

# Monthly Update

## April 2024

[www.ve3osh.com](http://www.ve3osh.com)

### Club Executive

President – **Derek VE3TKE**  
Vice President: **Peter VA3PKM**  
Secretary: **Neil VA3NH**  
Treasurer: **Bob VE3HIX**  
Membership Secretary: **Thomas VE3PDK**

### Committee's

Repeater & Technical -Trustee: **Daren VE3NMD**  
Website: **Laird VE3LKS**  
Club Examiner: **Aldo VA3AG**  
Newsletter: **Steve VA3TPS**  
Net Manager: **Steve VA3TPS**  
Presentation Coordinator: **John VE3KZT**  
RAC Representative: **Ken VE3RMK**

### Repeaters

#### 2m VHF FM Repeater – VE3OSH

Frequency: 147.120 MHz  
Input Tone: 156.7 Hz  
Input Offset: +600 kHz  
AllStar Node: 27838

#### 70cm UHF Fusion/FM Repeater – VE3NAA

Frequency: 443.000 MHz  
Input Tone: 136.5  
Input Offset: +5 MHz

#### 70cm UHF DMR Repeater – VE3LBN

Frequency: 443.9875 MHz  
Colour Code: 3  
Input Offset: +5 MHz  
DMR ID: 302340

#### APRS iGate – VE3OSH

Frequency: 144.390 MHz

### Previous Month's Meeting

In our March 20<sup>th</sup> monthly meeting on Zoom we had a presentation by **Allan Boyd VE3AJB** who discussed the Hamshack Hotline and some new features that you can now do with these phones. We have copies of this presentation in video format and PDF format that are available for review if you missed this presentation. Let Derek know if you want a copy.

### April Meeting

Our Monthly meeting on zoom will be Wednesday April 17, 2024 at 7:00 pm. We will have a presentation by **Andy Betterton VE3ORE** on the VNA analyzer. So bring your version of the VNA and your questions for this presentation.

### Tuesday Night Rag Chew

Were Back!!

The club's weekly Tuesday Night Rag Chew starts at 7:00 pm. Our current net controllers are: **Aldo VA3AG, Grant VA3KJI, Derek VE3TKE, Quinton VA3NLM** and **Neil VA3NH**. Also **Nick VA3NPW** has offered to be a spare and fill in once in a while.



This is not a formal net but rather a lively round table. Some can only stick around for a few minutes while others are there from start to finish. We never know what the topic de jour will be but someone always comes up with something interesting. So, if you are available between 1900 and 2000 hrs on Tuesday's pop onto VE3OSH and join the conversation.

A big thank you to all our Net control operators for stepping up!!

If anyone would like to give Net control a try one week, let me know and we will fit you in as a guest net control.

### Wednesday Night Virtual Parking Lot

The club has a weekly Virtual Parking Lot (VPL) meeting on zoom starting Wednesday night at 7:00 pm for members and guests. Everyone is welcome to attend. On the third Wednesday night the club has it's member meeting on zoom first and after the meeting is finished we have our virtual parking lot for those who are still on-line.

If you would like to attend our weekly VPL send an email to **Derek VE3TKE** at [VE3TKE@gmail.com](mailto:VE3TKE@gmail.com). Our club Secretary **Neil VA3NH** will be sending out the zoom link prior to the Wednesday meeting time. It has actually has been quite a success as more people can show up, due to distance or schedules, and yet we can still do show & tells by simply sharing our screens. It is not uncommon to have 20 to 25 participants but we can easily handle more. So, quit complaining about being bored and hop on the Virtual Parking Lot also remember that you can also ask questions of the group as well.

At our zoom meetings we have Amateurs from around the globe.

So, try to remember Wednesday nights and drop by our Zoom VPL and say hello and see who is visiting from around the globe. It starts around 7:00 pm and lasts until the last die-hard leaves but you can pop in anytime and say hello and stay as long or short as you want.

## White Feather Fun!



Some of the club members meet up on Saturday morning at **White Feather Country Store**. So, if you need your fix of a steamy hot beverage, as well as a hot fritter, pop up to **White Feather Country Store**, which opens at 8:30 am, and join the gang in the south east corner of the parking lot. Make sure to bring a lawn chair as we sit outside in the parking lot even when it's cold or raining. Just give a shout on the repeater between 8:00 and 8:20 to see if anyone is heading up that way and come and join us. **White Feather Country Store** is located at the corner of Simcoe St and Raglan Rd in Raglan, just south of our repeater site.

## Coffee Time Alternative

We also have an alternate location for the Saturday morning get together if the weather is lousy. Some of the members (fair weather hams) meet up at the Coffee Time in Courtice at the same time on Saturday morning. Most arrive at 8:00 am.

