



News from

The GLORIOUS SOCIETY OF THE WORMHOLE

December 2023

Hello Worms

2023 is winding down, the Tampa Bay Hamfest and Christmas is about all that's left for me this year. Of course, for most people Christmas includes putting up decorations and trees and those Christmas parties. I don't do all that but do play Santa at the American Victory Ship Christmas Boat Parade party. Ron Perrett operates the ship radio and sends blinker light CW to all the boats ... none ever answer him. I wish you all a wonderful December and a very happy and safe 2024.

For the last four or five meetings no one has been on the repeater to hear about the meeting so I will discontinue asking. The radio will be on for information about and directions to the meeting but that will discontinue when the meeting starts. We will continue with Zoom for now but the 40 minute limit does make it awkward at times. The Zoom information is the same as all the other meetings and is listed towards the end of this newsletter.

In the meeting 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 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 SHARP INCREASE IN SOLAR ACTIVITY ***

SPACEWEATHER.COM 11-24-2023

The past week, sunspot numbers have increased almost 10-fold with dozens of dark cores now present on the solar disk. It is no surprise that solar activity has sharply increased as well. Just today multiple overlapping CMEs have billowed away from the sun. The first, bright southerly CME shown in the movie above could hit our planet's magnetic field during the late hours of Nov. 25th.

*** THE ISOTRONS TECHNICAL DESCRIPTION ***

I have produced these articles since 2013. Up until now there has been no technical descriptions of how the **Isotron Antennas** work. Well, here you go.

The purpose of the design was to make a compact, convenient design that would perform well.

The design is an electrical copy of a 1/2 wave dipole. I will describe electrically what takes place. Radiation patterns and formulas are not necessary for analyzing the tuning characteristics.

A 1/2 wave dipole reacts as a **SERIES RESONANT CIRCUIT**. All electrical formulas you want to apply to this circuit will also apply to the antenna **AT THE FEEDPOINT**. The feed point is what determines how the antenna will match the transmitter and measurements are taken at the connector of the antenna. Therefore, whether the circuit is on your radio board or hanging as an antenna all formulas and theory apply.

What is the difference between a series resonant circuit on your radio board and the same circuit that comprises an antenna?

The circuits in your radio are made of small surface areas. Therefore, it develops a very low radiation resistance, just a fraction of an ohm in most cases. This is like having a shorted circuit. High current, low voltage. This keeps the radiation within the circuit. This is what is needed in the radio circuitry, but not good as an antenna.

As you increase the physical area of the circuit it starts to develop a resistance and works at a higher voltage. Here is what starts to take place.



At the feed point the dipole or Isotron will resonate. This is when the Capacitance Reactance (XC) and Inductive reactance (XL) are equal (value in ohms). However, when this takes place, because the antenna is a radiator it will also develop a pure **RESISTANCE (R)** when resonant or Radiation Resistance. This R is dependent on the antennas grounding,

feed line and environment. This R value is what establishes your SWR measure at resonance. Once an antenna is resonant it becomes a working device with a radiation resistance of 25 ohms or greater. 50 ohms normally.

An antenna that can develop naturally a Radiation Resistance of 25 ohms and higher (no specific limit) it becomes an efficient radiator.

When the antenna has a higher XC value than the XL the antenna is off resonance. The resonant point is at a higher frequency than where the transmitter is currently set. If the XL is greater than the XC the opposite is true. Off resonance the Impedance (Z) of the antennas increases. It will be at its lowest value at the resonant point. (Z and R are not the same).

Testing an antenna at the feed point without the feed line is fine for design work, but is not practical for tuning it to your entire set up (radio, feed line and grounding). The antenna is an infinite extension to your feed line. They both must be tested together to have reliable results.

The Isotrons have been built physically to have proper capture area to the atmosphere. Enlarging the antennas more will have little effect on performance.

The Isotrons are not a loop. Therefore, the radiation pattern is omni-directional and polarization is random. This offers excellent efficiency on transmit. Reception is noticed as soon as the receiver is connected. Low noise, good sensitivity and the effects of changing polarization is lower.

Granted it looks a little strange compared to what we are used to. However, the advantages are plain to see. Our 40+ years of service to the HF community is a testimony to the performance of the Isotrons.

