APRIL
2016
VOLUME XLIII NO. 4

BRANDON AMATEUR RADIO SOCIETY (BARS)

The ANTENNA

OVER 39 YEARS OF PUBLIC SERVICE TO THE BRANDON AREA
- BRANDON, FLORIDA USA -

Brandon Amateur Radio Society, P.O. Box 2307, Brandon, FL, 33509-2307

- Officers -

Pres: Doris Haskell WB9VDT
V.P: Bernie Hulth W4BGH
Sec: Scott Irwin W8UFO
Tres: Jim Moorehead WF4AC
Trust: Tony Stone W4TAS
Editor: Mark Haskell WB9UJS

- Repeaters -
K4TN

2 Meters VHF
147.165 MHz (+) Pl=136.5
w/EchoLink Node 22440
via K4PPK-R

1-1/4 Meters UHF
443.500 MHz (+) Pl=127.3

- Nets -

2M: Mon, 8 PM
147.165 (+) Pl=136.5
6M: Tues, 7 PM
50.2 MHz USB
10M: Tues, 8 PM
28.365 MHz USB

-Web Page-

www.brandonhamradio.org

- Meetings -

Monthly: 3rd Thursday
Time: 7:30 PM
Location:
The Brandon Assembly of God Church
710 South Kings Ave.
Brandon, FL 33511

CLUB MEETING… *Reminder for 4/21/2016, 7:30 PM*

Our monthly club meeting happens at our usual location: Brandon Assembly of God, 710 South Kings Avenue, in the Annex. Things get underway at 7:30 p.m. sharp, when Doris (WB9VDT) bangs the gavel to start things off.

The planned April meeting program is: "Language and DX" e.g.) Why can't everyone talk just like me? Mark Haskell (WB9UJS) will be the speaker, and guide us through a fun look at language and Ham Radio.

Come and bring a friend—coffee and donuts available with a contribution to the kitty.

QRA

- **Meeting Plan**
- **VE Testing**
- **QSLing**
- **Public Service**
- **147/447 Ground Plane**
- **Calendar**

THE TICKET… *Amateur Testing Report for 4/2/2016*

Two new Technicians, One new General—to report from the VE Testing Team! - Congratulations!

Getting your "Ticket" (Amateur Radio License) in the early days of 1912, was NOT as easy as today's method. It meant taking an essay-type exam and a code test in the presence of a Radio Inspector at a Field Office. Many of us recall having such extra perspiration moments, including failures and multiple re-attempts. A quick summary from Ham Radio's beginning to present includes the following:

1912 - Radio Act of 1912, Department of Commerce, First and Second Grade licenses

1923 - Established Amateur Extra Class, new General restrictions of 200 M and down, 1KW

1927 - W/K License classes become Amateur and Amateur First Class

1934 - FCC comes into existence

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1934 - Licenses become Class A, B, and C
1951 - Licensing classifications reorganized; Novice, Tech, General, Extra
1968 - Incentive Licensing implemented
1987 - Novice enhancement
1991 - Morse code requirements removed from Technician License
1991 - The Novice Class ends and the Technician Class exam became the entry level license
1996—FCC stops enforcing geographic association with call number
2000—Restructuring and recognition of Technician-Plus
2007—Morse code requirement ends for all classes
2016—FCC ends routinely sending paper copies of licenses

Volunteer examiners have been in play since the very beginning - the form being assistance to those impaired, who could not get to a Field Office. Later this became more routine for entry level Novice and Technician exams, which were administered by upperclassmen within our fraternal organization. Under the Freedom of Information Act, the test questions were ironically made public, so the FCC simply moved to a huge pool of questions, from which an applicant's test was generated. Eventually the FCC ended all Field Office testing, and today the process occurs by FCC appointed groups of Volunteer Examiner Coordinators

