Chew Net

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

02/28/18, W5TKZ, (NCS), K5JPP, WA5UTK (San Antonio), K5LJ, W5TOM, KE5SR (Gainesville, FL), KJ5Y (RCS)(W5FMH/club)(Angleton), KG5LRP (Katy), KF5PHA. (10 Check-Ins)
Solar Cycle 24: SFI = 69, SN = 15, A = 6, K = 1

03/07/18, K5LKJ (NCS), KG5SXG/5 (P), K5IZO, W5TKZ, KF5TFJ, K5JPP, W1BG (Katy), W5VOM, K5LJ, KD5O, KJ5Y (RCS)(W5FMH/club)(Angleton), KE5SR (Gainesville, FL), W5TOM. (13 Check-Ins) Solar Cycle 24: SFI = 67, SN = 0, A = 4, K = 0

03/14/18, K5LKJ (NCS), K5JPP, K5IZO, W5TKZ, K5LJ, W1BG (Katy), W5VOM, W5RH, KJ5Y (RCS)(W5FMH/club)(Angleton). (9 Check-Ins) Solar Cycle 24: SFI = 68, SN = 0, A = 4, K = 1

03/21/18, K5LKJ (NCS), KF5TFJ, W5TKZ, K5LJ, WW5PA/5 (M), AF5XL, KJ5Y (RCS)(W5FMH/club)(Angleton), W5VOM, W1BG (Katy). (9 Check-Ins)
Solar Cycle 24: SFI = 69, SN = 0, A = 8, K = 1

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

Net conditions have been Fair this month. Check out your station.

Come join in the conversation each Wednesday evening, 7:00PM, 3910 +/- 3 KHz.

Regards. John K5LKJ



MINUTES
Board of Directors Meeting
Brazos Valley Amateur Radio Club
March 3, 2018 9:00 AM
Bayland Park Community Center
6400 Bissonnet, Houston, Texas

Board Members Present:

Mike Hardwick N5VCX (President)
Mark Janzer K5MGJ (Vice President)
Jon Noxon KF5TFJ (Rec. Secretary)

Donovan Balli KG5BDZ (Treasurer)
Scott Royall W5RUA (1yr @ Lg Dir)
Non-voting attendees:
Mike Monsour AC0TX (Quartermaster)

A business quorum was established.

Recorded by Jon Noxon, KF5TFJ Recording Secretary

- 1) Call to Order: The President called the meeting to order at 9:22 AM.
 - 2) Establishment of Quorum: A business quorum was established.
 - 3) Approval of Agenda: A motion made and seconded to approve the agenda.
 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 February 3 BoD meeting.
 7. Approval of Treasurer's Report: The Treasurer's Report was approved.
 8. Old Business:
 - 8a. General Membership Meetings scheduled as follows, with topics not listed to be determined:
 - March 8, 2018 "Solderless Transmitter" and/or public service activity
 - April 12, 2018 "ARES" "RACES" and/or public service activity
 - May 10, 2018 TBD
 - June 14, 2018 TBD
- Discussion for future meetings included hands-on microprocessors/controllers; Sky Warn; APRS.
- 8b. Mark Janzer discussed contact made regarding donations to the Undersea Warfare Center in support of Museum Ships activities. Donation of A/C and needed electrical rework in the Stewart radio room discussed. Possible additional workday is to be scheduled in April. Status of any actions resulting from August BOD meeting regarding Emergency Business (people locked in sub) still open item.
 - 8c. Planning for 2018 Museum Ship's Weekend discussed.
 - 8b. Planning for 2018 ARRL Field Day discussed. Scott Medbury to chair FD again. Duhacsek Park will be the location.
 - 8c. Scott Medbury is working on an Amateur Radio Night at Constellation Field during an upcoming Skeeters home game.
9. New Business:
 - 9a. Funding for radio kits for March meeting approved.
 - 9b. Saturday build days discussed.
 - 9c. Financial support for the 94 repeater discussed.
 - 9d. Club mailing lists information to be requested from E. Runner.
 10. Next BOD meeting date: April 7
- Future BoD dates: May 5, June 9, July 7, August 4, September 8, October 6, November 3, December 1* NOTE: date changed from December 8, for which a room was not available.
11. Comments: Nothing of substance
 12. Adjournment: The meeting was adjourned at 10:20 AM.



The Radio Hotel - The Saga of the Full Wave Loops

Part 2 -- Rectangular and Square Loops – The Quad

The most popular configuration of the full wave loop is the Quad Loop. Although most of the recent improvement in antenna designs has been applied to Yagi-Uda's, full wave loops are still quite popular.

