



APRIL 2025

Volume 14 Issue 4

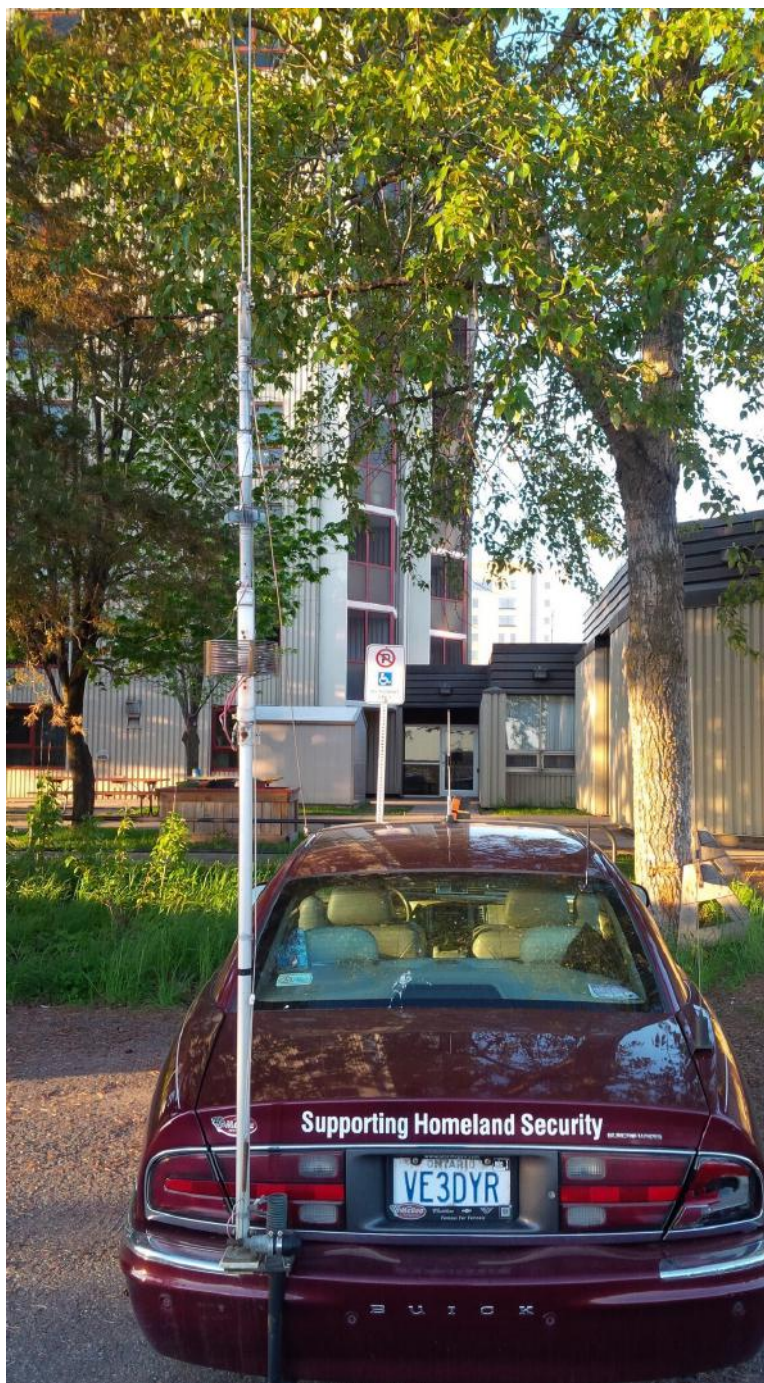
# VE3ERC-LUB

- President:** Frank VA3FJM
- Vice-President:** Tom VE3DXQ
- Secretary:** Rod VA3MZD
- Treasurer:** Ted VE3TRQ
- Trustee:** Wes VE3ML
- QSL Manager:** Kirk VA3KXS
- Repeater Trustee:** Wes VE3ML
- Website Admin:** Ted VE3TRQ
- Lighthouse:**
- Maple Syrup Display:**
- Newsletter:** Bob VE3IXX
- ERC Website:** <https://ve3erc.ca>

## ERC REPEATERS

- UHF 444.700 + TONE: 131.8**
- UHF 444.700 + TONE: 123.0**
- VHF 147.390 + TONE: 123.0**
- VHF 147.255 + TONE: 131.8**
- EMERGENCY SIMPLEX: 146.550**
- UHF-IRLP node 2404,ECHOLINK VE3ERC-L**
- VHF- IRLP node 2403,ECHOLINK VE3ERC-R**

**In an emergency, tune  
 Into our repeaters,  
 UHF 444.700 or  
 VHF 147.390 or  
 HF 3.755 LSB or  
 Simplex 146.550  
 For coordination and  
 assignments.**



See Page 4 for story about Unusual Antennas.