(VEC). There are 14 VEC's chartered by the FCC. The ARRL and W5YI group were among the first appointed, and are perhaps the most well known examples. A VEC agrees to coordinate sessions in at least one of 13 regions - basically the same geographic distribution as are the number notations used in call letters. The VEC is responsible to coordinate <u>all</u> efforts, including enlistment, training, and certification of individual volunteer examiners (VE). Each VEC has a structured program for this purpose. Within our B.A.R.S. Club, such a volunteer team efficiently operates under the direction of Bill Johnson (WJ4G). Additionally there is also local access to Mike Fletcher's (NI4M) team, which services the EOC's initiatives, TARC applicants, and assists our team as needed.. They've chosen to affiliate with the W5YI Group, because that organization not only is a VEC, but also holds a Commercial Operator's License

Examination Managers (COLEM) FCC appointment - chartered as the "National Radio Examiners" (NRE). This gives Mike's team the unique ability to provide BOTH the Amateur, <u>and</u> Commercial Radio Operators exams. If you want or need a Commercial Ticket for a job requirement, make an appointment with Mike. His email address is mfletcher@abbx.net.

The publicized B.A.R.S. opportunity is essentially:

<u>First Saturday of Each Month</u>
11:30 AM
Brandon Assembly of God
710 South Kings Avenue

Walk in Amateur applications are gladly accepted, but prior notification of attendance intention is always appreciated as the best method. Please know that there are multiple club Elmers who would willingly help you with understanding questions and test preparations. For more information, or to schedule an exam, contact:: Bill Johnson's (WJ4G) team of volunteers by email to: moo.bill@verison.net.

THE HUMBLE QSL… *a.k.a. Wallpaper*

What is QSL anyway? The 3-letter Q-Code structure, initially developed by the British Government for ships, coast stations, and commercial radiotelegraph communications (circa 1909), was later adopted by the International Radio Convention in 1912. It includes "QSL" which has the radio message meaning: "I am acknowledging receipt."

Who invented the QSL Card? In expanding the radio message meaning to a written confir-

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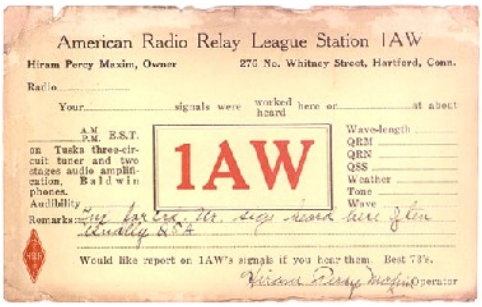
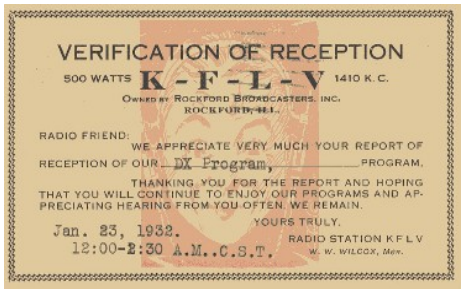
mation, sent by mail, credit is generally given to Amateur Radio Operators 8VX and 3TQ for confirming a 2-way contact exchange—a card sent in 1916. Then, the beginnings of a standardized card format with call sign, frequency, date, etc. goes to C.D. Hoffman, 8UX, in Akron, Ohio—used in 1919. By the mid 20's the QSL card had become an Amateur's official calling card. Check out Bob Green's Gallery of historic beauties. Clicking on any of the card thumbs enlarges it for full viewing.



Ah, but not all "QSLers" were Radio Amateurs. Wiki contributor Lucky Louie chronicles; "During the early days of radio broadcasting, the ability for a radio set to receive distant signals was a source of pride for many consumers and hobbyists. **Listeners** would mail reception reports to radio broadcasting stations in hopes of getting a written letter to officially verify they had heard a distant station. As the volume of reception reports increased, stations took to sending post cards containing a brief form that acknowledged reception. Collecting these cards became popular with radio listeners in the 1920s and 1930s, and reception reports were often used by early broadcasters to gauge the effectiveness of their transmissions." Many SWL enthusiasts proudly brag that they heard this or that station and have the confirming card as proof. One such event, more recently, was 40 Meter Moon-Bounce from the HAARP experiment's 180 element phased array and a helpful 36000 KW signal in January of 2008 - QSL trophy and comments viewable.



