



# News from THE GLORIOUS SOCIETY OF THE WORMHOLE



March 2015

Hello Worms

Hopefully everyone survived Orlando. I had a great time but didn't buy much. I picked up a few connectors and some zip cord. Learned that AES will no longer print catalogs, they will only have the online catalog. As of right now HRO and Universal Radio still have catalogs printed but I wonder how long that will last.

Talk-in is on the Wormhole repeater and we will also monitor 146.52 simplex. Seating is limited outside so you might bring a folding chair if you have one handy.

Bill

## \*THE FIRST ANNUAL WEST CENTRAL FLORIDA SECTION TECHNICAL CONFERENCE\*

This from Darrell Davis KT4WX our new Section Manager.

The First Annual West Central Florida Section Technical Conference will be held on Saturday April 4, 2015 from 9:00 A.M. until 5:00 P.M. at the Bert J. Harris Jr. Agri-Civic Center, 4905 George Blvd, Sebring. Welcome and last minute registration will begin at 8:15 A.M. If you are planning on attending, please go to the WCF Section Technical Conference Registration Page at <http://arrlwf.org/wcf-special-events/wcftechconference/> and fill out the online registration form. You will receive an online and email confirmation of your successful registration. There you can also download the conference flyer, and look WCF Section Technical Conference Event Page on the WCF Section Events Calendar, which has a Google Map showing the location of the Agri-Civic Center. The direct link to the Section Calendar Event Page for the WCF Section Technical Conference is at <http://www.arrlwf.org/event/first-annual-arrl-wcf-section-technical-conference/>.

We are still looking for more speakers. If you have an area of expertise in any area of amateur radio or amateur radio related technology consider being on of our speakers. Having a PowerPoint slide show and or PDF handouts is a great addition but not required if you wish to speak. We will have a section on our website for PDF handouts and or PowerPoint presentations that will go live when the conference begins, so those who attend the conference will be able to view and or download these materials on their tables and or smart-phones for viewing during the presentations.

The conference schedule will be finalized in mid-March and the conference schedule will be published on the Section website mid to late March. We will have hourly door prizes and several door prizes at the end of the day. You must be present to win one of the door prizes. Also we will have a guest speaker for one of the conference slots from ARRL Headquarters. Anyone from inside or outside of the Section is welcome to attend or be a speaker at the conference.

## \*WITH JUST A WSPR\*

By Dan Romanchik, KB6NU

Its really amazing what you can do with computers in amateur radio, and there's been an explosion in the number of digital modes. One interesting mode that I've recently been introduced to is WSPR, which is short for Weak Signal Propagation Reporting. The protocol and the original WSPR program was written by Joe Taylor, K1JT, and is designed for sending and receiving low-power transmissions on the HF bands to test propagation paths.

I won't try to cover all the technical details here. There are several sites that cover them pretty well:

- \* Wikipedia: WSPR ([http://en.wikipedia.org/wiki/WSPR\\_%28amateur\\_radio\\_software%29](http://en.wikipedia.org/wiki/WSPR_%28amateur_radio_software%29))
- \* G4ILO's Shack: WSPT - Distant Whispers (<http://www.g4ilo.com/wspr.html>)

I was introduced to WSPR by my friend, Joe, AC8ES. He posted a message to our club mailing list asking if anyone had a toroid core that he could buy to make a QRP balun for 10 MHz. When I asked what he was going to use it for, he said that he was making a WSPR transmitter with a Raspberry Pi, and the balun was for the dipole he built for it. He said that he'd gotten roped into doing this because he'd attended a local Raspberry Pi users' group, and when he mentioned he was an amateur radio operator, they encouraged him to try this project.

How could I refuse a request like that? I have a whole kit of ferrite cores, and after some back and forth, we found a small core that he could use.

The software he chose is WsprryPi (<https://github.com/JamesP6000/WsprryPi>). It's described a "Raspberry Pi transmitter using NTP-based frequency calibration." It uses a GPIO port to generate WSPR signals anywhere from 0 to 250 MHz. Joe said that there are several Raspberry Pi programs that run WSPR, but that he chose this one because it seemed to have more features than the others.

Figure 1 shows Joe's setup. Since the output generates a square wave, a low-pass filter is needed to filter out the high-frequency components. As you can see, the GPIO output is fed through a 0.1uF decoupling capacitor into a Mini-Circuits 10.7MHz low-pass filter, then to a 1:1 balun, which is connected directly to the dipole elements.

