

# News from



# The GLORIOUS SOCIETY OF THE WORMHOLE

**June 2023** 

#### **Hello Worms**

The WormFest was a success last weekend. I saw many of you and it is always good to see all the Pinellas peps. Even had Dean and Alan's dogs make a visit but neither bought anything from me. Since no one in the Wormhole was interested in doing coffee and snacks I invited SPARC to do it but they could not come up with anyone either.

We will broadcast the meeting on the repeater and Zoom video. I am moving the directions to the meeting place and Zoom to the end of the newsletter, you all have seen them enough.

We will have donuts, water and soft drinks (probably only root beer). Bring, your coffee and lunch if you want! We will not be cooking but we do have access to the Chamber of Commerce kitchen which has a microwave and a toaster oven so you can heat up/cook what you bring.

#### \*A VARIABLE VOLTAGE REGULATOR\*

# Ralph Bilal

Our past articles have been about fixed regulated voltages. The voltages stay at a fixed value with a variation in load. Now that you are getting good at regulators, how about a variable regulated power source?

The LM-317 device works well and is simple to construct. These can handle up to 1.5 amps. It can regulate up to 35 volts.

You start with a 35 volt DC power source. However 15 volt is more practical. Most devices to be run or tested are 12 volts or lower. The LM-317 will vary the voltage from 1.2 volts up to your supply voltage value.

The LM-317 is adjusted with a variable resister (R4) if desired. If there is no need to change voltage a fixed resister can be used. Both resistors are of low wattage. The variable resistor is about 5K ohms. (See schematic below)

The output is + in reference to ground.

Many integrated circuits cannot tolerate much variation in voltage. The LM-317 will maintain a constant voltage where ever you set it.

The circuit is simple and can be made in a short time.

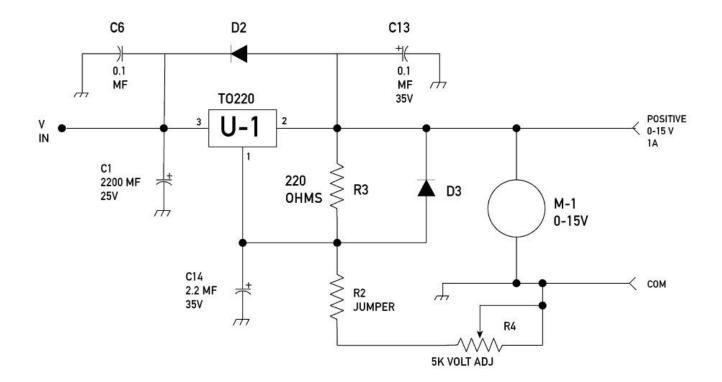
The input source voltage is at lead #3. A 2200mf capacitor (C1) is filtering the input voltage. (See figure below)

Lead #2 is the positive output voltage. There are some protection devices at the output. D2, D3, C6 and C13. This lead is also connected to the heat sink, if you choose to use one.

Lead #1 Is the control lead. R3 and C14 are to stabilize the control voltage.

If you want to get fancy, you can add a volt meter (M-1) to the circuit.

The result will give a variable, ripple free voltage source for little cost.



73,

Ralph WD0EJA

**BILAL COMPANY** 

PH/FX: 719/687-0650

wd0eja@isotronantennas.com

#### \*FLORIDA CONTEST SUSPENDED DUES\*

#### From Chris NX4N

Hi Friends,

This is the link <u>Contest Gazette April 2023</u> to the latest newsletter of the Florida Contest Group; hope you enjoy it. If you have any interest in Contesting, or have any questions, please reach out to me directly.

The FCG has suspended their \$5 annual dues so you are welcome to join for free; voluntary donations are tax-deductible. The FCG sponsors the FQP, hosts a Contest Dinner at HamCation on Friday nights with wonderful guest speakers and a huge amount of door prizes, also host activities at the Melbourne Hamfest and they have a groups.io system to find out more about contesting related events, operating techniques, technical issues and to answer questions for new and experienced contesters alike.

