



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 (+) PI=136.5  
w/EchoLink Node 22440  
via K4PPK-R

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

**- Nets -**

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

**-Web Page-**

[www.brandonhamradio.org](http://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 6/16/2016, 7:30 PM***

Gussy-up in some casual duds and get yourself on over to Brandon Assembly of God, 710 South Kings Avenue; Park your mobile ground-plane with rubber grommets anywhere on the asphalt plateau and sashay on into the Annex (eyeball QSO's in progress).



7:30 p.m. sharp—Doris (WB9VDT) will sound the gavel to begin.

**Program:** Our June meeting will be all about Field-Day-2016. Field Day is a once-a-year honored national fraternal tradition, and It's our big mid-year Club fellowship event. Planning, preparation, assignments, and operational commitments, will all be dis-

**QRA**

- Meeting Plan
- VE Testing
- CW Attitude
- Antenna Party
- Hurricane Drill
- Be Safe
- Parade & Progress
- Calendar

cussed and finalized. Come prepared to be an active participant!

**Bring a friend!**

*Coffee & Donuts*

...available with a contribution to the kitty

**VOLUNTEER EXAMINER... *Testing Report for 6/4/2016***



**Once-upon-a-Saturday...** There are now 4 new Amateur Radio success stories for the B.A.R.S. VE log—3 Extra (John, Kemp Michael), 1 Technician (Samuel). To each congratulations, including much appreciation for our ever-faithful team of

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volunteers. Do you need a success story too? Walk in Amateur applications are gladly accepted, but prior notification of attendance intention is always appreciated as the best method. Contact BILL JOHNSON [ moo.bill@verizon.net ]



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

**First Saturday of Each Month**

11:30 AM

**Brandon Assembly of God  
710 South Kings Avenue**

**SPEAKER WITH A CW ATTITUDE**



To everyone who has needed to copy Morse Code, each a favorite operational setup—Code Reader; a “cute [HamSpeaker](#),” Western-Electric Earphones; Ear buds; Narrow Filter; Vari-

able Band-pass Tuning; Digital Signal Processing (DSP); That special tone; Tipping the head just so!

Although grossly over reported, not every signal is arm-chair copy RST=599. Some stations are almost buried in the noise—speaker turned up loud, QRN/QRM, brain over-clocking process enabled, driving your significant other crazy! Help! Singling out that one tone and minimizing all else, is all important for good copy. So how about a nifty resonant speaker to help?

OK, not new! Before the Handbook was ever printed, somebody, way back in BC time, figured out the stick kazoo, flute-a-ophone, bells, and digital drum communicators using hollow logs. Although, I think perhaps we’ve lost what the log-a-rhythmic beat is for; Please QSL! None-the-less, the idea was perfected a bit



in 1831 by [Joseph Henry](#)—now used profusely in our electro-mechanical door-bell systems. i.e.) A chime over a resonant tube, one for Ding (F-sharp, 740 Hz), one for Dong (D, 587 Hz). Ah, now(!) solenoid dinger technology comes into play and you remember the unit of inductance is the “Henry” - not a coincident! Strangely, the Nutone Company claims they invented the doorbell chime in 1936. .AND. You know the “Ding” is what they use on Wheel of Fortune to help Vanna White find the letters... don’t you? Lets apply the same resonant principle to a simple, fun, and effective speaker project. Sorry; No MP3, HD, 128 MB memory, 802.11n WiFi, USB port, digital sampling, infrared remote controls, or ribbon cable required.

First, some *brief* science stuff (Physics). Ever huff across an open bottle top? As in open at one end, closed off on the other, and of certain length. You get a musical tone determined mostly by physical dimensions. Same with the sea shell, drinking glass, or coffee cup (empty) to your ear. That “certain” depth-size is resonant and selectively reinforces only one frequency tone. Accordingly, we’ll be looking at resonance for CLOSED columns of air. Use the above hyper-link if you crave a more in-depth understanding. Now, let’s play!



