



News from

The GLORIOUS SOCIETY OF THE WORMHOLE

November 2022

Hello Worms

We still do not have access to the Wormhole MailChimp mailing list and I have little hope of getting it. My newsletter mailing list is progressing along and I should have almost everyone who was getting it back on the list soon.

In November we will meet face to face for those who wish to do so. If Alan is in attendance or we meet inside, we will broadcast the meeting on the repeater and Zoom video. We will meet at the regular meeting time of 1100 on Saturday morning at the Lurie Civic Building 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](#). There are a few parking spots in front 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 outside meeting area. Double parking is fine since we will be able to find the owner to move his vehicle if necessary. Below is the Zoom information, same as last month.

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

Join Zoom Meeting
<https://zoom.us/j/2737114584?pwd=d1BETHVOQ21vWWZXZ0lYQ0FIWWtldz09>

Meeting ID: 273 711 4584
Passcode: worm

BRING YOUR CHAIR your coffee and lunch! There are a few picnic benches if you do not have a folding chair but they are not comfortable for most of us. We will not be cooking but we have access to the Chamber of Commerce building which has a microwave and a toaster

oven so you can heat up/cook what you bring. We will meet inside if the weather is or looks like it will be bad.

We could use a few more net controls. If you are interested in being a net control station for once or twice a month let me or Dee or George know. You can talk to them on the weekly net. We also need a Vice President. And while I am asking if anyone would like to be the webmaster I am sure Mike would love to give it away since he does not like WordPress.

THAT'S NOT A CONSTELLATION, IT'S AN AD

The Register by Richard Currie 6 Oct 2022

"Space: the final frontier" – not just for humanity but also marketeers, it would seem, as Russian scientists have undertaken a feasibility study on satellite-displayed advertising. They conclude that not only is it possible, but it could also turn a profit.

Dismissing ad opportunities or sponsorships tied to serious space missions, the boffins from Skolkovo Institute of Science and Technology and Moscow Institute of Physics and Technology said: **What we propose to consider is a dedicated space system. A long-term space advertising mission would rely on a complex satellite system orbiting the Earth and demonstrating pixel images to observers on the ground. In this case, an advertisement appears as a constellation of bright artificial stars formed into an image that can be observed in clear night sky for several minutes.**

The idea of [the paper](#) – "Satellite Formation Flying for Space Advertising: From Technically Feasible to Economically Viable" – is to send up a constellation of about 50 12U-cubesats and place them in a Sun-synchronous low-Earth orbit so that they are always in direct sunlight.

Each small satellite (about 20cm x 20cm x 34.05cm and weighing around 6-8kg) would then deploy solar reflectors, bouncing that sunlight down onto consumers. These satellites could be programmed to assume certain formations – like, perish the thought, "I'm lovin' it" – that change depending on the city below and the advertiser willing to shell out for that prime real estate we know as the sky.

The scientists note that similar campaigns have been considered several times in the past, such as the Eiffel Tower centennial in 1989 or the Atlanta Olympics in 1996, but both "were to be devoted to a single event and relied on a space structure rather than on a satellite formation to display the graphics." Nowadays, SpaceX's Starlink constellation can often be spotted by the naked eye as a peculiarly uniform line of lights drifting across the night sky – the bane of astronomers everywhere.

So we know that space advertising is technically possible, and the paper provides loads of knotty equations and diagrams on the hows and whys of paraboloid diffusive reflectors, optimal orbit height, coverage, and so on.

- Satellite operators want option to exceed deorbiting rules
- China can destroy US space assets, Space Force ops nominee warns
- OneWeb takes \$229m hit from satellites not returned by Russia
- Startup wants to build a space station that refuels satellites by 2025

But with space missions costing multiple millions, is it economically viable? Unfortunately, the answer appears to be yes, and much of the paper is dedicated to showing how. The boffins estimate, based on prior examples, the cost of manufacturing the satellites to be \$48.7 million; testing, support and engineering comes in at \$11.5 million; and launch itself \$4.5 million – so we're looking at \$65 million to have everything in place.