Please see more about at <u>floridacontestgroup.org</u>

# \*HAMS START GOING TO DAYTON FOR THE TECHNOLOGY. THEY KEEP GOING FOR THE PEOPLE\*

Dayton, Ohio becomes the center of the amateur radio universe every third weekend in May. That's when the Dayton Amateur Radio Association holds Hamvention, the largest gathering of radio amateurs in the world. This year, approximately 30,000 converged for the event.

Most people start going to Hamvention for the technology, and there was plenty of that this year. All the major manufacturers were there, including (in alphabetical order) Elecraft, Flex,



Icom, Kenwood, MFJ, and Yaesu. There were some less well-known manufacturers there, too, including Alinco, HobbyPCB, QRPLabs, and QRPWorks. They were joined by a host of niche suppliers, who make and sell everything from antennas to Morse Code keys to batteries. And, of

course, there's the flea market, where you can find all kinds of weird and wonderful electronic stuff.

People come for the forums, too. The theme for this year's Hamvention was Innovation! and many of the forums emphasized this aspect of amateur radio. This year's forum lineup included presentations on digital communications, software-defined radio, fast-scan TV, and Linux-based ham radio software.

## People over technology

Technology was certainly the initial draw for me, but it's not why I keep returning. I didn't buy a single thing this year. What keeps me going back are the people. Every year, I meet old friends, hams who I've only met on the air, and make new friends.

Last year, for example, I had dinner on Saturday with a fellow with whom I'd had many CW contacts, but never met in person. In fact, because we were operating CW, I'd never even heard his voice. We hit it off so well, that we again met for dinner this year. Not only that, we expanded our circle to include several other hams who we've worked before.

Here's another example. On Friday, an old friend came up to the booth to say hello. As it turns out, he was recently elected to the board of directors of the Quarter Century Wireless Association (QCWA). About 15 years ago, I was a member of QCWA, but let my membership lapse when I became disenchanted with the organization.

One of the reasons for my departure was that they actively discouraged me from starting a chapter here in Southeast Michigan. Their reasoning, as I recall, is that there was already a chapter in Michigan, even though its activities were mostly on the west side of the state. That made no sense to me at all.

This didn't seem to make much sense to my friend--the newly-elected QCWA board member-so we plan to explore this further at a later date. Who knows? We may yet form a SE Michigan chapter of QCWA.

This is just a small sample of the people I met this year. I also got to talk to some podcasters and YouTubers, a couple of fellows who recognized me from reading my blog or listening to me on the ICQ Podcast, and hams out in the flea market who had some interesting stories about the stuff they had for sale. You never know who you'll run into, what stories they'll tell you, and what you'll learn from them.

It's meeting people that keep me returning to Hamvention. If you've never been to a Dayton Hamvention, I'd encourage you to go at least once. If you do, I'm going to guess that you'll go back, and it won't be for the technology, but for the people.

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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 at Hamvention, he teaches ham radio classes and operates CW on the HF bands.

# \*NCDXF GOING AFTER QRMERS \*

## Message 1 - NCDXF DQRM Project Press Release

Please publish this ASAP. We want to attract proposals from around the world as this is all DXer's concern.

Thanks and 73, Craig K9CT NCDXF Vice President

The Northern California DX Foundation (NCDXF) recognizes the negative impact deliberate QRM (DQRM) is having on our hobby. We believe this is a problem that can be mitigated by amateur radio operators applying their vast knowledge and creativity to the advanced receiving and direction finding technology currently available. In order to spur research into solving this problem the NCDXF Board of Directors at their April 2023 Board Meeting allocated \$100,000 for grants to develop DQRM solutions.

