News from

The GLORIOUS SOCIETY OF THE WORMHOLE

June 2019

Hello Worms

I will be going through the Newsletter mailing list and purging a few names, SKs, new address or no longer interested. If you get this newsletter you are now on the list and if you do not get after this month then I purged you my mistake. If you care let me know at my address at the end of the newsletter and I will reinstate you.

Talk-in is on the Wormhole repeater system. For those coming to the meeting who cannot hit the repeater we will also monitor the Honeywell club repeater on 443.050 +141.3. Bring a folding chair for the meeting if you have one.

* APPLE TO WARN IPHONE USERS IF UPDATES IMPACT PHONES *

BBC NEWS, Technology 22 May 2019

Apple has pledged to warn iPhone owners if an update is likely to significantly slow a device or affect battery life.

The Competition and Markets Authority (CMA) in the UK had expressed concerns in 2017 that people had not realised an operating system update could affect the performance of the phone.

It feared that iPhone owners had been repairing their devices or replacing the batteries unnecessarily.

It can now take court action if Apple does not comply.

The CMA added that by signing up to this commitment to greater transparency, Apple was bound by it.

"To ensure compliance with consumer law, Apple has formally agreed to improve the information it provides to people about the battery health of their phones and the impact performance management software may have on their phones," the CMA says on its website.

Apple believes that changes to the way it allows users to monitor their battery's performance among other improvements it has made mean that it is already in accordance with the CMA's wishes.

A spokesman declined to provide further comment.

* GETTING LOADED (ANTENNA WISE) *

By Dan Romanchik, KB6NU

A couple of years ago, I homebrewed a "Cobra" antenna (https://www.kb6nu.com/yet-another-new-antenna-the-cobra/). It's a doublet antenna, meaning that it consists of two elements connected to a center insulator, where it connects to a feedline. The unique thing about the Cobra antenna is that each element consists of three parallel conductors connected in series.

My antenna uses a lightweight, three-conductor rotor cable that used to be available from Radio Shack. The feedline is 450 Ω ladder line that connects to an antenna tuner to give me multi-band operation.

Connecting the conductors in this way is is supposed to provide "linear loading." Somehow, running the conductors in parallel is supposed to increase the antenna's effective length. My antenna is only 73-ft. long, but it easily tunes up on 80m.

The *ARRL Antenna Book* has a short section on linear loading. It says that linear loading is a "little understood" alternative to inductive loading that can be applied to almost any type of antenna. Furthermore, "...it introduces very little lose, does not degrade directivity patterns, and has low enough Q to allow reasonably good bandwidths."

As I mentioned, I've been using this antenna with good results for a little more than two years now. When I first put it up, someone mentioned the concept of linear loading to me, but not being an antenna guru, I didn't 'give it much thought. About a week ago, though, I ran across a link to the page Short Ham Antennas for HF (https://www.hamradiosecrets.com/short-ham-antennas.html). That got me thinking about the topic again.

This page describes a way to build a linearly-loaded dipole antenna with a feedpoint impedance of approximately 35 Ω. This allows you to feed it with coax instead of the ladder line that I use. The author uses 390 Ω ladder line for the elements. He says it's commonly available, but I don't think I've ever seen 390 Ω ladder line. You could probably use 450 Ω ladder line by adjusting the element lengths a little.

At that point, I started Googling. The next linear-loaded antenna design that I ran across is a design from M0PZT (http://www.m0pzt.com/40m-linear-loaded-dipole/). He built his elements from some sturdy wire and homebrewed spacers made from PVC pipe. He's used this design for the 40m elements of a fan dipole covering the 40m, 20m, 15m, and 12m bands. Only the 40m elements are linear-loaded.

I also found a design for a linear loaded vertical antenna for 40m and 80m (https://www.qsl.net/pa3hbb/ll.htm). This antenna is only 7.736m, or 25.4 ft. tall. Of course, it requires a good radial system to work well, but it will work a lot better for DX than a low doublet or dipole.

Finally, there's an eHam discussion on linear loading (https://www.eham.net/ehamforum/smf/index.php?topic=84418.0). Unlike a lot of eHam discussions, this one is quite civil. It's worth reading if you're interested in the topic.

So, if you're thinking of getting loaded, errrrr, I mean loading your antennas, here's a method for you to consider. It works!

73!

Dan KB6NU

CW Geek, Ham Radio Instructor

Author of the "No Nonsense" amateur radio license study guides

Read my ham radio blog at http://www.kb6nu.com

Editor's Note: I recommend Dan's blog if you do blogs.

