

News from



The GLORIOUS SOCIETY OF THE WORMHOLE

June 2021

Hello Worms

In the April meeting enough people were in favor of a face to face (mask to mask) meeting in May. It was successful with 16 members attending, almost a normal meeting. I tried to get Zoom going but for some reason my computer would not run it. I have deleted and re-installed it so hopefully we can have a Zoom monitoring of this month's meeting. The Zoom link is below. We will meet at the regular meeting time of 1100 on Saturday morning. We will again meet at the Lurie Civic Building which is the new Greater Seminole Area Chamber of Commerce. It is located on the St Petersburg College campus in Seminole. Turn west at the light at 113th St N and about 92nd Ave N. It's the first building on the north side. Here is a link to a Google map : [Google Maps](#) . In google maps the building does not exist yet at street level view but it is there at all the higher views. There is a few parking spots at the Chamber building but if you go another 100 yards past you can park in the college parking lot which is a lot closer to the meeting area.

We will practice social distancing, BRING YOUR CHAIR and lunch! There are a few picnic benches if you do not have a folding chair. We will not be cooking. There will be water and cold drinks also but no food or coffee. Bring your chair, lunch and coffee if you want it. A microwave is available in the building if you want to heat up your lunch.

As always before a regular meetings there are members on the repeater long before the meeting time so jump in there and chew the rag.

Topic: Bill Williams' Zoom Meeting
Time: This is a recurring meeting Meet anytime

Join Zoom Meeting

<https://zoom.us/j/2737114584?pwd=d1BETHVOQ21vWWZlZ0YQ0FIWWtldz09>

Meeting ID: 273 711 4584

Passcode: worm

For the meeting do not forget ... BRING YOUR CHAIR, lunch and coffee!

The Wormhole web service provider had a fire. The server we are on is apparently beyond recovery. They are offering an old backup. Mike, our webmaster, will wait until after the Wormfest so our hamfest information is still active and then transition to a new website on a new service provider. Thanks to Mike for all his work.

***GETTING AN HF ANTENNA TO WORK - Part 7 ***

Ralph WD0EJA

Part 6 mentioned 4 characteristics or values that an antenna has. X_L -INDUCTIVE REACTANCE, X_C -CAPACITIVE REACTANCE, RADIATION RESISTANCE AND R-NONREACTIVE RESISTANCE.

If you are using a SWR meter at the radio through a length of coax, you are limited as to what you can determine. You can scan a section of frequency and find the minimum SWR. This will tell you the resonant point of antenna and coax combined. Not too bad, but sometimes we need more data to make the antenna match closer to 1:1.

If you are building an antenna, many have purchased some kind of analyzer. This device has measurements for X_L , X_C , Z and R. How do we use it?

The instrument needs to be connected at the antenna. On HF a short coax jumper will work.

Now scan the area of frequency you are working with. If you are building an antenna for 40 meters, then scan the frequencies in the 7 Mhz area. What are you looking for?

Zero Reactance. Be sure your analyzer is set to reading reactance. When you have found 0 you are at the resonant point of the antenna. This will also be where the minimum SWR is.

What if the minimum SWR is greater than 1:1? Now change the setting on the analyzer to the Resistance setting. In some units you have a resistance meter. You should hold your thumb over that meter so not to see it until you find where the Reactance's are at 0. Now take your thumb away and see what you have. How close are you to 50 ohms? At any other point this value does little to help you.

Now you know if the antenna is above or below 50 ohms. Depending on the design of the antenna, R value can be adjusted (possibly) to measure needed 50 ohms.

Now you are ready to connect your coax and operate. **Wrong!** Once you connect the coax the values will most likely change. The coax is also a component of the antenna. It does not radiate, but it does change the readings you just obtained.

Now what do you do? A future article will start to address this.

73,
Ralph WD0EJA

May 2021

*** WHAT AMATEUR RADIO CLUBS AND SERVICES ARE WORTH PAYING FOR? ***

By Dan Romanchik, KB6NU

On the amateurradio subreddit (<https://www.reddit.com/r/amateurradio/>), someone asked:

I have always wondered what subscriptions/memberships are worth having? Is ARRL worth the \$50/year? What about QRZ \$30/year for XML data? Is there something that is a must have ?

Several replied in the affirmative about the ARRL:

I joined the ARRL so they can lobby for amateur radio when needed.

I think ARRL is worth it.

If you care about things like DXCC awards, and are in the US, you will need to be an ARRL member. Now that QEX, The National Contest Journal, On the Air and QST digital are all member benefits, I would say you get enough for your \$50 to make it worthwhile

Of course, there were differing opinions:

They [expletive deleted] up the Parity Act so badly that it's almost hilarious. ARRL will never see a dime from me.