NCDXF will entertain grant proposals from individuals or groups that specifically outline their approach to identify bad actors. A group of NCDXF Directors led by Craig Thompson, K9CT and Don Greenbaum, N1DG will weigh the probability of success of their proposals as well as monitor the progress of the grantees.

Funding will be available for R&D as well as implementation of technology proposals. It is hoped that manufacturers will also assist NCDXF and grantees with equipment and other resources.

NCDXF will shortly outline specifics for how to apply for these DQRM grants. We have created a webpage devoted to this project, DQRM Project

## \*GOOGLE WILL DELETE EVERYTHING IF NO LOGIN IN 2 YEARS\*

9TO5Google by Abner Li

<u>In 2020</u>, Google said it would remove content stored in an inactive account (but not the account itself) to preserve storage space. Google is <u>now updating</u> its inactivity policy so that old, unused accounts will be deleted starting later this year.

"If a Google Account has not been used or signed into for at least 2 years," Google will delete that personal account and its contents. In addition to the email address becoming inaccessible, Gmail messages, Calendar events, Drive, Docs, and other Workspace files, as well as Google Photos backups, will be removed.

At the moment, Google is not planning to delete accounts with YouTube videos. (That would be tricky as some old abandoned clips might have historical relevance.)

Google will start deleting inactive accounts in December 2023 (at the earliest) and take a "phased approach," starting with "accounts that were created and never used again." The company says it is "going to roll this out slowly and carefully."

Before deleting an account, we will send multiple notifications over the months leading up to deletion, to both the account email address and the recovery email (if one has been provided).

Meanwhile, this only applies to free Google Accounts and not those managed by a business or school.

# What keeps an account active

Besides signing in periodically, being logged in and performing basic actions counts as activity:

- Reading or sending an email (like viewing an inactivity alert)
- Using Google Drive
- Watching a YouTube video
- Downloading an app on the Google Play Store
- Using Google Search
- Using Sign in with Google to sign in to a third-party app or service

Additionally, Google tells us that using a signed-in Android device is considered activity.

Google Photos already has a <u>separate</u> two-year sign-in and usage policy to be considered active. Meanwhile, accounts with active Play Store subscriptions, like Google One or third-party apps, are considered active.

Today, Google recommends users assign a <u>recovery email</u>, and the company points users toward the <u>Inactive Account Manager</u> to decide "what happens to their account and data when it

becomes inactive for a period of up to 18 months." Options include sending files to trusted contacts, setting a Gmail autoresponder, or account deletion.

In making this change, Google cites security, as inactive accounts — often with "old or re-used passwords that may have been compromised" — are more likely to be compromised.

Our internal analysis shows abandoned accounts are at least 10x less likely than active accounts to have 2-step-verification set up. Meaning, these accounts are often vulnerable, and once an account is compromised, it can be used for anything from identity theft to a vector for unwanted or even malicious content, like spam.

This also "limits the amount of time Google retains your unused personal information," with this time frame considered to be an industry standard. Unlike other services with different security/privacy implications, Google will not free up Gmail addresses to reclaim with deletions.

#### \*HACKABLE NOT-PHONE DOES MESSAGING\*

#### Beeper

Introducing Beepberry - a portable e-paper computer for hackers, designed for chatting on Beeper.

Last year, I had an idea for a fun side project - I wanted to create a 'weekend' device that would let me stay in touch with friends and family, without the distractions of a full smartphone. I imagined a tiny, hackable e-paper screen with a physical keyboard, powered by a Raspberry Pi, that I could use to chat and pretty much nothing else.

Before Beeper, the idea probably would not have gone anywhere. Most chat apps do not have an API, making it practically impossible to hack something like this together.

Enter <u>Beeper</u>, with connections to 15+ chat networks. Built on top of <u>Matrix</u>, Beeper is fully hackable. You can write alternative clients, bots and more!

I reached out to <a>@sqfmi</a> (who had built the amazing <a>Watchy</a>) and we teamed up to create this tiny computer.