Joe says, "The antenna is just a dipole taped up to the walls of my living room and hallway." As you can see he made the balun and dipole from 24 ga speaker wire.

The performance of this setup has been kind of amazing. In one e-mail, Joe reported, "Your toroid seems to be working well. Got the balun and antenna finished and executed seven WSPR transmissions from the Raspberry Pi. The WSPR reporting website WSPRnet (<http://wsprnet.org>) came back with a couple dozen reception reports; typical distance is ~300+ miles, max was 593 miles." In a second e-mail, Joe writes, "Did a few more beacon transmissions and checked the WSPR signal reports again. Someone picked up my 5 mW signal from 1010 miles away in Canada."

Joe's turned into quite a WSPR fan. He's even written an Android app - WSPRnet Viewer (<https://play.google.com/store/apps/details?id=com.glandorf1.joe.wsprnetviewer.app>) to retrieve and displays report from [www.wsprnet.org](http://www.wsprnet.org)

. Tapping on a specific report displays more details about it, along with a world map that shows transmitter and receiver locations.

Unfortunately, I don't have a Raspberry Pi, or I'd try this as well. I do have a BeagleBone Black, but there doesn't seem to be software that I can download and install as easily as the Raspberry Pi software. That being the case, this might be a good excuse to purchase one of those new, cheaper RPis.

When he's not digging through his junk box or teaching amateur radio classes, KB6NU writes about amateur radio at KB6NU.Com. He has just released The CW Geek's Guide to Having Fun with Morse Code. The book is available on Amazon.Com or on KB6NU.Com.

#### \*YOU TALK, TV LISTENS\*

This is old news now, it was in the Tampa Paper during the Orlando Hamfest. But it is interesting enough and some may not have read about it so I will let it run anyway. Bill

INFOPackets by John Lister on February, 10 2015 at 08:02AM EST

Samsung has caused outrage after careful examination of its Smart TV terms and conditions suggest it might listen in on conversations and then pass on details to a data collection agency. The company insists any chat that the television does overhear would be treated with the utmost confidence.

The controversy involves Samsung's range of televisions that include an Internet connection for features, such as online video access. Some models also include the ability for users to control the television using voice commands, rather than by remote control.

Samsung says it may transmit the audio of voice commands to a third party service for two reasons. The first is to use recognition services to figure out what the user was saying. The second is to keep track of how well the feature is working, and whether it could be improved in specific areas.

## Sensitive Information Could Be Transmitted

The line in the company's privacy warning that is raising the alarm reads: "Please be aware that if your spoken words include personal or other sensitive information, that information will be among the data captured and transmitted to a third party through your use of Voice Recognition." (Source: [samsung.com](http://samsung.com))

It appears some of the panic may be down to Samsung's unclear wording, rather than its privacy practices. The company insists it only gathers voice data when the feature is in use, which is represented when a microphone icon is displayed on screen.

The system isn't set to permanently listen to the audio in the room. Instead, any personal conversations would only be collected by accident. An example would be if a user said something immediately after issuing a voice command, which may be too soon for the system to realize the commands had finished.

## Samsung Vows No Data Sold to Third Parties

Samsung has stressed that it encrypts the data it collects and does not sell any voice data to third parties. It has now confirmed that the "third party" referred to in the privacy warning is Nuance, a company that provides voice recognition services. (Source: [bbc.co.uk](http://bbc.co.uk))

According to Samsung, users can switch off Voice Recognition data collection, or disable the feature altogether in settings menus. If they do so, they won't be able to use the interactive feature that learns a user's preferred commands, such as switching to a specific channel. However, even with the voice recognition feature switched off, users may be able to use some basic, pre-determined voice commands.

#### \*HOW HIGH SHOULD AN ANTENNA BE\*

THE BEST WAY TO OPERATE HF

EASY INSTALLATION

EXCELLENT PERFORMANCE

DURABLE CONSTRUCTION

CC&R FRIENDLY (XYL ALSO)

This question is asked quite frequently. Actually what many want to know is, how low to mount the antenna to where it will still work?

There is much to learn about HF propagation. However, a few basics can help to achieve good results.