# THE PREZ SEZ!

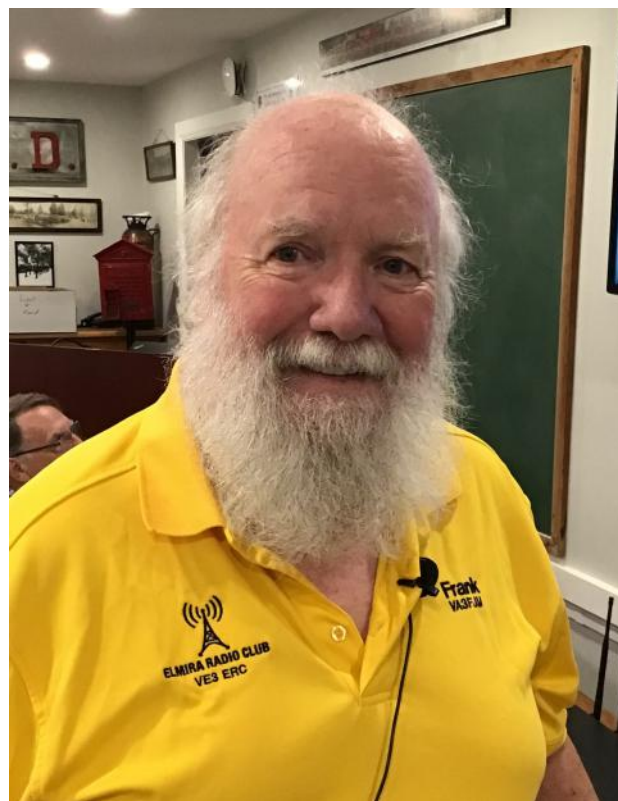
This club is Radio-ACTIVE  
 This club is Radio-ACTIVE

## President's Update for April 2025

**W**e were greatly saddened this past month by the passing of two of our members,

**Al Dee VA3DZZ-SK** and  
**Jim Litwiller VE3JLC-SK.**

Both will be greatly missed. We spent a portion of our meeting remembering these two members and we had a moment of silence for them. See more on page 3.



On a separate note, a few months ago we published a list of up-coming hamfests. Well it seems that Mike VE3MKX did some research on the internet and came up with a more complete list of upcoming events. Spring is in the air and there is nothing like the change in weather to encourage us to get out to such events. Here is his list.

- |                              |                                |
|------------------------------|--------------------------------|
| Mar 15. Kempville            | Sept 6. Carp                   |
| April 5. Iroquois            | Sept 13 Sudbury ?? / Barrie ?? |
| April 12 Durham              | Sept14 London                  |
| May 10 Barrie                | Sept 22 Ancaster               |
| May 17 Smiths Falls          | Oct 18. Kingston               |
| May 15 -18 Dayton            | Oct 26 YRAC                    |
| May 22. Niagara ft Erie ??   |                                |
| June 1. Cambridge            |                                |
| June 14 Grimsby HARC         |                                |
| June 21 Rochester            |                                |
| July 12. Milton              |                                |
| July 28 Barrie Junk in trunk |                                |
| Aug 9. Hanover               |                                |
| Aug16. Parry Sound           |                                |

# In Memoriam

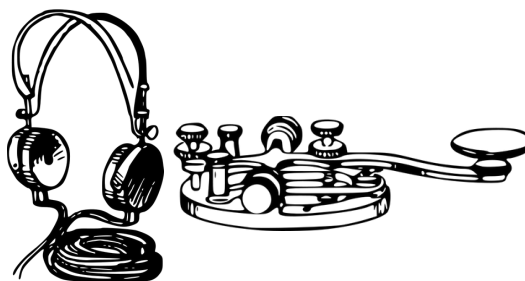
## FOR TWO ERC MEMBERS

**Al Dee VA3DZZ-SK**



"In retirement, Al became a proud, licensed HAM radio operator, forging lasting friendships that kept his mind sharp and his heart full—even as physical limitations and a Parkinson's diagnosis made it harder to get out and about as often as he would've liked."