If you're a hacker and want to play with one, you can pre-order one today for \$79:

#### https://beepberry.sqfmi.com/

Beepberry is a portable computing device, with a beautiful high contrast, high resolution display, and a tactile keyboard + touchpad. It is the ultimate everyday hacking gadget.

Powered by the Raspberry Pi Zero W (or any other compatible SBCs), you can use it as a chat device (supporting all chat networks on Beeper e.g. iMessage/WhatsApp/Signal/etc.) or use it as a hackable handheld cyberdeck, running any Linux application that runs on the Pi.

## \*SANDISK SSD DELETING DATA\*

#### arsTECHNICA by Scharon Harding

SanDisk customers have been complaining about the company's Extreme and Extreme Pro portable SSDs suddenly wiping data and, in some cases, becoming unreadable. Complaints go back at least four months, and SanDisk told ars today that a firmware fix is coming "soon." However, SanDisk only confirmed a firmware update for the 4TB models, despite an ars staffer and online users reporting issues with 2TB drives.

An ars reader tipped us (thanks!) to online discussions filled with panicked and disappointed users detailing experiences with recently purchased Extreme V2 and Extreme Pro V2 portable SSDs. Most users seemed to be using a 4TB model, but there were also complaints from owners of 2TB drives.

In a thread about 4TB Extreme Pro drives in a film and video editors subreddit, a Reddit user called Ian wrote: "Multiple DITs/Loaders/ACs on both coasts have experienced the exact same failure with these drives over the last month. The symptom seems to be that after a sustained write they will completely lose their filesystem and it's a total crap shoot [whether] you can recover it or not. The primary way you will see this is that the drive will unmount and you will not be able to get it to mount again, despite showing up in Disk Utility. You can sometimes recover it using DiskDrill's filesystem rebuild, but occasionally that does nothing. It persists with any filesystem type."

The thread, as well as other threads on Reddit (<u>here</u>, <u>here</u>, and <u>here</u>), show the problem extending to the non-Pro 4TB drive, as well as the 2TB Pro drive (it's unclear if the 2TB non-Pro Extreme is affected).

arsTechnica's Lee Hutchinson confirmed suffering not one, but two 2TB Extreme Pros dying. After filling about halfway, each drive met a slew of read and write errors. When he disconnected and reconnected the SSD, it showed it was unformatted with the drive completely

wiped, including its file system. Wiping and reformatting didn't help, and this happened with two different units.

Lee's story is echoed by many people, including those on SanDisk's <u>forums</u>, who bought one of the external SSDs within the past few months. The problem seems to only affect a recent batch of drives, with one user <u>claiming</u> they were told via a Japanese distributor that "this problem is causing a fuss and is only for those manufactured after November 2022" (Ars couldn't confirm this). The Reddit user Ian, who claimed to be collecting error reports to share with SanDisk, agreed that the issue only affects recent batches. And <u>some</u> users <u>said</u> they used several Extreme and Extreme Pros over the years but only saw ones purchased recently fail.

Until now, there has been little public response from SanDisk, which has mostly referred online users to open a support ticket with SanDisk's technical support team. Questions about refunds have been left unanswered.

When ars contacted SanDisk about the issue, a company representative said:

Western Digital is aware of reports indicating some customers have experienced an issue with 4TB SanDisk Extreme and/or Extreme Pro portable SSDs (SDSSDE61-4T00 and SDSSDE81-4T00 respectively). We have resolved the issue and will publish a firmware update to our website soon. Customers with questions or who are experiencing issues should contact our Customer Support team for assistance.

SanDisk didn't answer our questions about refunds, whether or not the firmware would address issues with the 2TB models, what caused the issue, or when exactly this firmware fix will come.

Some Reddit users have suggested that SanDisk has dragged its feet on the monthlong saga, with Ian claiming they needed to collect "data to prove to SanDisk that it actually is more than a fluke." SanDisk's brief response to ars' questions fails to clarify what's been going on behind the scenes.