**STAGE-1:** Science Affect—Experiment Requirements:

- Tone source (radio)
- Average coffee mug (flat bottom)

Our starting point (this is after all an engaging experiment) will be that you bring the open end of the cup near your ear—like listening to a sea shell at the beach. Tune your receiver for a 700 Hz tone; You’ll experience, as you adjust the distance between your ear and the open cup (~1.5in), one magical distance point produces resonance at ~700 Hz, and the tone will have a noticeable volume peak. OK, ear proximity detuning effect and the size of your coffee mug aside, this is exactly what we want to do with a speaker. Unfortunately, nowhere locally can you go buy a little 3 or 4-inch

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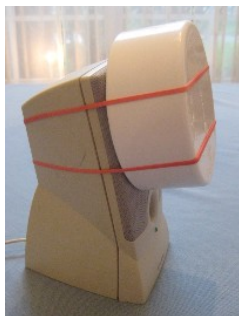
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speaker! So, check your treasured junk-box parts chest, .OR. cannibalize something from the computer speaker left-overs bin. Good-Will has odds-n-ends for \$3.

**STAGE-2:** Modification—Toy Requirements:

- PVC Pipe 4-Inch End-cap—qty-1 (flat bottom)
- ...Field Trip to Lowes...

This little beauty is very flat bottomed, and nicely 44mm deep—just right for a closed air column add-on, 700 Hz resonant cavity. Ready(?) Promise not to laugh! A little unsightly, but honestly, the illustrated engineering works great! And, almost a perfect 700 Hz peak. The picture and fine craftsmanship say it all. The distance from the speaker cone behind the grill, to the bottom of the end-cap and back, is just the perfect dimension to allow the returning acoustic standing wave to be in phase with the speaker's movement and reinforce its' vibrations.



This very exact same principle additionally works oh so well from behind—on my Kenwood speaker (SP-430) enclosure. Just pop off the top and install a firm separating partition baffle to seal the front-end at just the right dimension to create a 700 Hz resonance space. A little tuning experimentation is needed to get the dimension and tone spot-on. It's worth doing!

Now go forth, tune in some 45 wpm weak CW signal in the noise, and experience the advantage of your speaker's new attitude—physical resonance. Well, OK, perhaps after 35 wpm this technique does add some “ring” to characters and diminishes copy intelligibility.

**STAGE-3:** BUT...WAIT, there's more than just modification. You say you want to make an [OPEN](#) column version from scratch? Let's **start!**

Be aware that there is some end compensation affect depending upon your speakers exact physical characteristics. Nice to know, because the Physics “formula” actually results in a length too long. You will overcome all of it without caring why, during “tune-up” and testing. Use the dimensions given and trust that it gets you

nically into the almost perfect ball park. The toy list is:

- PVC Pipe, 3-inch, 6 inches length—qty-1
- Small 3-inch speaker

Firmly hold the speaker (magnet out) in the exact mounting position, over one end of your tube. While tuning in a steady CW signal and sweeping the frequency, the resonant tone is easily observed; probably at ~640 Hz. Remember, we're experimenting. Assuming it's too low, time to trim the length. Please know that 5mm (3/16 in) changes resonance frequency by about 15 cycles. Make sure your trim cuts are even and nicely perpendicular (VERY DIFFICULT!).

**CAUTION: Be sure you use a protective breathing filter and eye protection!!!**

Shorten in steps accordingly, with caution, remembering its difficult to re-grow plastic pipe. Retest after each adjustment until you reach your desired tone. “My” **final dimension length was 5-1/4 inches.** When done, wash the tube in soap-n-water to get rid of the static-clinging plastic dust. When mounting speaker to pipe, use a small bead of RTV around the speaker flange as glue, and to get a good air seal. Complete your wiring connections as desired. *Note:* The speaker, all by itself, also has a free-air mechanical resonance around = <120 Hz—just incase you notice a secondary lower than expected peak. Oh, and you already know, if you investigated the technical reference, that there are additional peaks at each harmonic node (2n,3n,4n...).

Mounting and aesthetics are your creativity and personalization. Redesign as desired!