When the weather gets better, when ever that is; we will all meet up at the main White Feather location.

At the Courtice location we may have upwards of 12 members show up.



## MEMBERSHIP RENEWAL

According to Thomas VE3PDK, our membership secretary, some members have not renewed their 2024 membership as of yet for some reason.

Please remember that the membership renewal process has changed and is even easier this year. Step 1: go the membership section of our club page and submit the online form. Step 2: send the club an e-transfer to [treasurer@ve3osh.com](mailto:treasurer@ve3osh.com) or you can give your membership dues to either Bob, Derek or Thomas in cash.

If you want to mail a cheque you can send it to the club President at 45 Allard Avenue, Ajax Ontario L1Z 1B6. He will forward it to the club Treasurer.

NOTE – if you are claiming that you are a RAC member make sure you check with RAC to make sure your membership is paid up. We have to double check this for our RAC insurance policy so please do not try to claim this if you are not a current RAC. The dues are staying the same for 2024 at \$30 for a RAC member and \$40 for Non-RAC member.

## Swap Shop

### For Sale

1. Icom IC-92AD Dual Band D-Star Transceiver.
2. Icom HM-175 GPS Speaker Microphone
3. Icom BC-177 Charging dock with Icom BC-123 SA Charger
4. Icom IC\_92 AD Instruction Manual
5. RT Systems Windows Cloning Software with RT Systems USB-92 USB cable

All are in good working order. **\$350**



Ken Fitzgerald, VA3KJF at [webhog@me.com](mailto:webhog@me.com)...905-435-6311

If you have items for sale or if you have items that are free for the pick-up, feel free to list them here in the club swap shop.

\*\*\*\*\*

## STORM WARNING!

"The Big One" may be caused by wild weather in space.

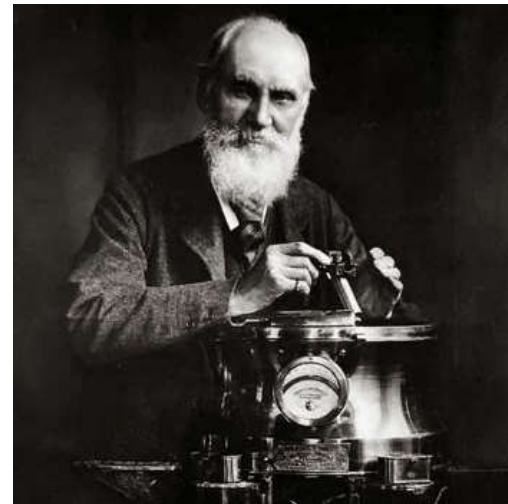


Figure 1: As a younger man of 33, Victorian era astronomer Richard Carrington made the first observation of a solar flare in 1859.



Figure 2: The Great Auroral Storm of 1859.  
Contemporary artist's rendering.

by Neil McAlister, VA3NH

### Blasts in the Past

In August, 1859 the northern lights dazzled night skies as far south as Rome and Panama. A few days later the aurora borealis blazed so brightly that people in South Carolina and miners in the Rockies woke up in the middle of the night to get ready for work, thinking morning had arrived.

Richard Carrington, a wealthy English gentleman, was an astronomer who had built his own observatory. (Fig. 1) On September 1st he had been tracing sunspots from images captured by a small telescope, projected through a pinhole camera onto a sheet of paper. Suddenly he observed a bright flash of light on the sun's rim and a rapid change in some sunspots that he had just been drawing a few minutes earlier. Scientists elsewhere noted magnetometer readings jumping off the scale over the next couple days.

On September 1st and 2nd, telegraphs failed all over North America and northern Europe. Equipment in many stations stopped functioning; unreadable gibberish was sent and received by others. Several operators transcribed conversations made after disconnecting their batteries, using only ambient current.

In Kingston, Jamaica (lat. 18°N) the never-before-seen aurora led people to imagine that Cuba was on fire. In the southern hemisphere, Santiago, Chile (33°S) saw a 3 hour long celestial display in vivid colour.

Comparing notes, Victorian era scientists correctly surmised that there was a connection between the spectacular auroral displays, unusual solar activity, very high magnetometer readings and wonky telegraphs.

Modern astronomers conclude that Carrington saw the first solar flare ever observed; and that a huge coronal mass ejection (CME) exploded from the sun soon after. Eighteen hours later, that CME smashed into the earth like a stupendous cannonball of charged particles. The result was a "geomagnetic storm," a torrent of electrical currents induced in and around the earth when an incoming CME deforms the earth's magnetosphere.