#### \*CLUB MEETING and ZOOM\*

The meeting time is 1100 on Saturday morning at the Lurie Civic Building on the St Petersburg College campus in Seminole. Turn west at the light at 113<sup>th</sup> St N and about 92<sup>nd</sup> Ave N. It's the first building on the north side. Here is a link to a Google map: Google Maps. There

are a few parking spots in front the Chamber building but double parking is fine since we will be able to find the owner to move his vehicle if necessary. Alternately if you go another 100 yards past you can park in the college parking lot. Below is the Zoom information, same as last month. The ZOOM meeting is limited to 40 minutes so I will start it early and restart it to cover the whole meeting.

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Topic: Bill Williams' Zoom Meeting

Time: This is a recurring meeting Meet anytime

Join Zoom Meeting

https://zoom.us/j/2737114584?pwd=d1BETHVOQ21vWWZXZ0IYQ0FIWWtldz09

Meeting ID: 273 711 4584

Passcode: worm



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**

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	6M net	Brandon ARS			
1900 28.365 USB	10M Net	Clearwater			
1900 NI4CE system	WCF Section VHF ARES	NI4CE system			
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 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			
1900 146.490 simplex 3 <sup>RD</sup> Tuesday monthly, Hillsborough Co ARES simplex Net					
WEDNESDAY					
1830 147.060 no tone	St Pete ARC daily net	from St Petersburg			
1900 147.165 + 136.5	Humpday Net	from Bandon			
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			
0000-2359 HF Winlink	Winlink Wednesday Net https://winlinkwednesday.net/remino	ler.html			

# THURSDAY

1800 146.52 simplex	Hillsborough ARES/RACES	North Tampa				
1830 147.060 no tone	St Pete ARC daily net	from St Petersburg				
1900 444.750 +146.2	Fusion net	from Tampa				
1915 224.660- no tone	St Pete ARC	from St Petersburg				
1930 146.6385 -127.3	Lakeland ARC	from Lakeland				
1930 444.225 + 146.2	Hillsborough ARES/RACES	from Tampa				
1930 146.850- 146.2	Wormhole	from Pinellas Co				
2000 53.150 –1MHz 146.2	Wormhole	from Pinellas Co				
2030 NI4CE system	EAGLE Net, NTS traffic net	NI4CE system				
FRIDAY						
1830 147.060 no tone	St Pete ARC daily net	from St Petersburg				
1900 3.830 LSB	Brandon 80M Net	from Brandon				
2030 NI4CE system	EAGLE Net, NTS traffic net	NI4CE system				
SATURDAY						
0730 3.940 (7.281 Alt.)+/- QRM	WCF Section HF Net	from WCF				
1830 147.060 no tone	St Pete ARC daily net	from St Petersburg				
2030 NI4CE system	EAGLE Net, NTS traffic net	NI4CE system				
SUNDAY						
0800 3.933	Florida Traders Net	non-affiliated				
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				

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## \*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. If you want to see anything here and you are coming to the meeting let the seller know, maybe he can bring it.

#### FOR SALE,

See Bill AG4QX for the following: most from SK estate, make me an offer.

- \*Heathkit HD-1215 Phone patch \$15 looks ok
- \*Drake WV-5 wattmeter \$90 looks ok
- \*Heath Cantenna dummy load, 1 gal oil load, oil a little low, \$50

#### This stuff is from Ray KD4HUW

- \*Icom AH-4 antenna tuner \$175.00
- \*MFJ-616 Speech Intelligibility Enhancer \$90.00

Dean W8IM wants to make room in his closet.

- 352-255-1431 or w8im @arrl.net or the Wormhole and SPA\*RC nets
- \*Meade 2080AT -LNT refracting telescope, little used original owner, original box, tripod, manual, some extra lenses, complete. \$100.00.