* LEARNING ABOUT BATTERIES*

By Dan Romanchik, KB6NU

I often say that getting an amateur radio license is as much getting a license to learn as it is getting a license to operate on the amateur radio bands. Lately, I've been learning about batteries, LiPo batteries to be exact.

It all started when I purchased a Morserino (http://morserino.info/). The Morserino is a Morse Code learning aid that has a number of unique features. For example, in addition to helping you learn the characters, it's also supposed to help you learn how to copy in your head. It also has a built-in touch keyer function, and a LoRa interface that lets you send and receive code from other Morserino units.

[[Image at https://www.kb6nu.com/wp-content/uploads/2019/05/morserino-768x670.jpg goes here]]

I'll be writing more about the Morserino in a future column, but let's get back to batteries. The kit did not come with a battery. Instead, it was suggested that one purchase a 600 mAh LiPo battery commonly used for powering drones. I found this battery on Amazon , and purchased a six pack of them, thinking that I'd find uses for the other five in some project or another.

[[Image at https://www.kb6nu.com/wp-content/uploads/2019/05/tattu-3.7v-600-mah-battery-768x522.png goes here.]]

Well, sooner than expected, I did find another application for one of the batteries. I'm building a little Arduino project for a client, and I reckon that this, or one with more capacity, will make a great power source for the project.

Now, I have two immediate challenges:

1. Figure out how to charge the battery.

2. Figure out how to connect it to the Arduino.

On the Morserino, the battery plugs directly into a connector on the bottom of the computer board (the white board with the LED display). I knew that connecting the 5V line from the USB connector directly to the battery was a no-no, but I'd lent out the Morserino to a friend, and I didn't have the schematics for the board. So, how they managed to charge the battery from the USB port was a bit of a mystery.

I emailed Willi, OE1WKL, the designer of the Morserino, and he sent me a wealth of information. There actually is a battery-management IC, the TP4054, on the board:

[[Image from https://www.kb6nu.com/wp-content/uploads/2019/05/heltec-power-supply-768x327.png goes here.]]

He also gave me the part number for the battery's mating connector. He said, "The mating connector for the Molex connector on the battery is a Molex 51006. It is sometimes referred to by vendors as 51005 female, but 51005 is the connector on the battery." You can, of course, buy pre-made cable assemblies on Amazon (https://www.amazon.com/gp/product/B07P54QTR8).

You can also buy lithium battery charging modules (https://www.amazon.com/gp/product/B01LZSC7I8). These modules have a TP4056 on them, which is similar to the TP4054. It's amazing to me that you can purchase ten of these things for less than seven bucks.

So, that's where I'm at right now. Once I get the modules and cables, I'm going to hook it all up and get the Arduino system running from the battery. The next step will be to integrate a small solar panel and run the whole thing from solar power, hopefully.

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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 (KB6NU.Com/study-guides/), and one of the hosts of the No Nonsense Amateur Radio Podcast (NoNonsenseAmateurRadio.Com). He often wonders if he can learn things fast enough.

* RANSOMWARE ATTACK LINKED TO NAS BREACH*

INFOPACKETS John Lister on May, 28 2019

The National Security Agency (NSA) is refusing to comment on claims a tool it developed has been used in a ransomware attack on the Baltimore city government. The New York Times says the attackers used a tool called "EternalBlue."

The attackers have encrypted Baltimore government systems and demanded between $76,000 and $114,440 (depending on the account) to restore access. Officials have refused to pay and used workarounds including some manual processing of files and switching to Gmail for internal communications.

It seems the attack was carried out using EternalBlue, which is designed to address a bug in Windows XP and Vista. Though that bug was quickly fixed once EternalBlue became public knowledge, some users haven't applied the update, apparently including Baltimore's officials.

Of course, one irony is that organizations still using the hugely outdated XP and Vista probably aren't exactly doing a perfect job of keeping systems up to date. (Source: bbc.co.uk)

EternalBlue is particularly dangerous as it allows hackers to execute code remotely on a machine, which can be used for all manner of disruptive activity from stealing data to disabling a computer. It's known to have been used for several key attacks worldwide including the WannaCry ransomware and NotPetya, a targeted attack against Ukraine's infrastructure and financial system.

While a group known as the ShadowBrokers made EternalBlue publicly available and thus enabled such attacks, many security experts believe the group didn't develop the tool.

Instead, the theory is that the group stole the tool from the National Security Agency, whose own communications were compromised.