On VHF and higher you can go by the rule, "the higher the better". This is a ground wave transmission. You can liken it to line of sight. If you were to raise yourself above ground, you would see a farther distance to the horizon. So will the ground wave. On VHF, this will increase the performance in distance. Actually on VHF in particular, it is more forgiving and will bend with the terrain somewhat. This is a reason for using VHF for police and fire in rural areas. We are referring to distances of 10 to 15 miles car to car (depending on power) and as much as 100 miles through a repeater at a very high altitude.

What happens at the HF frequencies? A lot!

HF is normally used for much longer distances than the VHF ground wave. Therefore, where do you start and what factors affect it?

There is one thing to keep in mind. HF radiation rarely reflects. Due to the low frequency, there is insufficient inductance in objects to make it reflect. However, there are other factors that affect HF.

We can start with what you are walking on. The soil conditions of the earth varies per location. Conductivity and various minerals in the soil affect HF communications.

Depending on this chemistry will determine how much HF radiation will be absorbed and not leave the antenna site. What do you look for?

If the antenna is very low to the ground, you can observe the performance. Tuning of the antenna is one factor. Is the antenna reacting peculiar? Minimum SWR a bit too high? If measured, is the impedance of the antenna very low. Possibly receiving performance has deteriorated severely.

Another check is measuring SWR at low power as compared to high power. If at low power the SWR is closer to normal and high power it increases a lot, then a nearby object is most likely having an affect. Like the earth. Radiation can be absorbed and due to a transformer affect radiate some back into the antenna or possibly the feedline laying on it. This will increase the SWR and can make the antenna very narrow in bandwidth.

If this is the case, Raising the antenna even a few feet will make a change toward normal functioning of the antenna.

We can usually use the same rule as VHF,"the higher the better". However, when you are limited in what you can do, you will want to know the minimum you can get away with. HF will start performing reasonably well if you can get sufficient height from your ground absorption factor. On the average, 20 feet will do it. Some areas are more forgiving and some areas are worse. You will get indications of it by taking note of the readings mentioned.

Next article will continue on this subject.

73,

Ralph WDOEJA

#### \*CLUB MEETING\*

The next meeting is 1100 Saturday morning, March 7 in Walsingham Park. The park is between 102 Ave and Walsingham. If you enter the park from Walsingham the volunteer building where we meet is just inside the gate on the East side. Find the exact location by going to Google maps and entering 27.8797N and 82.8053W. Talk-in is on the Wormhole repeater system. For those coming to the meeting who cannot hit the repeater we will be monitoring 146.520 simplex, the national calling frequency. We will keep an eye peeled for you. We will take advantage of the cooking facilities with an after-the-meeting Social and wormdog luncheon.

#### \*CLUB NETS\*

Check in on the club net Thursdays at 1930. 442.625 + with a 146.2 tone or the 2M side at 146.850 – also with a tone of 146.2. We are always looking for volunteers to be the net control operator. Anyone interested, talk to one your club officers.

#### \*LOCAL NETS\*

##### MONDAY

|      |                  |                             |                    |
|------|------------------|-----------------------------|--------------------|
| 1830 | 147.060+ no tone | St Pete ARC daily net       | from St Petersburg |
| 1900 | 144.210 USB      | CARS, vertical polarization | Clearwater         |
| 1930 | NI4CE system     | WCF Section VHF ARES        | NI4CE system       |
| 2000 | 147.165+ 136.5   | Brandon ARS                 | from Brandon       |
| 2000 | 50.135           | Pinellas ARK                | Pinellas County    |
| 2030 | NI4CE system     | EAGLE Net, NTS traffic net, | NI4CE system       |
| 2030 | 145.450          | Pinellas ARK                | Pinellas County    |

##### TUESDAY

|      |                               |                            |  |
|------|-------------------------------|----------------------------|--|
| 1830 | 147.060 no tone               | St Pete ARC daily net      | from St Petersburg   |
| 1900 | 50.200 USB                    | 6M net                     | Brandon ARS  |
| 1900 | 28.450                        | WCF section net            | Clearwater   |
| 1930 | 145.170 & 442.4 both pl 156.7 | Pinellas ACS net           | Clearwater   |
| 1930 | 147.060 no tone               | Buy-Sell net on SPARC      | also on <a href="http://www.buysellnet.net">www.buysellnet.net</a> |
| 2000 | NI4CE system                  | WCF Skywarn net            | NI4CE system   |
| 2000 | 147.105+ 146.2                | Tampa ARC net              | from Tampa   |
| 2000 | 28.365 USB                    | simplex                    | Brandon ARS  |
| 2030 | NI4CE system                  | EAGLE Net, NTS traffic net | NI4CE system   |
| 2100 | 28.465 USB                    | 10/10 net                  | from Orlando   |