73,
Ralph WD0EJA
BILAL COMPANY
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*** NEW AI PIN TO REPLACE YOUR PHONE .. PLUS***

ZDNet/tech by June Wan, Reviews Editor Nov. 9, 2023

If there's one company that's truly embraced the ChatGPT/AI era, it's Humane, a secretive startup built by a super team of ex-Apple employees, including co-founders Imran Chaudhri and Bethany Bongiorno. After years of drip-feeding teasers and mission statements about its first-ever consumer product, the company today has finally launched the "AI Pin."

At the base level, the AI Pin is a wearable projector, with the ability to capture photos with an ultra-wide RGB camera, send text messages and emails, and answer your most curious questions thanks to its ChatGPT-like capabilities. In case I didn't mention it already, the

company is backed by OpenAI's Sam Altman and Microsoft, among others. Naturally, the AI Pin operates on AI models from both OpenAI and Microsoft.

Much like any other wearable -- wireless earbuds, smartwatches, etc. -- the AI Pin is meant to be a casual, everyday accessory. However, it's not as lightweight as its compact, all-aluminum figure makes it seem. The device, which requires a magnetic battery pack to keep it latched onto your shirt, weighs about 55 grams -- that's the weight of a tennis ball. For bulkier apparel, Humane is selling separately a clip-on accessory.

Notably, Imran Chaudhri told [Wired](#) that people with pacemakers should consult with their doctors about potential magnetic interference. In an interview with the publication, Chaudhri also mentioned that he's been able to go about his day with the AI Pin attached, from biking to running and jumping. It's even survived a one-meter-and-a-half fall on various surfaces, for what it's worth.

Where things get crazier is when the projector does, well, projector things. When prompted with a physical tap on the device, the AI Pin can project a Laser Ink Display onto the palm of your hand. You can navigate the operating system, dubbed Cosmos, by tilting or rolling your hand forward or backward. A pinch gesture with your index and thumb fingers selects what's on the projected display. And making a closed fist brings you back to the home screen.

At a TED Talk back in April, Chaudhri demoed how the AI Pin could project a caller ID when there was an incoming call, among other nifty features like summarizing your day's worth of emails and identifying foods and their nutritional values. Newer demos show how you can ask the wearable more context-based questions like "What's that exhibit Ava texted me to go see while I'm here?"

The core experience of the AI pin revolves around several AI tools -- think third-party ChatGPT plugins -- to help you throughout the day. When given a prompt, the device pulls the most relevant AI tool to service your needs. That's compared to how we traditionally have to manually find the right apps on our phones, download them, and then learn how they function before anything.

Some other details on the AI Pin include its built-in "Personic Speaker," which gets both low-volume enough for more intimate audio experiences and louder for group settings. The ability to connect to Bluetooth headphones is also present, thankfully. And lastly, a "Trust Light" on the front blinks whenever the device is doing any form of recording. It's a nice touch that we've also seen on other AI-powered wearables of late.

Humane's AI Pin will start at \$699, with three color options (black, black with silver edges, and white with silver edges), and officially go on sale November 16. The AI Pin will also require a \$24 monthly "Humane Subscription" to access cellular data via T-Mobile's network (with a

phone number in tow), cloud storage for photos and videos, and unlimited queries of its voice assistant.

Ultimately, the fate of the AI Pin rests on how well it functions in the real world, such as how accurately the device can project against your palm when in the dark, whether or not you'll even be able to communicate with it in a loud room, and just how reliable it is in areas of weaker signal. Stay tuned for the review.

Editor Note: You may see the manufacture's website here: <https://hu.ma.ne/media/humane-launches-ai-pin> If anyone buys one you are expected to bring it to a meeting for show and tell.

*** SERIOUS SECURITY THREAT TO THE EU AND US ***

Dublin/Ireland time, 14 November 2023 —

New ICCL reports reveal serious security threat to the EU and US:

- Trade in compromising “RTB” data about leaders and military personnel.
- Google sends sensitive “RTB” data to China and Russia.

Dublin, Ireland — An investigation by the Irish Council for Civil Liberties (ICCL) reveals widespread trade in data about sensitive European personnel and leaders that puts them at risk of blackmail, hacking and compromise, and undermines the security of their organizations and institutions.

ICCL has today published two reports (“*Europe’s hidden security crisis*” and “*America’s hidden security crisis*”) that reveal how extraordinarily sensitive information about key EU and US figures and military personnel flows to foreign states and non-state actors through online advertising’s Real-Time Bidding (RTB) system. That system is active on almost all websites and apps.