According to the Times, the NSA spotted the bug and developed the tool around 2012, using it to gain remote access to computers of people under surveillance. It reportedly didn't warn Microsoft about the bug for five years when it discovered its own systems had been breached and the tool's existence leaked. (Source: nytimes.com)

CLUB MEETING

The next club meeting is June 1st. We meet on the first Saturday every month at 11:00 Saturday morning at the Minnreg Building located at 6340 126th Ave N, Largo. Members are welcome to come in the rear area through the fence gate on the southeast corner of the property. Talk-in is on the Wormhole repeater system. For those coming to the meeting who cannot hit our repeater we will be monitoring the Honeywell club repeater on 443.050 +141.3. We will keep an eye peeled for you. We will take advantage of the cooking facilities with an after-the-meeting Social and Wormdog picnic.

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. We are always looking for volunteers to be the net control operator. Anyone interested, talk to one your club officers.

LOCAL NETS

MONDAY

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

Time	Frequency	Net	Location
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

Time	Frequency	Net	Location
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
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	3RD Tuesday monthly, Hillsborough Co ARES simplex Net	

WEDNESDAY

Time	Frequency	Net	Location
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 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
2100 NI4CE system affiliated	Tampa Bay Traders Net		non-

THURSDAY

1800 146.52 simplex Tampa	Hillsborough ARES/RACES		North
1830 147.060 no tone Petersburg	St Pete ARC daily net		from St
1900 444.750 +146.2 Tampa	Fusion net		from
1915 224.660- no tone Petersburg	St Pete ARC	from St	
1930 146.6385 -127.3 Lakeland	Lakeland ARC		from
1930 440.100 + 162.2 Tampa	Hillsborough ARES/RACES		from
1930 146.850- 146.2 Petersburg	Wormhole		from St
2000 53.150 –1MHz 146.2 Petersburg	Wormhole		from St
2030 NI4CE system system	EAGLE Net, NTS traffic net		NI4CE

FRIDAY

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

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 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, Mosley TA-33M 10-15-20M beam with the 40M add on kit. Antenna is on the ground and in good shape. There are several parts that need replacement. The 40M kit is new in box. Antenna is broken down into six or seven feet sections so easy to handle. Asking $300, talk to me, Bill AG4QX at arrl dot net or see me at the meeting.

FOR SALE, Cushcraft A4S 10-15-20M beam, on the ground. There are several parts that need replacement. Asking $250, talk to me, Bill AG4QX at arrl dot net or see me at the meeting.

HAMFESTS

2019

August 17	TARCFest, TARC Clubhouse, 22nd St at the river, $5 entry plus including tailgate, a few inside tables reserved in advance, talkin on 147.105 +146.2, more info at http://hamclub.org/
October 26	**Gulf Coast ARC Hamfest,** New Port Richey, Millennium Academy, 10005 Ridge Road, admission $6, tailgate free, Talk-In on 146.670 - no tone, For info contact Ralph McCullough , WA3YFQ 727-247-4790, no information on their website
November 9	Pinellas Park, **SPARCFest**, admission FREE, tailgate free, Freedom Lake Park, 9990 46th St N, Southeast corner of US 19 and 49th 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 13 & 14	**Plant City, the 2018 Tampa Bay Hamfest is the West Central Florida Section Convention**, Friday and Saturday, **at the Expo**

Building in the Strawberry Festival grounds, advanced admission $9, at the door $10, 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 ;-)**

2020

February 7-9   **Orlando Hamcation and State Convention,** Central Florida Fairgrounds, 4603 West Colonial Drive, Tickets $15 in advance, $17 at door. Talkin 146.4760 - no PL or D-Star 146.850 -, all the information at   www.hamcation.com or call 407-841-0874

February 21 & 22   Tampa, **5th Annual TECHCON Convention,** for more info http://arrlwcf.org/ or contact Darrell Davis at kt4wx@arrl.net.

May 23   **WormFest 2020, 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 442.625 + or 146.850 – both with a tone of 146.2. For a map and directions see** http://www.TheWormholeSociety.org **.**

Mid January   Frogman swim in Tampa Bay.
                    http://www.tampabayfrogman.com/
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/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	
Early to Mid May	MS 150 Citrus Tour bike ride
http://www.citrustour.org/register.php	
Mid-May	Annual Armed Forces Crossband Test
Mid-May	Florida Hurricane Exercise
May, Memorial Day Weekend	Wormfest
Early 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	JOTA, Scout Jamboree-on-the-AIR (around 14.280MHz)
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 repeaters are both now dual mode Yaesu DR-1X.   FM analog as always and now 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