**Jim Litwiller VE3JLC-SK**



He was quite the personality on the net .

Jim was such a personality, always telling stories or sharing a bit of wisdom or knowledge.

Jim would always come back to me when I was mobile .

What I'll miss most about Jim, is his unfiltered honesty. Sometimes we need that

*In Memoriam*



# STRANGE AND UNUSUAL ANTENNAS

By Tony Lelieveld VE3DWI

The topic of Sunday morning's net was strange and unusual antennas. I mentioned that one of the "Algoma Amateur Radio Club" members in Sault Ste Marie had made an unusual mobile vertical antenna for HF. Elmer Kars, VE3DYR, traveled a fair amount of which part of it was in the state of Michigan. The US Border Patrol Service often asked him what the contraption on the back bumper of his car was about.

I am sure that, as you can see on the Front page, this was the reason he put the slogan "Supporting Homeland Security" on the back of the car. The antenna was entirely home made. The most striking part of it was the framework of an old umbrella stripped of its cloth material. Combined with a small 12 V electric screwdriver motor, some string, a spring and pulleys, Elmer was able to adjust the angle of the contraption from the driver side and thereby tuning the antenna to a decent VSWR.

Close examination of the antenna reveals some heavy and large inductors so he could tune the antenna on 80, 40 and 20 meters.



He also had a 500 Watt solid state amplifier in the trunk of the car. The antenna worked very well and I was able to talk to Elmer on numerous occasions while he was traveling in the US, Thunder Bay, Sudbury, Manitoulin Island and Southern Ontario.

Both Elmer and his brother Paul, VE3GPM, (Gallons Per Mile) are avid experimenters.

**73, Tony VE3DWI**



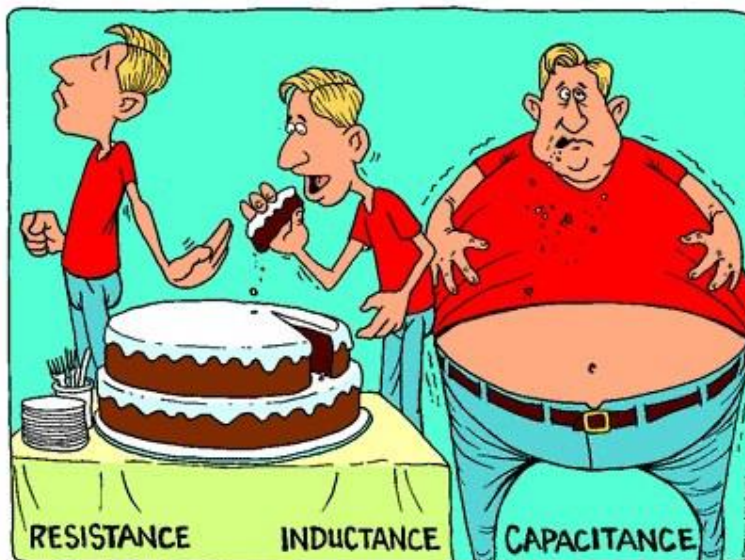
**CONTRIBUTIONS TO VE3ERC-  
CLUB NEWSLETTER**

Do you have an article you'd like to submit? Or photos? Do you have any comments you'd like to make?

Perhaps you'd like to share a photo of your shack, a special project you are working on or a special interest!