There were a lot of comments about subscribing to QRZ.Com:

I spend a bunch of time on QRZ every day, and I log every contact in their logbook, and then send it to LoTW, so the XML is well worth it. Also, will all the time on the forums and the articles I spend I enjoy not having the ads, and supporting what I believe is a fantastic website.

QRZ is worth it so you can integrate with logging software or if you want upload your ADIF file from WSJT-X, if you do FT8, that sort of thing.

I've never felt the need for a QRZ subscription. Only when I was the noobest of noobs and couldn't tell the difference between ON4 and OH2 did I ever run up the 100 lookup a day limit. Now with...alternate... lookup services even hitting the limit might not matter for most hams.

There were some comments about supporting local groups:

You should definitely seek out your local club(s) and join whatever ones seem like a good fit to you. You can learn a lot from a good club, and having a couple of hands to help with antennas/ loan equipment is a fantastic benefit.

I donated to the repeater I use the most.

As for me, I am a member of the ARRL, and at various times, have been a member of:

- AMSAT
- Amateur Radio Lighthouse Society (ARLHS)
- TAPR
- QRP Amateur Radio Club Intl. (QRP-ARCI)
- Quarter Century Wireless Assn. (QCWA)
- Northern California DX Foundation (NCDXF)
- Michigan QRP Club
- ARROW – the amateur radio club here in Ann Arbor

My membership is current in ARRL, AMSAT, ARLHS, QRP-ARCI, MI QRP Club, and ARROW.

I would encourage you to become an ARRL member and a member of other groups that serve your particular interest in amateur radio. I like operating from lighthouses, so I'm a member of ARLHS. If you're a big DXer, join NCDXF. If you're a QRPer, then QRP-ARCI is the group for you. Becoming a member really will help you have more fun with amateur radio.

You probably belong to your local club if you're reading this column, but I'm curious about what other amateur radio subscriptions you have or which services you pay for. Feel free to email me and let me know which groups you support and why you do so.

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (<https://KB6NU.Com/study-guides/>), and often appears on the ICQPodcast (<https://icqpodcast.com>). When he's not paying his dues, he teaches online ham radio classes and operates CW on the low end of the HF bands.

*** ARE YOU READY FOR THE NEW RF EXPOSURE EVALUATION REGULATIONS?***

By Dan Romanchik, KB6NU

On Tuesday, April 27, Dan, W1DAN, ARRL Eastern Massachusetts Section Technical Coordinator, gave a Zoom presentation on the latest FCC regulations on RF exposure evaluation. These are spelled out in FCC-1926A1 (<https://www.fcc.gov/document/fcc-maintains-current-rf-exposure-safety-standards>), "Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields; Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies." The document is as long as the title might suggest but W1DAN boiled it down, focusing on what these changes mean for radio amateurs.

A recording of the presentation can be viewed by going to https://drive.google.com/drive/folders/1_qIGZhHyMrha-axJt87Dcu0UZuJO0t8F.

After explaining how RF exposure can be harmful, Dan explained how the rules are changing: The biggest change, he notes, is that amateur radio's categorical exclusion has been eliminated. What this means is that now every radio amateur will have to perform an RF exposure evaluation of their stations. This now includes mobile and portable stations, including HTs, SOTA/POTA stations, and Field Day and special event stations.

He noted that you must be able to prove that your station is safe. This includes not only performing the evaluation, but also documenting these evaluations, should this data be requested by FCC personnel.

One thing that's not changing are the maximum permissible exposure (MPE) limits. These are spelled out in FCC OET Bulletin 65 (https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." The FCC published this document in August 1997, but it's still the Bible when it comes to RF exposure. If you don't have a copy, or have never taken a look at it, you really should do so.

Be careful, though, when reading it. It contains a table (Table 1 on p. 21) that contains a list of output powers at various frequencies. If your station exceeded those limits, then you were required to perform an RF evaluation. Now, however, all

amateurs (and other radio services, for that matter) must perform RF exposure evaluations if their output power exceeds 1 mW. We are no longer categorically excluded from performing these evaluations.

OET Bulletin 65 goes on to give guidance on how to calculate or measure exposure levels. Explaining how to do this is outside the scope of this article, but again, you'll want to refer to the bulletin for more information.

Besides the elimination of the categorical exclusion for amateur radio stations, what else is new is the dates on which amateur radio stations must perform evaluations.