Since prime-time spots during major televised sporting events also cost multiple millions, the scientists seem willing to bet that the novelty of the message delivery would attract substantial cash.

"A mission demonstrating images with magnitude of individual pixels ... has the payback period of 33.7 days, while a formation operating for 91.5 days ... can perform 24 image demonstrations within the lifetime, meaning 24 potential contractors for the mission with a net income of about \$111.6 million."

\$111 million, over three months, and 24 displays – \$4.6 million an ad. Now look at what some companies are actually willing to spend. The most expensive TV spot is during Super Bowl, where 30 seconds can cost \$9 million, but Google and Amazon have each shelled out a stonking \$23.5 million.

Now the sky billboard is starting to look like an ever more attractive proposition. Would such companies want to risk their reputation by making hiding indoors the only way to avoid their marketing? Arguably, they've already done much, much worse. ®

FOOD DELIVERY DRONE CRASHES INTO POWERLINES

Thousands of people were left without power after a food delivery drone crashed into powerlines yesterday in what has been described as a "first" by Energex.

Wing, the food delivery company, says the drone crashed into powerlines as it made a precautionary landing

Energex spokesman Danny Donald says drones hitting powerlines can be very dangerous

Energex spokesman Danny Donald told ABC Radio Brisbane people in Browns Plains, south of Brisbane, and the immediate surrounds lost power yesterday after a drone carrying food hit the network about 2pm.

Energex restored power for about 2,000 customers within 45 minutes, while 300 customers in the immediate vicinity of that drone were without power for three hours.

"The meal was still hot inside the drone's delivery box when the crew got there," Mr. Donald said. "This is the first time that I've seen it happen. It could have simply been an equipment malfunction. It may have been human error." It's rare.

"This is the first time that I've seen it happen. It could have simply been an equipment malfunction. It may have been human error."

Mr. Donald said there was no permanent damage to the network and thus would not be requesting the food delivery company to cover the damage.

However, he said, if any person or company caused network damage, for example, by reversing into a power pole, Energex could seek the cost of damage repairs.

He said everyone, including companies, had to be careful not to let objects hit power lines or cause damage to the network. "While this is a different circumstance, it's no different to the previous generation flying kites," Mr. Donald said.

"Fifteen years ago, we asked people to be careful if they were giving their children kites for Christmas and where they were flying them. Now we're asking parents to be very careful with where their kids fly their drones," he said.

"It could bring down live powerlines. The last thing we want is people in danger."

USE OF AN AMPLIFIER

Ralph WD0EJA

Many amateur operators make use of a linear amplifier. This will increase your output power of your radio to as much as 1500 watts. Should you use one? What type, tube or transistorized? It really comes down to a personal choice. However, possibly a few facts can help.

There are several manufactures making Solid State amplifiers. What are some pros and cons?

Most Solid State amps use Power MOSFET transistors. This is the heart of the amp. What is this thing? It is an interesting device. It has a minimum of 3 connections. Source (S), Drain (D) and Gate (G). The Source is normally the ground side of the device. The Drain is normally the + voltage side. Current will travel from the S to the D when biased or triggered properly. It will also turn off the current flow if needed. This is all controlled by the Gate. Current values of as much as 50 amps for a basic MOSFET can be controlled by the Gate.

The Gate is unique in that it has no physical connection to the D and S material. It is insulated by a thin dielectric. Therefore, the input resistance is almost infinite or very high. On an N type transistor, you can trigger it fully on by just touching 4 or 5 volts + to the G. Take the voltage away and the transistor will stay on for along time. Ground out the G, the device will turn off.

The resistance from the S to D when fully on is only a fraction of an ohm. At RF frequencies this device is at a very low impedance and needs to be matched, usually with ferrite type transformers. This makes the amplifier very broad banded and does not need tuning over the entire HF spectrum. Most amps will have a band selector only, for switching bands.