##### WEDNESDAY

|      |                 |                             |                    |
|------|-----------------|-----------------------------|--------------------|
| 1745 | 147.060 no tone | Buy Sell Net                | from St Petersburg |
| 1830 | 147.060 no tone | St Pete ARC daily net       | from St Petersburg |
| 1930 | 52.020 simplex  | Suncoast 6'ers              | from St Petersburg |
| 1930 | NI4CE system    | WCF Section Digital Info Ne | NI4CE system       |
| 2000 | 147.105 146.2   | Greater Tampa CERT net      | from Tampa         |
| 2000 | 146.97- 146.2   | Clearwater ARS              | from Clearwater    |

|          |                             |                            |                      |
|----------|-----------------------------|----------------------------|----------------------|
| 2030     | NI4CE system                | EAGLE Net, NTS traffic net | NI4CE system         |
| 2100     | NI4CE system                | Tampa Bay Traders Net      | non-affiliated       |
| THURSDAY |                             |                            |                      |
| 1800     | 146.52 simplex              | Hillsborough ARES/RACES    | North Tampa          |
| 1830     | 147.060 no tone             | St Pete ARC daily net      | from St Petersburg   |
| 1930     | 146.850- & 442.625+ both pl | 146.2 Wormhole             | from St Petersburg   |
| 1915     | 224.660- no tone            | St Pete ARC                | from St Petersburg   |
| 2030     | NI4CE system                | EAGLE Net, NTS traffic net | NI4CE system         |
| FRIDAY   |                             |                            |                      |
| 1830     | 147.060 no tone             | St Pete ARC daily net      | from St Petersburg   |
| 2000     | 147.360+ pl 127.3           | METRO ARC Friday Net       | from St Petersburg   |
| 2030     | NI4CE system                | EAGLE Net, NTS traffic net | NI4CE system         |
| SATURDAY |                             |                            |                      |
| 0830     | 3.911 (7.281 Alt.)+/- QRM   | WCF Section HF Net         | from Pinellas County |
| 1830     | 147.060 no tone             | St Pete ARC daily net      | from St Petersburg   |
| 2030     | NI4CE system                | EAGLE Net, NTS traffic net | NI4CE system         |
| SUNDAY   |                             |                            |                      |
| 1830     | 147.060 no tone             | St Pete ARC daily net      | from St Petersburg   |
| 1930     | NI4CE system                | WCF Section Net            | NI4CE system         |
| 2000     | 147.550 simplex             | 550 Simplex Net            | Pinellas County      |
| 2030     | NI4CE system                | EAGLE Net, NTS traffic net | NI4CE system         |
| 2100     | 144.210 USB                 | Clearwater ARS             | vertical orientation |

**\*FOR SALE / WANTED\***

Anyone having something for sale or who might be looking for an item let me know. I will not print phone numbers or email addresses unless specifically told to since this newsletter might end up on the web. The exception is when I get the information off the web. If you are a member of the Wormhole then you have all the information you need on a club roster and if you are not a member .. why not? OK, if you are not a member you can contact me at the email address at the end of this newsletter, I will give you the information to contact the person involved.

FOR SALE, 13 element, 14.5 ft 220 beam. Wormhole property, \$20, contact Bill AG4QX or any other officer. Free to any Wormhole member or other club. Pickup at Bill's house.

**\*ANNUAL EVENTS TO REMEMBER\***

|                           |   |
|---------------------------|---|
| Last full weekend January | Winter Field Day, <a href="http://www.spar-hams.org/index.php">http://www.spar-hams.org/index.php</a>                 |
| Late January              | Gasparilla celebration  |
| March/April               | MS Walks  |
| March/April               | Mass Casualty Exercises   |
| Late April                | Southeastern VHF Society Conference, <a href="http://www.svhfs.org">http://www.svhfs.org</a>                          |
| Late April                | Walk For Babies (was March of Dimes)  |
| Late April                | Florida QSO Parties   |
| Early May                 | MS 150 bike ride  |
| Mid May                   | NI4CE picnic  |
| Early-May                 | Annual Armed Forces Crossband Test  |
| Late May                  | Wormfest  |
| Early June                | Museum Ships on the Air   |
| Fourth weekend in June    | Field Day <a href="http://www.arrl.org/contests/announcements/fd/">http://www.arrl.org/contests/announcements/fd/</a> |
| July 3/4                  | Midnight Run in Largo   |
| August                    | International Lighthouse/Lightship Week   |