The Great Auroral Storm of 1859, now commonly referred to as the "Carrington Event," soon faded from the news of the day. (Fig. 2) But sixty years later, spectacular auroras blazed in tropical skies in 1921. Larger, more sophisticated telegraph networks again malfunctioned and failed. Stray "electrical fluid," as it was then called, sparked fires in at least two railway telegraph offices in New York State.

### Wakeup Calls

Serious solar interference with electrical equipment has been well documented several more times during the past hundred years. Two of the more recent events received wide publicity:

On 13 March, 1989, Hydro Québec's power grid was knocked offline for 9 hours by a geomagnetic storm. The Québec Blackout affected more than 2 million Canadians.

In February 2022, 38 Starlink satellites for Internet access fell out of orbit one day after launch, burning up in the atmosphere. Although space weather forecasting is in its infancy, SpaceX, the owner of Starlink, had been aware that a geomagnetic storm was imminent. However, since a mild storm was predicted, they had judged -- incorrectly, as it soon transpired -- that the celestial storm would not jeopardize deployment of their fleet of expensive, new satellites.

These incidents may have served as wakeup calls for a world that still seems largely asleep to the possibility of an immense kind of natural catastrophe that most of us have never even heard about.

### Space Weather

When we think about natural disasters, things like pandemics, fires, droughts and terrible storms come to mind. Earth-based weather is part of everyday experience; but do we ever think about the weather in space? Because we cannot see or feel the effects of space weather directly, it is out of sight and out of mind.

What will happen to our highly electrified world during a very severe geomagnetic storm? Although the exact timing of such an event is unpredictable, another such occurrence is inevitable. It could affect millions more people, and pose a greater threat to civilization than any other type of natural disaster with the possible exception of some future, global pandemic even worse than the one that we recently endured.

The destructive power of an electromagnetic pulse (EMP) is well known. The military has researched how an EMP might be weaponized by exploding nuclear bombs at high altitude. The paralyzing effect of an EMP on radios and car engines has long been a trope of sci-fi movies. A huge pulse of energy caused by a CME hitting the earth will disrupt circuits in computers, appliances, vehicles and anything else that runs on electricity. Radio communications will fail. Satellite based GPS systems will quit, taking down everything that depends on them.

The electrical power grid itself will break. A vast blackout will prevail for many weeks -- for many months and possibly years in some places. Our ageing and overstressed electrical grid, most of which was never designed to withstand such a disaster, will sustain massive damage. Thousands of giant AC transformers that supply the electricity on which we all depend will become inoperative when they are hit by a surge of DC current from a huge EMP. Commerce, transportation, health care, sanitation, food and water supply, law enforcement, national security, government and almost every other service, network and system that we now take for granted will all cease to function.

Some scientists predict that recovery from this catastrophe would take up to a decade and cost trillions of dollars -- assuming that modern society can avoid descending into lawless anarchy and total collapse under such conditions.

We hams know that radio will be useless during a major geomagnetic event. And after the storm passes? Even if transceivers survive the EMP -- questionable, since they are grounded and connected to antennas -- there will be no electricity to run them unless their owners have generators that also survive the event, and fuel enough for more than a few hours of operation. Don't count on your big, expensive home generator unit. Its electronics may get fried, along with critical components of the systems that deliver gas to run emergency generators during a blackout.

### The Risk is Real

Humans are programmed by evolution to struggle for survival. We pay far more attention to immediate, tangible threats than we do to nebulous, if unpleasant, long-term possibilities. Precautionary measures, even against potentially devastating future catastrophes, tend to get put on the back burner when we imagine that those bad things are not very likely to happen to us personally in the foreseeable short term. Need convincing? Consider the world's half-hearted, foot-dragging response to climate change, a looming existential threat identified at least a quarter century ago.

In reality, the likelihood of a significant geomagnetic storm coming our way within our own lifetimes is actually pretty high. Such events have happened more than once in recent decades. While storms can occur at any point in the 11 year sunspot cycle, they are thought to be more frequent and possibly more severe during a Solar Maximum. The current sunspot cycle peaks in 2025.

How big a risk could this really pose? After all, geomagnetic storms must have occurred many times in the past without triggering an apocalypse. But apart from fairly basic telegraph machines, how many devices existed that could have been affected at all by electromagnetic energy during the Victorian era, a century and a half ago?



What damage might a geomagnetic storm of similar magnitude to the Carrington Event do today? The modern world, utterly dependent on electricity, is infinitely more vulnerable; but we can only estimate the potential damage because the earth hasn't seen any Carrington-size storm during the electronic age.