If I see you with homebrew headphones, open-end lengths of PVC pipe, one extending from each ear, I'll understand why! Now that you know how to apply the technology, check out this [You-Tube](#) video and you'll know exactly how they engineered it. Happy CW listening!



**ANTENNA PARTY:**

Meet Richard Bibby (KC4UEC), Brandon area ham and fellow Club Member—87 years young. Back on April 7th, while enjoying an outing to Einstein’s for some beagle fellowship, Rich told those gathered that mother nature had visited his antenna in a shocking manner! Unfortunately his vertical antenna suffered a large momentary bandwidth overload of several million watts, and he was off the air on HF.

Well, that story sparked a desire to help, and a volunteer’s action plan was put into motion—seconded perhaps by adding cream cheese to a tasty beagle.

Behind the scenes activity, to acquire, assemble, and tune a new antenna, were effectively conducted by Bernie Huth (W4BGH) and Jim Smith (K4PPK) - a new [GAP Eagle-DX](#) vertical.



An antenna party was advertised among the B.A.R.S. members, and scheduled for Saturday, May 21st. Volunteers assembled on queue, late morning, at KC4UEC’s Brandon QTH.

Foundation work involved a proper well-drained base, which was of course nicely populated by an unexpected thick tree root. Chief Digger, Tin Campbell (N4HOZ), used Boy Scout ingenuity and one of those pocket-combo tools you can’t carry on an airplane, to dispatch the obstruction.



Satisfaction “peaked” as the new assembly was raised into position by the ground and ladder crews. Final touches included new mounting hardware and replacement RG-8x coaxial cable, routed toward the shack—Fortunately, the existing cable entry position was still viable. The completed installation was checked



at the rig with an antenna analyzer, and tune-up checks on all the bands were made. The first phone contact: Ron Perrett (K4FZU) - from his 20M mobile on the way home.



**The volunteer crew included:**

- Tim & Bowen Campbell (N4HOZ)
- Dick Capell, (KJ6FNV)
- Rod Clark (KC4MMR)
- Steve Gare (N1CZZ)
- Bernie Huth (K4BGH)
- Jim Moorehead (WF4AC)
- Donie Tomlinson (KI4DT)
- Pete Parish (WB5UUQ)
- Ron Perrett (K4FZU)
- Jim Smith (K4PPK)

**2016 FLORIDA HURRICANE DRILL:**

Brandon Amateur Radio Society’s Hospital Emergency Operations Team, headed by Bernie Huth (W4BGH), participated in the May 19th, 2016 Florida Hurricane Drill by activating the Amateur VHF/UHF station at Brandon Regional Hospital. Operations began at 8:33



AM, from the Radiology Staff Lounge, using the Hospital’s Emergency Radio Kit . The dedicated roof-top antenna feed line is accessible from this point and Hospital-available AC-Main power was used. Bernie provided a laptop with a configured Winlink-2000 application and radio data interface.

Net Control for this exercise was Hillsborough County ARES ARC (KF4ATP), operated by James La Follette (WB4WBL) at the EOC. On-air net activity engaged 13 other Hillsborough County amateur radio stations., including stations from Sun City Center and South Bay Hospital.

County message traffic, coordinated by the EOC, included flooding, sea level overflow situations, and even a train derailment incident. B.A.R.S. participation included not only awareness and radio voice interactions, but also testing of our digital viability with four HICS-213 “Drill” messages and a digital Bed Availability Report—sent and acknowledged using Winlink 2000 connections via KI4VAM-10 (144.910 MHz) and KF4ATP -10 (145.050 MHz).

During less active moments, the team took opportunity to discuss configurations of Winlink 2000 and refresh our structure awareness by reviewing details of the Hillsborough County ARES/RACES Emergency Plan, and the County’s Comprehensive Emergency Management Plan (CEMP).

The drill terminated at 11:11 AM. An After Action Report was compiled and provided to Brandon Regional Hospital, the EOC, and drill participants.