October, 3<sup>rd</sup> weekend                    JOTA, Scout Jamboree-on-the-AIR  
Early December                        ALS bike ride in Walsingham Park  
December, first full weekend        Ride & Run With The Stars in Fort DeSoto Park  
December, Second full weekend      Tampa Bay Hamfest

\*HAMFESTS\*

2015

March 7                    Zephyrhills, Lions Club, 5827 Dean Dairy Road, Open at 0800, vendors in at 0700. \$5 entry includes tailgate, \$10 entry includes inside table, talkin on 147.135 +146.2, contact Charlie Nelson at [ke7uth@arrl.net](mailto:ke7uth@arrl.net), more info at [http://www.zaarc.org/2015\\_Zhills\\_Hamfest\\_Flyer.pdf](http://www.zaarc.org/2015_Zhills_Hamfest_Flyer.pdf)

March 21                    Stuart, Martin County Fairgrounds, South Florida Section Convention, 2616 SE Dixie Highway (A1A), gate open at 0800, Talk-in on 147.060 +107.2

March 28                    Hudson, EZ Mini Storage, 15830 US19 N, nothing more on website at <http://gulfcoastarc.org/>

April 18                    TARCfest, TARC Clubhouse, 22<sup>nd</sup> St at the river, \$4 entry plus \$3 to tailgate, inside tables \$15 in advance, talkin on 147.105 +146.2, more info at <http://hamclub.org/wp/wp-content/uploads/2015/01/TARCFest-XXXIII-April-18th-Flyer.pdf>

May 23                    WORMFest 2015, Pinellas Park, FREE, Freedom Lake Park, 9990 46th St N Southeast corner of US 19 and 49<sup>th</sup> Street, 33782. Park opens at sunrise, hamfest from 0800 till... Talkin on 442.625 + or 146.850 – both with a tone of 146.2. For a map and directions see <http://www.TheWormholeSociety.org> .

August 22                    TARCfest, TARC Clubhouse, 22<sup>nd</sup> St at the river, \$4 entry plus \$3 to tailgate, inside tables \$15 in advance, talkin on 147.105 +146.2, more info at <http://hamclub.org/wp/wp-content/uploads/2015/01/TARCFest-XXXIII-April-18th-Flyer.pdf>

November 14                    SPARCFest, Pinellas Park, SPARCFest, FREE, Freedom Lake Park, 9990 46th St N, Southeast corner of US 19 and 49<sup>th</sup> Street, Talk-in on 147.060+ no tone. VE testing at 0900. For more information go to <http://www.sparc-club.org/sparcfest.html>

December 11 & 12                    Plant City, the 2013 Tampa Bay Hamfest is the West Central Florida Section Convention, Friday and Saturday, at the Ag Building in the Strawberry Festival grounds, for information contact Bill Williams AG4QX, [chairman@fgcarc.org](mailto:chairman@fgcarc.org) go to <http://www.tampabayhamfest.org> you can just ask me, Jim or Dee ;-)

\*YOUR WORMHOLE OFFICERS\*

Bill AG4QX is President and editor of this newsletter, Vice-President is Mike K4ZPE, Treasurer is Jim KD4MZL, Bruce WD9FMI is the Secretary, Dee N4GD is the Repeater Trustee and Neil W4NHL and Mike K4ZPE are our club webmasters.

\*YOUR WORMHOLE REPEATERS\*

442.625 + PL 146.2

146.850 - PL 146.2

West Central Florida Section website: <http://www.arrlwcf.org/>.

The Wormhole website is at: <http://www.TheWormholeSociety.org>

This newsletter is written for The Glorious Society of the Wormhole, an ARRL affiliated amateur radio club located in central Pinellas county Florida.

Anyone wishing to be added or removed from The Glorious Society of the Wormhole mailings please write to me at the address below and thy will be done.

73,

Bill Williams

AG4QX

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Glorious Society Of The Wormhole Inc.

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Website: [www.w4orm.org](http://www.w4orm.org) Having trouble reading this email? [View in your browser](#) [Unsubscribe from this newsletter](#) | [Manage Subscriptions](#)