## The Big One

Will society find the wisdom, solidarity and discipline to adapt to nineteenth century conditions literally overnight when a great geomagnetic storm suddenly forces us to live in a world without electricity? History offers little reassurance.

Buildings will not collapse when this "Big One" hit. However, until we fortify electrical infrastructure, communications and critical devices against destructive geomagnetic events, civilization could be shaken to its foundations someday soon by wild weather in space.

## Further Reading

Kathryn Schulz: Starburst. The New Yorker. March 4, 2024, pp. 26 ff.

## Illustrations

Fig. 1 - As a younger man of 33, Victorian era astronomer Richard Carrington made the first observation of a solar flare in 1859.

Fig. 2 - The Great Auroral Storm of 1859. Contemporary artist's rendering.

## Let's Build...

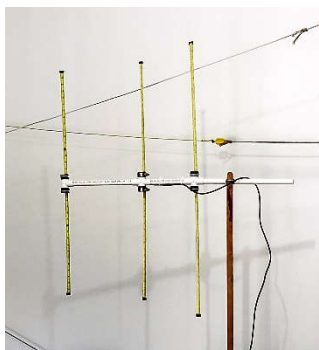


Figure 3: Tape Measure Yagi for 2 Meters

by Neil McAlister -- VA3NH

At my QTH north of Port Perry, we live in a 2-meter Winlink wasteland. The only RMS node that I could hit from my indoor stealth antenna farm in the garage was the nearest one, VA3BAL-10, about 30 km away.

An omnidirectional antenna was barely adequate, but able to pull in a usable signal at 2 or 3 S units most of the time. It seemed possible that a directional antenna might do a better job, but it felt unreasonable to invest in a commercial antenna to conduct an experiment with no guarantee of success.

The Internet has many plans and demonstration videos for building a simple, 3 element antennae for 2 meters. One popular invention is an inexpensive, vertically polarized Yagi made from a scrap, steel tape measure, the brainchild of WB2HOL, years ago. The measuring tape Yagi is light weight, easily portable and often seen on fox hunting exercises.

When clearing out some accumulated junk from our basement this winter, I found just such an item -- a kinked and battered tape measure that had somehow escaped a one-way ticket to the dumpster long ago. There were undamaged sections long enough for the two-piece driven element, the reflector and director. Pieces of half inch PVC pipe and connectors made the support, to which the elements were lashed with plastic zip ties. SWR of 1.7 is not as low as some builder's claim, but adequate for the purpose.

The whole apparatus is very light, supported on an old broom handle for a mast and a single U bolt on one end of a workbench. The antenna is readily removed from the mast for portable or fox hunting use with a short handle conveniently plugged into the back end.

My one and only connection to 2-meter Winlink now comes in at a more reliable 4-5 S units. As an added bonus, it is now possible to hit repeaters in Stouffville and even downtown Toronto (the CN tower is line of sight from here.) Off the back of the antenna, a Lindsay repeater is still as good a contact as it used to be with the omnidirectional antenna; and nearby VE3OSH works full quieting off the side of the tape measure yagi.

To paraphrase an old saying, one person's junk is another's good junk. It might even become your own good junk if you keep it long enough! Happy 2 meter DXing.

73 de Neil, VA3NH

## Station of the Month

I am surprised that more members do not share their Ham Shack setup and antenna and/or tower pictures. We would like to see the big setup's as well as the basic setup's. We also would like mobile setup's. All are welcome. We have a bunch of new ham's attending our meetings and they would like to see and get some ideas on how they should make their setup.

If you would like to share your setup send your pictures and info to Steve VA3TPS at [va3tps@outlook.com](mailto:va3tps@outlook.com)

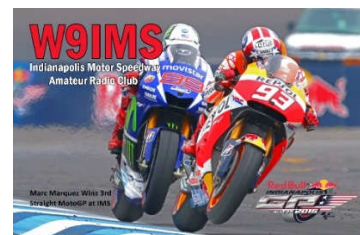
## Editor's Note

I would like to offer my congratulations to Payton Field VA3PYN who is 10 years old and just passed our Basic Course and wrote her exam and passed with honor's. She is now officially on HF and I believe she is the youngest to obtain her Amateur Radio licence and HF to boot in our club's history.

Way to go Payton great job!