A rectangular or square shape "Quad" having 4 sides is usually used as a fundamental element of a parasitic gain/directional array. With the full wave loop oriented in the vertical plane, a single element has the classic "dipole over a dipole" stacking; therefore, providing a bit of gain over a single dipole. Polarization is based on the current distribution. If the feed point is in the middle of the bottom leg, then the current max is in the bottom leg center and also in the opposing top leg, hence, horizontal polarization. If fed in the middle of the side, the current max's are on the two side legs, hence, vertical polarization. There are benefits to both polarizations, just like the dipole and vertical comparison; ground gain and low angle of radiation, respectively.

Clarence Moore, W9LZX, discovered /invented the quad loop in Ecuador at HCJB 1939, documented in Bill Orr's **All About Cubical Quad Antennas** book. Moore patented the quad in 1944, but his loop was two concentric loops -- see US Patent # 2,537,191. This is different than how we think of loops today -- as a single loop of wire. His double wire loop does not add anything gain or pattern wise. All the extra loop does is make the feed impedance higher and easier for the open wire, higher Z feedlines used back then to make a closer match. This is similar to a folded dipole making the dipole feed Z about 300 ohms vs. a single wire dipole at nominally 70 ohms Z.

The first instance of a "Quad" loop in QST is November 1948 in the Technical Topics on page 40, a monthly column written by George Grammer, W1DF, then Editor of QST. Quads were widely used on 10 meters then, as their large form factor played havoc with the Hams of the day devising unique structures from which to hang the loop. Innovation after innovation followed. For example, Sam Kennedy, KT4QW (a friend of BVARC's W5TOM) had a novel idea of stretching the loop vertically into a rectangle and from there had a nice 50 ohm match. This thinking is similar to the new Yagi-Uda design thinking where matching directly to 50 ohms is more important than the max gain or F/B. Sam's loop also hangs quite nicely. It reminds me a bit of Nizar's, KONM, Bent Vertical dipoles (which are not loops, btw). Find the full info on Sam's unique loop in QST, October 2004.

During the 70's and 80's there was a huge "war" going on between the Yagi users and the Quad Users. Many articles in QST, 73, Ham Radio and CQ magazines were written on the comparison between them. The quad users built massive structures with 4, 5 or more elements and each element had multiple, concentric loops for the different bands i.e. 20, 15 and 10. Some later builds even covered the 12 and 17 meter WARC bands, so 5 loops within loops hanging on the same element structure. Commercial companies brought to market kit versions of these multi-element monstrosities. One nice thing about Quads is that they are fairly light weight, as the support structure arms were either bamboo or fiberglass and the elements were #14 antenna wire. This compared favorably to the heavier Yagi with aluminum, and sometimes 'doubled up' aluminum tubing to support the element and keep it horizontal. Although the huge, multi-element parasitic quad always brought to mind the old school antenna adage that, "if it didn't fall down last Winter, it wasn't big enough".

A couple of solid references to read are Orr and Cowan's -- **All About Cubical Quad Antennas** book, referenced above, and W4MB, R.P. Haviland's -- **The Quad Antenna: A Comprehensive Guide to the Construction, Design, and Performance of Quad Antennas**. Many other Quad and Full Wave Loop references are found by searching back in QST on the **ARRL.org** web page. Also, E.G. Ross's **High Performance Quads** is an extensive expose of Quad experimentation. A bit of Internet sleuthing is required to find it. (If you don't find it, I can help). Enjoy your hobby. GL ES 73 DE W5RH

Next time.... Full Wave Loops -- Part 3 – Triangular Loops

*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.*

There's no "L" in Cabrillo?

Up in the sky, it's a bird, it's a plane! No, it's a Cabrillo!

If you are new to ham radio or new to contest participation, you are probably asking yourself that question.

Cabrillo refers to a standard format adopted by most contest sponsors as an electronic means of submitting a contest entry log. Most contests around the world now accept the Cabrillo format in lieu of a paper log. In fact, it is probably true to say that Cabrillo format logs are the de facto standard for radio sport competitions.

The Cabrillo format was developed by Trey Garlough, N5KO. Why the name Cabrillo? While most of us pronounce the "L" in the word, the inventor in a talk at the Dayton Hamvention some years ago pointed out that there are no "L" sounds in Cabrillo. He then proceeded to say that he was driving somewhere in southern California trying to decide on a name for the format when he spied a road sign with the word Cabrillo, and that was the decisive moment.¹ It is a basic text file featuring a header section and a body. The body is a simple one line per contact record. Most general logging programs and contest loggers can generate Cabrillo files, which can be sent via e-mail or uploaded to a website.