RTB is an advertising technology that constantly broadcasts sensitive information about people as they use the internet. The data are broadcast to large numbers of other entities without security measures to protect the data.

Today’s report ‘Europe’s hidden security crisis’ exposes how Google and other RTB firms send EU and US RTB data to Russia and China, where national laws enable security agencies to access the data.

Among the companies that Google sends EU data to is AiData, a Russian data broker that sells data on people in Russia who are frequent visitors to political opposition websites.

ICCL examined tens of thousands of pages of RTB data and discovered targeting data about sensitive US and EU military personnel and politicians, in addition to judges, utilities managers, and other key figures.

Today's report reveals Cambridge Analytica style psychological profiling of target individuals, as well as their movements, financial problems, mental health problems and vulnerabilities, including whether the target is a likely survivor of sexual abuse.

Foreign states and non-state actors can use RTB to spy on target individuals' financial problems, mental state and compromising intimate secrets. Even if target individuals use secure devices, data about them can still flow via RTB from personal devices, their friends, family and compromising personal contacts.

Today's reports also reveal "Patternz", a previously unreported surveillance tool that uses RTB to profile five billion people, including target individuals' driving routes, and their children. Patternz is marketed by a private company headquartered in Kokhav Ya'ir in Israel.

Speaking today, Dr Johnny Ryan, a Senior Fellow of ICCL, said:

"The RTB industry's data free-for-all has created a serious national threat. We call on the U.S. Federal Trade Commission, European data protection authorities, and the European Commission to urgently act. The industry can not be allowed to put our elected leaders and military personnel at risk."

Today, ICCL also launches Enforce, a unit that operates globally to push technology back to democratic value. Enforce produced today's reports. Information at <https://iccl.ie/enforce/>.

*** EARTH TO SKY CALCULUS***

By Bill

What is Earth to Sky Calculus? It is group of youths doing cutting-edge science in a little-explored realm 100,000 feet above our heads: the stratosphere. Several times a month, they send their experiments aloft using helium balloons to search for new life forms in the stratosphere and to monitor the effects of cosmic radiation on Earth's atmosphere. Each launch costs \$500 or more. Their efforts are crowd-funded. Non-profits, and small businesses "own"

this research and are responsible for its advance. They also sell stuff that they have sent to the stratosphere. Things like a Mr Spock Space Ornament, a Sterling Silver Star Cat, a Space Pickle and many more. All for sale in their gift shop.

Once a month they pick an experiment from a youth group outside their group to send up for free. For more info visit their website at: <https://www.earthtosky.store/>

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 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 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.

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

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
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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 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

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,

George W1AAG has the following:

*ASTRON 50 AMP MODEL VS-50 (AMP & VOLT METERS) \$ 200.00

*HEIL PRO-SET PLUS HEADSET + (DUAL ELEMENT'S) \$100.00

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

HAMFESTS

2023

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, chairman@fgcarc.org or go to <http://www.tampabayhamfest.org> or you can just ask me, Jim or Dee at a meeting ;-)

2024

January 13 **TARCFest** TARC Clubhouse, 22nd St at the river, 8AM-1PM, \$5 entry including tailgate, a few inside tables must be reserved in advance, talkin on 147.105 +146.2, license testing after, more info at <http://hamclub.org/>

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 www.hamcation.com or call 407-841-0874. There is also an AM low power Information Station on AM 610.

April 13 **TARCFest** TARC Clubhouse, 22nd St at the river, 8AM-1PM, \$5 entry including tailgate, a few inside tables must be reserved in advance, talkin on 147.105 +146.2, license testing after, more info at <http://hamclub.org/>

May 25 **WormFest 2024**, 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. All FREE! For a map and directions see <http://www.TheWormholeSociety.org> .

August 24 **TARCFest** TARC Clubhouse, 22nd St at the river, 8AM-1PM, \$5 entry including tailgate, a few inside tables must be reserved in advance, talkin on 147.105 +146.2, license testing after, more info at <http://hamclub.org/>



Last full weekend January
Late January

Winter Field Day <https://www.winterfieldday.com/>
Gasparilla celebration

Late February	West Central Florida Tech Conference http://arrlwcf.org/wcf-special-events/wcftechconference/
March/April	MS Walks
April	MS bike now named Suncoast Challenge http://www.citrustour.org/register.php
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/
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, 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 now dual mode Yaesu DR-2X. 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

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