Participating were:

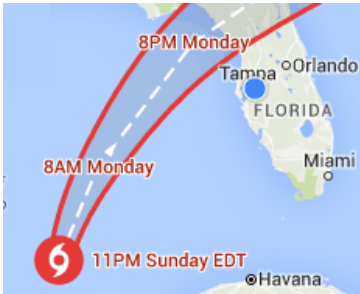
- Bernie Huth (W4BGH)
- Ron Perrett (K4FZU)
- Jim Smith (K4PPK)



Click to Print This Page		HICS 213 GENERAL MESSAGE FORM		RMSE Vers 2.6	
1. Incident Name:	Florida Hurricane Drill 2016				
2. To (Name / Position):	Hillsborough County EOC ESF12 - Energy				
3. From (Name / Position):	Mark Jackson /Brandon Hospital HICS Incident Commander				
4. Subject:	Towable Electric Generator	5. Date:	5/19/16	6. Time:	11:05
7. Priority:	URGENT	Response Needed:	YES	Urgent=High Non Urgent=Medium Informational=Low	
8. Message:	This is a Drill: Message: BRH003 We are concerned about the operation of one of our diesel generators. Please determine the availability of a three-phase, 60 Hertz towable diesel generator with a capacity of at least 500 KVA comparable to a Caterpillar XQ400 with a distribution panel, cables, and breakers. Please advise.				
9. Approved by:	Brenda Hunt	Position:	Brandon Hospital HICS Liaison		

**DON'T BE A HURRICANE VICTIM**

I know... I Know... what I said repeatedly, telling my grandmother when she was “instructing” me—and she’d say; “Well then... let me see a difference”!



A Hurricane is an awe-some-frightful thing to think about, and YES it could happen in our area. Are you ready? Do I hear you saying “I know...”? I bet you DON'T know! So, what's you're plan?

1. Your own personal survival, safety, and well being, as well as your immediate family is your primary concern. An “easy-complete” 10–minute get-a-plan tool, can be found on the State Emergency Response Team (SERT) [Florida Disaster](#) web page. Click on the “Get-A-Plan” graphic, near the top on the upper left hand side. Enter the basic information. Then, at the end, click on “Generate Plan” for the 8-page .PDF summary. Print, review, and think *your life may depend upon being ready*. A similar thought provoking stimulator is available on the [READY.GOV](#) website. Make sure you anticipate shelter, water, food, medical, and minimal power needs in your final “plan” and “kit.”
2. Ok, you're safe for now. How might you participate as an [aware](#) Amateur Radio Operator? What's that plan? Listen-Learn-Structured Participation... You should be capable in most all the following areas.

**TV:** Probabilities for commercial broadcast reception during an emergency are excellent. Brandon is just 4 miles north of TV alley's RF kingdom, with 10 power-house stations having emergency antennas and auxiliary power. Owning a low wattage AC/DC portable HDTV device is probably an important asset. Check options at Wal-Mart and other local retailers. Our biggest TV neighbors, next door in Riverview:



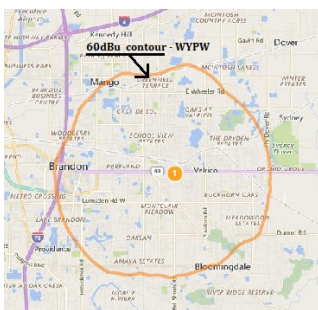
- WFTS-TV, 987Kw UHF ..... CH-28 (ABC)
- WUSF-TV, 475Kw UHF..... CH-16 (PBS)
- WTVE-TV, 72.3Kw VHF ..... CH-13 (FOX)
- WFLA-TV, 19Kw VHF..... CH-08 (CBS)

**RADIO:** There are [34 AM](#) and [21 FM](#) stations in the Tampa area, but only 1 AM'er that is 50,000 Watts; WHFS. It's also right next door in Seffner. The biggest FM power-house with the best antenna is WUSF, a PBS/NPR affiliate. Your best case radio choices...