Even though the manufactures of Solid State amps have a SWR protecting circuit, the MOSFETS are not damaged by a high SWR. What damages the MOSFETS is excessive heat. Good heat dissipation is essential to the life of the device.

The amplifiers are reasonably efficient, run at low voltages and have no warm up time. In theory there is nothing to wear out or deteriorate. They are light weight and smaller than the tube competitors.

On the down side. A transistor just does not get weaker in time like a tube. If the transistor fails, it is out. The cost can be quite high for a device. If installed without knowing the cause, it can blow the replacement very quickly.

Most solid state amps will require a high wattage Tuner.

Next article we will see how a tube amplifier will fair.

73,

Ralph WD0EJA

BILAL COMPANY

wd0eja@isotronantennas.com

CROSSBAND ACTIVATION OF BATTLESHIP IOWA

As the representative of the National Museum of the Surface Navy at Battleship IOWA in San Pedro, California, the Battleship IOWA Amateur Radio Association (BIARA) will honor the sailors and ships previously home ported in San Pedro who were attacked on December 7, 1941, with special crossband activations of **NEPM** on December 6th and 7th, 2022.

With authority from the Navy and Marine Corps Spectrum Office Southwest, we will transmit using the IOWA's **NEPM** call sign on assigned military frequencies and listen for calls from the amateur radio community in their adjacent bands. **NEPM** will transmit on 14.375 MHz, 18.170 MHz, and or 21.460 MHz on J3E/USB and or A1A/CW. The operator will advise listeners as to where they are listening. Amateur participants are reminded not to transmit on the **NEPM** military frequencies. Operations on both days are expected to be from 1500 to 2400 UTC. QSL procedures can be found at <https://biara.org>. For specific questions in advance of the operation, contact w6hb@biara.org.

CLUB MEETING

We will again have a face to face club meeting in November. We will try to keep up on the 2M and also video concurrent on a video service. 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

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 RD 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 Brandon
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/reminder.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 St Petersburg
2000 53.150 -1MHz 146.2	Wormhole	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
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

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.

- *Yaesu-Musen FRG-7 Receiver \$100 looks rough
- *Swan 750CW Transceiver with 117x power supply and cables, looks rough \$200
- *Heathkit HW-101 Transceiver \$150 was his primary radio, looks rough
- *Heathkit HD-1250 Solid State Dip Meter \$35 with all coils in case
- *Heathkit HD-1215 Phone patch \$15 looks ok
- *Drake WV-5 wattmeter \$100 looks ok
- *Radio Shack 10A power supply 22-506 \$40 (looks new)
- *Astron RS-12A 12A power supply \$35 looks ok
- *EICO 482 scope \$125 works (looks good)

This stuff is from Ray KD4HUW

- *Yaesu ft-1000MP (100 watt) \$775.00
- * 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, w8im @arrl.net or the Wormhole and SPARC nets

*Little used, original owner AnySecu TM218 144/220 transceiver, runs 10-15 watts, with original box, worthless Chinese manual, but most importantly RT software for it to make programming easy. \$35.00. Radio of course is already programmed for local repeaters.

*Meade 2080AT -LNT refracting telescope, little used original owner, original box, tripod, manual, some extra lenses, complete. \$100.00.

HAMFESTS

2022

November 5 Sarasota, SERC Hamfest, American RedCross, 2001 Cantu Ct, for info contact Gary Wells, Admission \$5, selling inside \$15, tailgate \$5, talk-in 146.73 – 100.0, WB9AYD, 941-549-1596, wb9ayd@arrl.net

November 12 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> or email kc1yl@yahoo.com

December 9 & 10 **Plant City, the 2022 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 ;-)**

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 http://www.arrl.org/contests/announcements/fd/
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 rd 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 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 now dual mode Yaesu DR-1X. FM analog as always and Yaesu Fusion, a C4FM 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](mailto:ag4qx@arrl.net)