## Upcoming Events

### W9IMS Special Event Station



This special event is a lot of fun and if you only work one event you can get a nice QSL card but work all three and they send you a nice Certificate. For more information checkout [www.qrz.com](http://www.qrz.com) and put in their call sign W9IMS

**2024 OPERATING SCHEDULE (you must work all three for the certificate):**

May 5 - 11: [Grand Prix - Operator Schedule](#)

May 20 - 26: [Indianapolis 500 - Operator Schedule](#)

July 15 - 21: [NASCAR 200 at the Brickyard - Operator Schedule](#)



**April 20, 2024**

This coming Saturday is the big day. Hamfest 2024. Come out and view the goodies and the deals. Don't forget to bring CASH. Come out to meet other members and have a coffee and a baked good. All in support of the Hamfest.

For our new ham's this is a great event to come and see some old and new equipment and talk with the vendors and other Ham's.

Remember the Hamfest will be held this coming Saturday April 20, 2024 from 0900 to around 12 noon. The website for our Hamfest is: [www.durhamhamfest.com](http://www.durhamhamfest.com). If anyone has any questions or comments about the Hamfest you can contact Laird VE3LKS by email at: [ve3lks@yahoo.ca](mailto:ve3lks@yahoo.ca).

**Also spread the word around the airwaves when your talking to your fellow amateur radio operators about our Hamfest!**

## 54th Annual Canoe the Nonquon – June 01, 2024.

Some of you may remember this event from previous years. Well guess what. NSARC has now been confirmed to take over this event on an annual basis as the previous Ham Club has declined participating any more. Details on what the event wants us to do and the locations are being worked on and more details at the upcoming May member meeting. This event is being held on June 01, 2024

## NSARC Summer BBQ – June 19, 2024

The annual summer BBQ will be held at Purple Woods Conservation Area located at 38 Coates Road in north Oshawa. This year Martha VA3SBD will be coordinating the BBQ food. Martha will also coordinate the food for this year's Field Day event as well. More details to come

## Field Day – June 22 – 23, 2024

The annual Field Day event will be held at Purple Woods Conservation Area located at 38 Coates Road in north Oshawa. This year Martha VA3SBD will be coordinating the BBQ food with Daren VE3NMD coordinating the Field Day operations. More details to come.

## Aquino Tank Weekend – July 26 – 28, 2024

This annual event will be held at the Ontario Regiment RCAC Museum. 1000 Stevenson Road North. Oshawa, Ontario. Laird – VE3LKS will be the coordinator for this event. More details to come

## NSARC Fall BBQ – September 18, 2024

The annual fall BBQ event will be held at Purple Woods Conservation Area located at 38 Coates Road in north Oshawa. We are looking for a food coordinator for this event. If you are interested let Derek know at the upcoming member meeting. We need to finalize this position before we break for the summer.

## From the President

We have now completed our Basic Amateur Radio course. We had a number of people request to write their exam early with a group writing their exam on March 28<sup>th</sup>. There still is a group of people who requested to defer their exam as they need some more time. There was a few who did not pass and are looking to re-write hopefully in near future. The people that wrote and passed the results were great. We had 17 people pass the exam. All that past the exam passed with honors. We had a few that passed with a mark of 100%.

The best was young Payton who is the daughter of Nick Field VA3NPW who attended the course and studied while attend school. Payton is 10 years old. Payton took her time writing her exam and was the last person to complete the exam. We all were anxiously waiting and hoping she would complete the exam. After finishing, I asked her how she felt that she did. Payton replied hopefully that she would get a pass mark as she felt the questions were hard.

Aldo graciously asked that Payton stay on-line and he will mark her exam to let her know what mark she got. After a few minutes, Aldo came back and asked Payton what mark does she feel that she got. The nervous Payton replied with I don't know. Aldo asked her to guess and Payton replied hopefully 70 %. Aldo stated NO. I then interrupted Aldo and asked him to give her the mark. Aldo then stated that she passed with honors. Payton was extremely happy and her father stated great job. Dad then said it's time for bed. I bet she did not sleep well that night.

Congratulations Payton. Her call sign is VA3PYN.

Here is a list of the other people that passed:

Ross S – VA3WVW

Michael G – VE3WTQ

Louise F – VA3LLF

Peter S – VA3PSU

Sam F – VA3YYC

Tim W – VA3BHC

Orion G – VA3OGX

John W – VA3OWK

Mark B – VA3MBN

William F – VA3TTB

Caroline L – VA3CIK

Jan M – VA3TCN

Chris R – VE3VMP

Paul P – VA3BHU

Lisa A – Waiting for call sign

Stephen L – VA3LNY

I am hoping that the balance of people who have not written their exam will write soon. All that passed have been asked if they would like to join the club. Some have stated that they live out of the area and would join their local clubs. Some have not responded as of yet.

**Congratulations to all that passed and welcome to the world of Amateur Radio.**

Derek Christian - President

Email – [info@ve3osh.com](mailto:info@ve3osh.com)