Certificates of Recognition: Soon, the Amateur's sought after QSL confirmation card qualified the holder for Worked-all-States (WAS), Worked-all-Continents (WAC), and 100-Countries-Worked (DXCC) type awards. #1 DXCC went to Frank Lucas W8CAR/W3CAR, Canonsburg, PA, born in 1909. Ed note: He was a local legacy that I remember hearing on the air as a Novice in the 1960's - His QTH was just 75 miles south east of where I grew up. He had a big tall 20 meter mono-band beam and lived on an above average cone shape hill top that sloped down at 20 degrees in all direction for a thousand feet - he claimed his signal squirt elevation was just 1 degree. (pause!)

Modern-Day Services like eQSL, where you can print a confirmation card right on your local printer, or Global QSL, which allows you to confirm online and have your QSL downloaded and printed at Wal-Mart, now abound. Just FYI; Stations who answer your CQ are much more likely to send their cards first, rather than those whose CQ you answer - especially DX contacts.

Remember that your response is certainly anticipated and expected as a common fraternal courtesy. In sending cards, many USA hams unfortunately experience perhaps only a 1:10 return ratio. Your QRZ web listing allows you to set expectations and provide additional comments or instructions. However, if your location is rare, the demand for your card and the quantity of wall paper received can be larger than life.

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QSL Bureaus: Finally, there are teams of internationally independent clearing houses**,** called QSL Bureaus**.** If you work DX at all, you should expect bureau cards, especially if you participate in any of the DX contests. Also, most SWL's send cards via the bureau. Most cards received via this free convenience are for contacts made between a year and two years prior. Some cards even come through the system as much as five years or more after the QSO. To minimize costs "Friends" of foreign bureaus sometimes facilitate by internationally transporting card packages as part of business or personal travel. Some bureaus only distribute a few times a year. Ironically, many come by boat... remember that adage "Slow Boat from China?"

A Survey was done at one busy Bureau, of all cards received over a two month period. Of those cards that had "TNX QSL" checked, less than 5% were for confirmation within a year of the QSO. This means if the

station you worked waited for your card before returning one, the minimum turn-around will be a year or more.

The **Incoming Mail** is picked up at the Bureau's PO Box on a regular basis, approximately once per week. There may be as little as five pounds to as much as 200 pounds in a week. You can visualize this by thinking of a stack of QSL cards ranging from 9 inches high, to over 29 feet high, each week! Volunteers are often geographically separated by more than 50 miles, but they schedule periodic common lunch meeting get-togethers to sort and divide - each taking their shares home to process.

Unclaimed Cards are the bureau's biggest problem. The Standard Operating Guidelines for ARRL QSL Bureaus states: "QSL cards on file which are unclaimed for a period longer than 90 days may be destroyed by the Bureau Manager (or Letter Manager) without further authority." PLEASE NOTE: Individual Letter Managers may elect to hold unclaimed QSL Cards for a longer period of time, at their discretion.

Your part: You need to provide your bureau volunteer with NON-clasp-fastening, end-opening envelopes, between 5X7 and 6X9 inches in size. Unless you receive lots and lots of bureau cards DO NOT send more than three or four self addressed stamped envelopes (SASE) at a time. DO NOT use envelopes smaller or larger than recommended. Smaller envelopes won't hold some of the larger DX cards; larger envelopes won't fit in the files, are more likely to come apart in the mail process, AND with current postage rates, cost more to use. Non-standard and padded envelopes may be returned to you empty. Several of the letter managers are moving to, or have implemented, a cash pre-pay provision service for distribution envelopes. This has been done because of frequent postage rate changes and the futility of trying to keep appropriate postage on the envelopes - it's the volunteer's option to offer and control.

Most Managers have email access. Be sure to include yours when you write to the bureau or your Letter Manager. Make sure to include your EMAIL address when you send SASEs to the bureau or your Manager as well. This will help to communicate with you much more quickly than by conventional snail mail. If your EMAIL address changes, make sure you notify your Manager of the change.