They are:

May 3, 2021(!) for new and modified stations

May 3, 2023 for stations that complied under the old rules.

Having said all that, the ARRL's RF Exposure page (<http://www.arrl.org/rf-exposure>) has a lot of resources to help you understand this topic and perform your own RF exposure evaluations:

An RF-exposure FAQ

(<http://www.arrl.org/files/file/Technology/RFsafetyCommittee/RFXFAQ.pdf>) to help hams understand the new rules.

"Learning to Live with RF Safety

(http://www.arrl.org/files/file/protected/Group/Members/Technology/tis/info/pdf/QST_Mar_2009_p70-71.pdf)," QST March 2009 pp. 70-71.

RF Safety at Field Day

(<http://www.arrl.org/files/file/Technology/tis/info/pdf/9906048.pdf>) QST, June 1999, pp. 48-51. A case study of Field Day with NSRC in a public park

RF Exposure Station Evaluation and Exemption Worksheets

(http://www.arrl.org/files/file/Technology/tis/info/pdf/rfex1_2.pdf)

RF Exposure and You

(<http://www.arrl.org/files/file/Technology/RFsafetyCommittee/RF%20Exposure%20and%20You.pdf>). This 8 Mbyte PDF file contains the text of the entire book by Ed Hare, W1RFI.

Chapter 5 References (<http://www.arrl.org/files/file/Technology/tis/info/pdf/RF%20Exposure%20Chapter%205.pdf>) needed for filling out worksheet.

There are also links to FCC web pages with information on RF exposure. I'm sure we'll all be hearing more about this in the days ahead. Hopefully, someone will come out with a simple way to do the modeling or make the calculations. As always, play safe.

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CLUB MEETING

We will again have a face to face club meeting on June. We will try to keep up on the 2M and also video concurrent on ZOOM. Our normal meeting place at the Minnreg Building is no longer available. The meeting will be held at the Lurie Civic Building which is the new Greater Seminole Area Chamber of Commerce. It is located on the St Petersburg College campus in Seminole. Turn west at the light at 113th St N and about 92nd Ave N.



CLUB NETS

Check in on the club net Thursdays at 1930 and 2000 (or at the end of the 2M net).
2M at 146.850 – with a tone of 146.2. Our 6M net runs after our regular 2M net on
53.150 – 1MHz offset 146.2 tone.



LOCAL NETS

MONDAY

1730 147.030 + Receiver sites and tone info <http://www.qsl.net/wd4scd/> St Pete
Yacht Club ARC

1830 147.060+ no tone St Pete ARC daily net St
Petersburg

1900 144.210 USB CARS, vertical polarization
Clearwater

1900 147.135 +146.2 Zephyrhills ARC
Zephyrhills

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 ARS	6M net	Brandon
1900 28.450 Clearwater	WCF section net	
1900 NI4CE system system	WCF Section VHF ARES	NI4CE
1930 145.170 & 442.4 both pl 156.7	Pinellas ACS net	Clearwater
1930 444.900 +141.3	Sheriff's Tactical ARC	Tampa
2000 NI4CE system	WCF Skywarn net	NI4CE system
2000 147.105+ 146.2 Tampa	Tampa ARC net	from
2000 28.365 USB	simplex	Brandon ARS
2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
2100 28.465 USB	10/10 net	from Orlando
1900 146.490 simplex simplex Net	3 RD Tuesday monthly, Hillsborough Co ARES	
WEDNESDAY		
1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
1930 52.020 simplex Petersburg	Suncoast 6'ers	from St
1930 NI4CE system system	WCF Section Digital Info Ne	NI4CE
2000 147.105 146.2 Tampa	Greater Tampa CERT net	from
2000 146.97- 146.2 Clearwater	Clearwater ARS	from

2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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2100 NI4CE system affiliated	Tampa Bay Traders Net	non-
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THURSDAY

1800 146.52 simplex Tampa	Hillsborough ARES/RACES	North
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1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
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1900 444.750 +146.2 Tampa	Fusion net	from
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1915 224.660- no tone Petersburg	St Pete ARC	from St
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1930 146.6385 -127.3 Lakeland	Lakeland ARC	from
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1930 444.225 + 146.2 Tampa	Hillsborough ARES/RACES	from
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1930 146.850- 146.2 Petersburg	Wormhole	from St
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2000 53.150 -1MHz 146.2 Petersburg	Wormhole	from St
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2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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FRIDAY

1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
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2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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SATURDAY