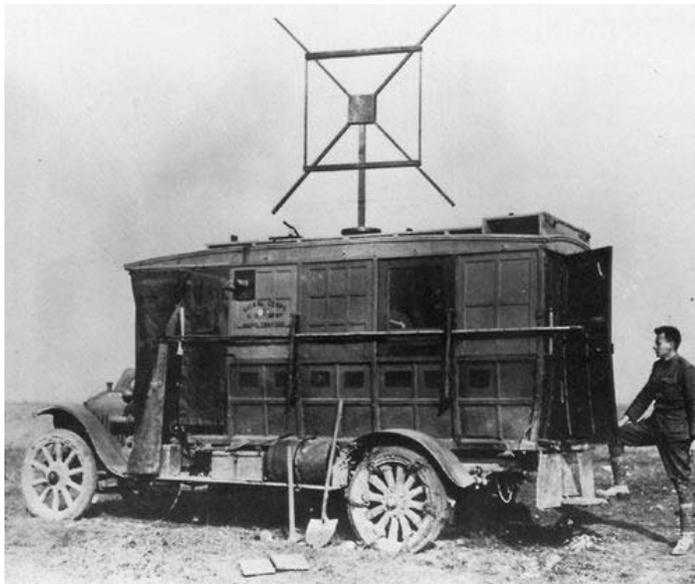


Even if you keep your log by hand, you can still submit a Cabrillo format log thanks to Bruce Horn, WA7BNM, and the support of several other amateurs. A web-based applet supports most ARRL and CQ based contests as well as many others. The applet is located at <http://www.b4h.net/cabforms/>. To see a list of the supported contests, just click the link.

See you during the contest.

Reporting from the Dark Side
73, Ron, K5HM

¹ Most likely, the sign referenced Juan Rodriguez Cabrillo, a 16th century [Portuguese](#) explorer. Cabrillo was the first European explorer to navigate the coast of present day [California](#) in the United States. Source: Wikipedia



N5VCX new COM van

The ARRL DXSC-100 Selfie Award Announcement

April 1, 2018 ARRL Bulletin Newington, CN 040118.....ARRL DX Committee Announces DXSC-100 -- DX Selfie Club award – “The Introvert”

The ARRL DX Committee today announces a new DX program for ALL members. DXSC – DX Selfie Club. With the popularity of the selfie photographs and the demise of the rag-chew QSO on the bands, the DXSC will provide the average Ham with plenty of opportunity to get on the air.

The DXSC Chairperson, Larson E. Rapp, W1OU, of Kipperring-on-the-Charles, MA, stated that, “The goal of DXSC is to work your home QTH base-station from as many world-wide HF remote stations as you can. 100 HF Remote stations worked in any mode is the target for receiving the DXSC Award called ‘The Introvert’.” (The Introvert award is still under design review as of this notice)

Rapp further went on to explain, “The overall functionality is similar to DXCC, but you work yourself, any mode, any band. Confirmation must include the ARRL approved on-time logon/log off receipt from the remote station or it can be the receipt from your credit card for those stations charging a fee.”

“All tracking of the award is thru LOTW, he said, and a special category within LOTW has been set up to track your efforts and compare them to the other stations trying to achieve DXSC-100. We hope all Hams have a great time getting on the air and working themselves”

The ARRL has released a listing of all certified and approved, world-wide, HF Remote stations that you can work yourself on for this award. Single mode, Low Power and 5 Band DXSC-100 awards are planned for the future.

QSO counts for this award start as of April 1, 2018. The active award period is one year, ends April 1, 2019. GL ES 73.

(End Bulletin 040118 ARRL Newington)



Hamfests

(typically within 200 miles of Houston)

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

04/07/2018 | [HamEXPO](#)

Location: Belton, TX

Type: ARRL Hamfest

Sponsor: Temple Amateur Radio Club

Website: <http://www.TARC.org/hamexpo>

06/08/2018 | [West Gulf Division Convention \(Ham-Com 2018\)](#)

Location: Plano, TX

Type: ARRL Convention

Sponsor: Ham-Com, Inc.

Website: <http://www.hamcom.org>

07/07/2018 | [Texas City Hamfest](#)

Location: Texas City, TX

Type: ARRL Hamfest

Sponsor: Tidelands Amateur Radio Society

Website: <http://www.tidelands.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 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

Other contacts include:

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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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APRIL 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, April 12



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