Our 4th-Call-District enjoys the excellent volunteer services of The Carolina DX Association (CDXA). Be sure to check out the Bureau's web site for information and instructions:

Outgoing Bureau Services are offered by the ARRL. There is a complete and informative web page detailing the ARRL's role in providing this members service, including all the conditions that apply - and surprisingly a

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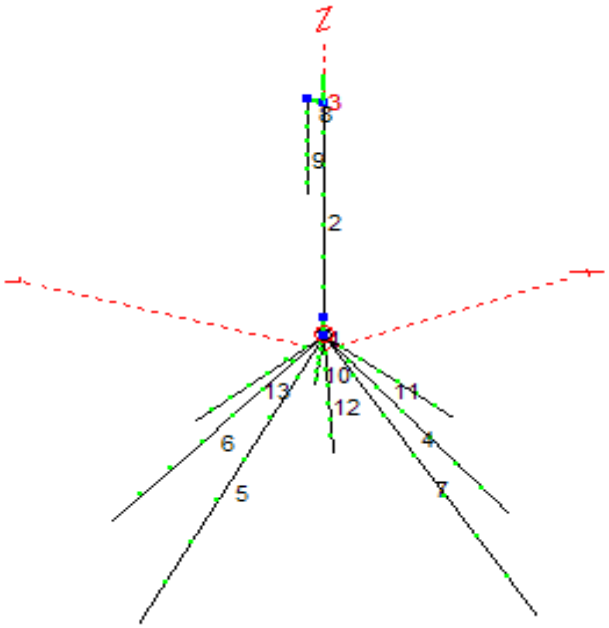
listing of over 75 countries NOT served. **To end this rag chew,** please(!) do carry on the satisfying tradition of exchanging your QSL card in some manner. The USPS Post Card mailing fee is slightly more than the Franklin 1-cent lick-n-stick that Hiram used in 1924. Effective May 11, 2016, it's $.35 for any US delivery location, and $1.20 for international destinations. The Forever stamps are a nice option. For IARU Region 2, which includes the United States, the recommended optimum QSL Card dimensions are (Height 3-1/2)x (Width 5-1/2) inches—for consistency.

PUBLIC SERVICE…

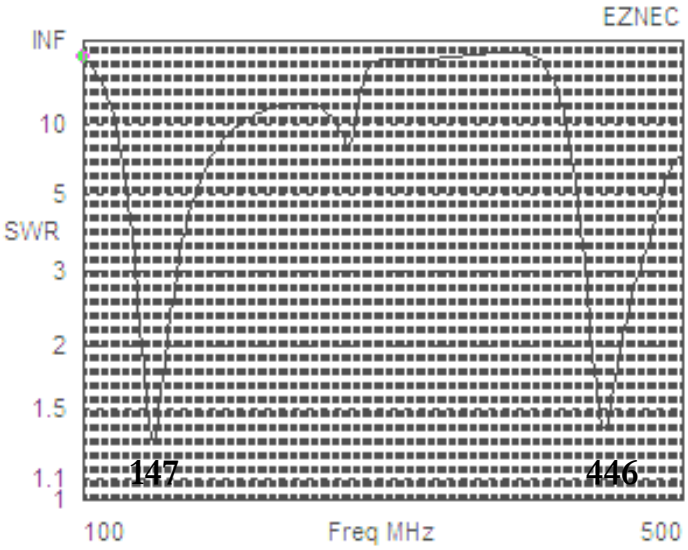
Hillsborough County Mass Causality Drill of March 18th (Hospital Serge 2016) was an Anthrax exposure and contamination simulation. B.A.R.S. Club volunteers participated by providing structured Amateur Radio communication support to Brandon Regional Hospital's Command Center. This marks the 3rd consecutive year our Club has participated as an event team. Conceived and organized under the leadership of Bernie Hulth (W4BGH), and integrated with Brandon Regional Hospital staff, our local contribution became part of a County-wide network of at least 7 similar teams—each at strategic locations. The Objective was to practice our setup and participation skills in an incident management environment, using structured-team emergency procedures and protocols. The Hillsborough County Emergency Operations Center's (EOC) focus was net control using both simplex and TARC repeater frequencies. Our participation locally and regionally demonstrated the affective and positive benefits of Amateur Radio support to Hospital Administration and incident evaluators. Being part of this team is simply a matter of making your desire know, and then participating. Team members attend a Hospital seminar covering basic terminologies and internal security practices, as preparation training. Team members are asked to on-line register with the EOC as a volunteer, and as well, are encouraged to consider completing FEMA ICS on-line introduction training courses. The 2016 participants:

Dick Capell (KJ6FNV)
Bernie Hulth (W4BGH)
Art Lusk (KI4SGM)
Jim Moorhead (WF4AC)
Ron Perrett (K4FZU)
Art Powers (KI4BIM)
Bob Guentner (K4NPF)
Bill Trombley (BRH)
Rich Walker (BRH)

ANTENNA… *147/446 Ground Plane*



Dual-band Ground Plane



VSWR Plot

A Combo Antenna is always a favorite convenience, especially with the availability of many dual-band radios. However, they can be difficult to tune as a coat-hanger trial-n-error, afternoon project. How did we ever live without EZNEC to help with our starting point? The illustrated antenna is an easy project using a SO-239 connector and 12 ft. of No. 8 wire (bare). My plan calls for 4 each 147 MHz radials, and additionally 4 each 446 MHz radials. This keeps things happy for the impedance matching. Let's use a coil-less, open 1/4 wave, choke trap (some times called a trombone) to make the job easy and efficient. Here are the details…

What follows is an example of a 147 MHz Ground Plane with a 446 MHz choke installed on the vertical radiator. The open end of the choke creates a 1/2 wave very high impedance point and establishes the demarcation for the end of the 446 MHz portion. The trombone assembly acts a bit like a loading coil during 147 MHz operation, and slightly reduces the length of the remaining vertical portion. The trombone is just an "L" shaped piece of wire attached at the appropriate point. Follow the suggested dimensions and check the final VSWR on each band (or not) when done. I used a Switch-Plate cover to mount the SO-239 on, and provide ~easy soldering for the radials. Work with these rough dimensions first, then finish-trim later:

- Qty-1 Galvanized cover plate (trimmed square)
- Qty-1 SO-239, w/hole in plate
- Qty-1 Vertical radiator, No.8 x 18"
- Qty-4 Radials, No.8 x 20"
- Qty-4 Radials, No.8 x 7"
- Qty-1 Choke, No.8 x 7"

1. Attach the 147 MHz radials at 0-90-180-270 degree points—Solder to cover plate
2. Attach the 446 MHz radials at 45-135-225-315 degree points—Solder to cover plate
3. Accurately trim the radials, measuring from the vertical radiator Ctr to: 147=19-7/16", 446=6-7/16"
4. Mount SO-239; File wire end dia to fit SO-239; Solder in the vertical wire; Accurately trim to 16-15/16" above the SO-239's flange
5. Solder the choke wire to the vertical at 2-5/8" below the top end. Then, carefully measure a 1" separation dimension and bend the remaining length down and parallel to the vertical—trim to 5-1/2" down length
6. Bend the radials down to an angle of 45 degrees

The finished item, with coax attached, nicely sleeves into a 3/4-inch PVC pipe as a support mast. Presto-RFo! Adapt or modify as needed. **ed note:)** EZNEC's theoretical dimensions were helpful, but a little short for "real" perfect. CQ Moon-Bounce de K4FZU K

CALENDAR… *Upcoming of Interest*

April 21: B.A.R.S. Club Meeting

April 23: International Marconi Day Event
Guglielmo Marconi birthday 4/25/1874
GX4CRC - Cornish Radio Amateur Club
Station List to hear and/or contact

April 27: Morse Code Day
Samuel Morse birthday 4/27/1791

May 07: VE Testing—Amateur Exams
Contact Bill (WJ4G)

May 19: B.A.R.S. Club Meeting

May 20: Dayton Hamvention 3-days (20-21-22)
Hamvention Web Site

June 01: Hurricane season begins

June 25: Field Day 2016, 2-days (25th-26th)

July 04: Independence Day Parade—Brandon

July 12: Maritime Radio—Night of Nights