0730 3.940 (7.281 Alt.)+/- QRM WCF	WCF Section HF Net	from
1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
SUNDAY		
0800 3.933	Florida Traders Net	non-affiliated
1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
1930 NI4CE system system	WCF Section Net	NI4CE
2000 147.550 simplex County	550 Simplex Net	Pinellas
2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
2100 144.210 USB orientation	Clearwater ARS	vertical



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 can ask club members for the persons contact information. 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, Comet GP-1 2M/440 MHz base antenna, \$50, Ralph W4TNY,
w4tny@tampabay.rr.com, 727-409-0468

HAMFESTS

- June 12 Dade City, Pre-Field Day Gathering, Dade City Masonic Lodge No. 48, 13642 21st Street South, Talk-In 147.135 + 146.2 & 146.52, For info Gary Mentro, N3OS, 813-713-9994 or n3os@arrl.net, fee unknown, no website
- June 12 Orlando, K4KDI Tailgate, South Conway Baptist Church, 6099 S Conway Rd, talk-in unknown, fee unknown, no website, For in Jack Moyer, K4KDI 407-443-1963
- August 21 **Tampa, TARCfest XLV**, TARC Clubhouse, 7801 N. 22nd S, t22nd St at the river, no other details yet, talkin on 147.105 +146.2, more info at <http://hamclub.org/>
- December 10 & 11 Plant City, the 2021 Tampa Bay Hamfest and West Central Florida Section Convention**, Friday and Saturday, at the Strawberry Festival grounds, admission \$10, 16x40ft tailgate space \$10, electric \$5, for information contact Bill Williams AG4QX, chairman@fgcarc.org or go to <http://www.tampabayhamfest.org> or you can just ask me, Jim or Dee at a meeting ;-)

2022

- February 11-13 Orlando Hamcation and NATIONAL Convention**, Central Florida Fairgrounds, 4603 West Colonial Drive, Tickets \$15 in advance, \$20 at door. Talk-in 146.760 - PL 103.5 OR Fusion. Also D-Star on 146.820 -, all the information at www.hamcation.com or call 407-841-0874 There is also a AM low power Information Station on AM 610.
- May 28 WormFest 2021**, Pinellas Park, admission FREE, tailgate free, Freedom Lake Park, 9990 46th St N, southeast corner of US 19 and 49th Street, 33782. Park opens at sunrise for vendor setup,

hamfest starts at 0800. Talk-in on 146.850 – 146.2. No food or open drinks will be available! For a map and directions see <http://www.TheWormholeSociety.org> .

Mid January	Adventure Run, Honeymoon Island
Last full weekend January	Winter Field Day, https://www.winterfieldday.com/
Late January	Gasparilla celebration
Late February	West Central Florida Tech Conference http://arrlwcfc.org/wcf-special-events/wcftechconference/
March	MS 150 Citrus Tour bike ride http://www.citrustour.org/register.php
March/April	MS Walks
March/April	Mass Casualty Exercises
Late April	Southeastern VHF Society Conference, http://www.svhfs.org
Late April	Florida QSO Party
Mid May	March For Babies (was March of Dimes) https://www.marchforbabies.org/Registration/Events
Mid-May	Annual Armed Forces Crossband Test
Mid-May	Florida Hurricane Exercise
May, Memorial Day Weekend	Wormfest
First weekend in June	Museum Ships on the Air
Fourth weekend in June	Field Day http://www.arrl.org/contests/announcements/fd/
July 3/4	Midnight Run in Largo http://www.kiwanismidnightrun.com/
August	International Lighthouse/Lightship Week https://illw.net/

October, 3rd weekend
14.280MHz)

JOTA, Scout Jamboree-on-the-AIR (around

Early December

ALS bike ride in Walsingham Park

December, Second weekend

Tampa Bay Hamfest <http://www.fgcarc.org/>

YOUR WORMHOLE OFFICERS

Bill AG4QX is President and editor of this newsletter, Treasurer is Jim KD4MZL, Paul KA4IOX is the Secretary, Dee N4GD is the Repeater Trustee and Mike K4ZPE is both our club Vice President and webmaster.

YOUR WORMHOLE REPEATERS

53.150 -1Mz PL 146.2

442.625 +5Mz PL 146.2

146.850 - 600Kz PL 146.2

The Wormhole 2M and 440 repeaters are both now dual mode Yaesu DR-1X. FM analog as always and Yaesu Fusion, a C4FM/FM digital mode.

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

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

The ARRL website is at: <http://www.arrl.org/>

This newsletter is written for The Glorious Society of the Wormhole, an ARRL affiliated amateur radio club located around the Seminole section of 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

ag4qx AT arrl DOT net