## Larry Wissinger KM4LEW has a David Wireless Vantage Pro 2 for sale.

I cannot set it up at our new QTH. I am willing to part with it for \$ 400.00, cash; a new one retails for over \$ 900.00. It is in very good condition and was working until we moved a couple of weeks ago. Has all the mounting hardware. If you are looking for a professional weather system this is one of the top rated systems. Need to pick up at my QTH in Zephryhills or I would be willing to meet you at the TARC Club house. You can contact me via email; km4lew@gmail.com or TXT to 813-468-7436.

#### \*HAMFESTS\*

#### August 19

**TARCFest** TARC Clubhouse, 22<sup>nd</sup> St at the river, \$5 entry including tailgate, a few inside tables reserved in advance, talkin on 147.105 +146.2, license testing after, more info at <a href="http://hamclub.org/">http://hamclub.org/</a>

#### October 21

Bradenton, MARCIFest 2023, 2113 Morgan Johnson Road, talkin 146.820 – 100.0, for more info goto <a href="https://www.manatee-arc.org/">https://www.manatee-arc.org/</a> contact Michael Ryan K4CVL at 941-376-6453

#### December 8 & 9

Plant City, the 2023 Tampa Bay Hamfest and West Central Florida Section Convention, Friday and Saturday, at the Strawberry Festival grounds, admission \$10, 16x40ft tailgate space \$10, electric \$10, for information contact Bill Williams AG4QX, <a href="mailto:chairman@fgcarc.org">chairman@fgcarc.org</a> or go to <a href="mailto:http://www.tampabayhamfest.org">http://www.tampabayhamfest.org</a> or you can just ask me, Jim or Dee at a meeting ;-)

## 2024

# February 9-11

**Orlando Hamcation,** Central Florida Fairgrounds, 4603 West Colonial Drive, Tickets \$20 in advance, \$25 after Dec 21 and at the door. Talk-in 146.760 - PL 103.5 analog or Fusion. Also D-Star is on 146.820 -, all the information at <a href="www.hamcation.com">www.hamcation.com</a> or call 407-841-0874. There is also an AM low power Information Station on AM 610.

## **May 25**

WormFest 2024, Pinellas Park, admission FREE, tailgate free, Freedom Lake Park, 9990 46th St N, southeast corner of US 19 and 49<sup>th</sup> Street, 33782. Park opens at sunrise for vendor setup, hamfest starts at 0800. Talk-in on 146.850 – 146.2. All FREE! For a map and directions see <a href="http://www.TheWormholeSociety.org">http://www.TheWormholeSociety.org</a>.

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://arrlwcf.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

Late May Dayton Hamfest

May, Memorial Day Weekend Wormfest

First weekend in 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

http://www.kiwanismidnightrun.com/

Third weekend in August International Lighthouse/Lightship Week

https://illw.net/

September Run for All Children's

October, 3<sup>rd</sup> weekend JOTA, Scout Jamboree-on-the-AIR (around 14.280MHz)

Early December ALS bike ride in Walsingham Park

December, Second weekend Tampa Bay Hamfest <a href="http://www.fgcarc.org/">http://www.fgcarc.org/</a>

# **\*YOUR WORMHOLE OFFICERS\***

Bill AG4QX is President and editor of this newsletter, the Vice President position is open, Treasurer is Jim KD4MZL, Paul KA4IOX is the Secretary, Dee N4GD is the Repeater Trustee and Mike KV0OOM is our 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 dual mode Yaesu DR-2X. FM analog as always and Yaesu Fusion, a C4FM digital mode.

Your Wormhole website is at: <a href="http://www.TheWormholeSociety.org">http://www.TheWormholeSociety.org</a>.

West Central Florida Section website: <a href="http://www.arrlwcf.org/">http://www.arrlwcf.org/</a>.

The ARRL website is at: <a href="http://www.arrl.org/">http://www.arrl.org/</a>

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