- WUSF-FM 144Kw (Riverview)..... 89.7 MHz
- WHFS-AM 50Kw (Seffner) ..... 1010 KHz

Brandon area even has its very own 122W (61V/61H) low power FM station [WYPW-LP](#) at 99.9 MHz Next time you exit Wal-Mart you can see their 2-Bay crossed



turn-styles at 100ft, on the cell tower, south side of SR-60. They may have an important “local” role in the event of disaster in the Brandon area. In all, be sure you have a viable AM/FM radio and an extended power re-source plan!

**2-WAY RADIO:** Besides the B.A.R.S. repeaters, important VHF/UHF frequencies include NOAA's weather Radio channel, and NWS Amateur accessibility.

- NOAA [Wx Radio Tampa Bay](#) .. 162.550
- [NI4CE](#)-VHF (cluster) ..... 145.430 /pl=100
- NI4CE-UHF (cluster) ..... 442.550 /pl=100
- NWS/Ruskin ([WX4TOR](#))..... uses NI4CE
- NOAA Tampa Bay..... [Web Page](#)
- ARES/RACES/SKYWARN.... 147.105 /pl=146.2
- via the TARC repeaters..... 443.025 /pl=146.2
- SIMPLEX (universal backup) ... 146.520

Citizens communications include neighborhood coverage FRS channels and Citizen's Band (CB) Radio.

- FRS handheld—monitor CH-1 462.5625

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- Citizen Band Emergency CH-9. 27.065

Considering HF capabilities; Local and regional SSB nets for ARES/RACES are well established. .AND. The most popular regional daily 40M SSB net is South-CARS.

- ARES/RACES ..... 3911 KHz
- ARES/RACES ..... 7281 KHz
- Florida Phone Traffic Net ..... 3940 KHz
- Florida Phone Traffic Net ..... 7242 KHz
- South CARS Net ..... 7251 KHz
- Hurricane Watch Net ..... 14.325 KHz

Digital Communication listings:

- [DSTR](#) (Tampa area links) ..... 147/446
- C4FM (N4TP) ..... 147.105
- Winlink 2000 Gateway (EOC) .. 145.050



*What are you doing? - Anyone want to practice for 3-days? ... Well then, as grandma would say, "let me see a difference!"*

**Be PREPARED...Be SAFE!**

If you'd like to review the West Central Florida (WCF) Emergency Communications Plan [document](#), its available on the Hillsborough ARES/RACES web site—click the hypertext link above.



**The 4th of July Parade...** will be going around this corner very soon. Fred Hendershot (N3BUL) is actively recruiting willing volunteers to assist in logistics and control. Both last years seasoned team members .AND. new participants are welcome! Please consider what service contribution you might be able to provide—it's an exciting morning event! Call Fred to offer yourself—say you'll help! Get all the details!

**R.S.V.P.**  
**FRED/N3BUL**  
**813-892-5864--cell**  
**[fred.hendershot@verizon.net](mailto:fred.hendershot@verizon.net)**

**PROGRESS REPORTS:**

Two updates to report:

- 1) The B.A.R.S.'s Yaesu System Fusion Repeater equipment offer/application, submitted in May: Still awaiting acknowledgement and an actionable response. Last update was June 10th.
- 2) QCWA Chapter Application: Sufficient National Members responded with signed endorsements, with 5 additional intents to join if approved, all submitted to QCWA Board Of Directors on June 10th.

**CALENDAR... *Upcoming of Interest***

**June 16: B.A.R.S. Club Meeting**

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

701 South Kings Ave  
 In the field behind the church  
 Club Pot-Luck social (Sat) 12:00 noon

**July 02: VE Testing—Amateur Exams**

Contact Bill (WJ4G)

**July 04: Independence Day Parade—Brandon**

Volunteer prospecting...  
 Contact Fred Hendershot (N3BUL)  
 fred.hendershot@verizon.net

**July 12: Maritime Radio—Night of Nights**

Tues: 8:00 PM—2:00 AM (ESDT)

**July 23: LARC Fest (Lakeland)**

**August 20: TARC Fest XXXVII (Tampa)**

**Sept 16: ARRL/TAPR (16-17-18th)**

Digital Communications Conference  
 St. Petersburg, FL



- *Uncle Bud (WB4J) says “Thanks for the Antenna - miss you guys!...”*