**SEND THEM TO:**

**Bob [bobve3ixx@gmail.com](mailto:bobve3ixx@gmail.com)  
(519-787-2279)**



**WEDNESDAY NITE NET CONTROLLERS**

- JANUARY 8 - BRIAN VA3DXK**
- MARCH 19 - ROD VA3MZD**
- MARCH 26 - MEETING**
- APRIL 2 - TED VE3TRQ**
- APRIL 9 - TONY VE3DWI**
- APRIL 16 - FRANK VA3FJM**
- APRIL 23 - MEETING**
- APRIL 30 - BOB VE3IXX**
- MAY 7 - ROD VA3MZD**
- MAY 14 - TOM VE3DXQ**
- MAY 21 - HAGEN VE3QVY**
- MAY 28 - MEETING**
- JUNE 4 - ROD VA3MZD**

# What 3 Words? – Maidenhead Grid Squares!

**By John VA3KOT (Ham Radio Outside the Box)**

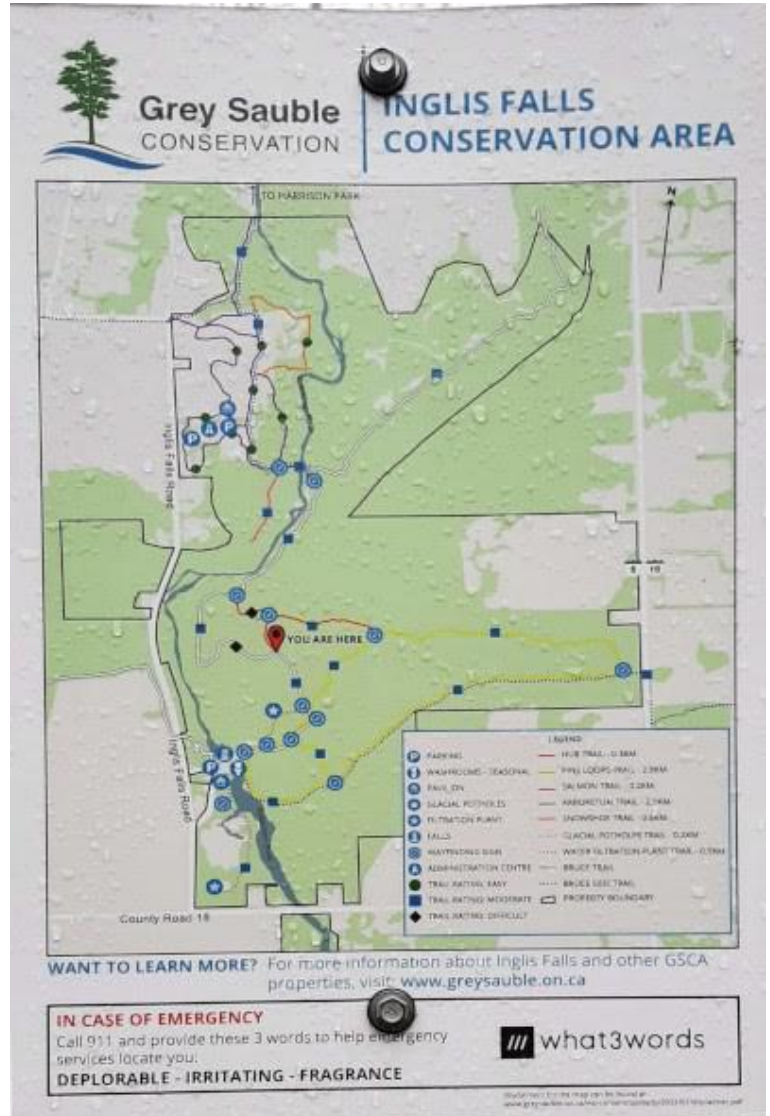
**I** was taking a walk in a local park recently. The Sydenham river flows through the park and plunges over the Niagara Escarpment creating a local attraction called Inglis Falls. Usually a very pretty sight, but during the spring thaw and following a heavy rainfall, it had become a raging torrent of water that was a sight to behold.

Following one of the trails I came across a new sign erected by conservation area staff. It contained a What 3 Words reference for use in emergency:

DEPLORABLE - IRRITATING - FRAGRANCE

I nearly fell down with laughter at the thought of calling 911 and telling the dispatcher "Deplorable, Irritating, Fragrance". I can just imagine the response: "I am sorry sir, but a disagreeable smell does not constitute an emergency!" .

The What 3 Words system is gaining popularity in public events where ham radio volunteers attend to provide event communications. This grumpy old ham finds the whole idea "deplorable and irritating" and wonders why the good old Maidenhead Grid Squares system isn't used instead. Maidenhead Grid Squares are not



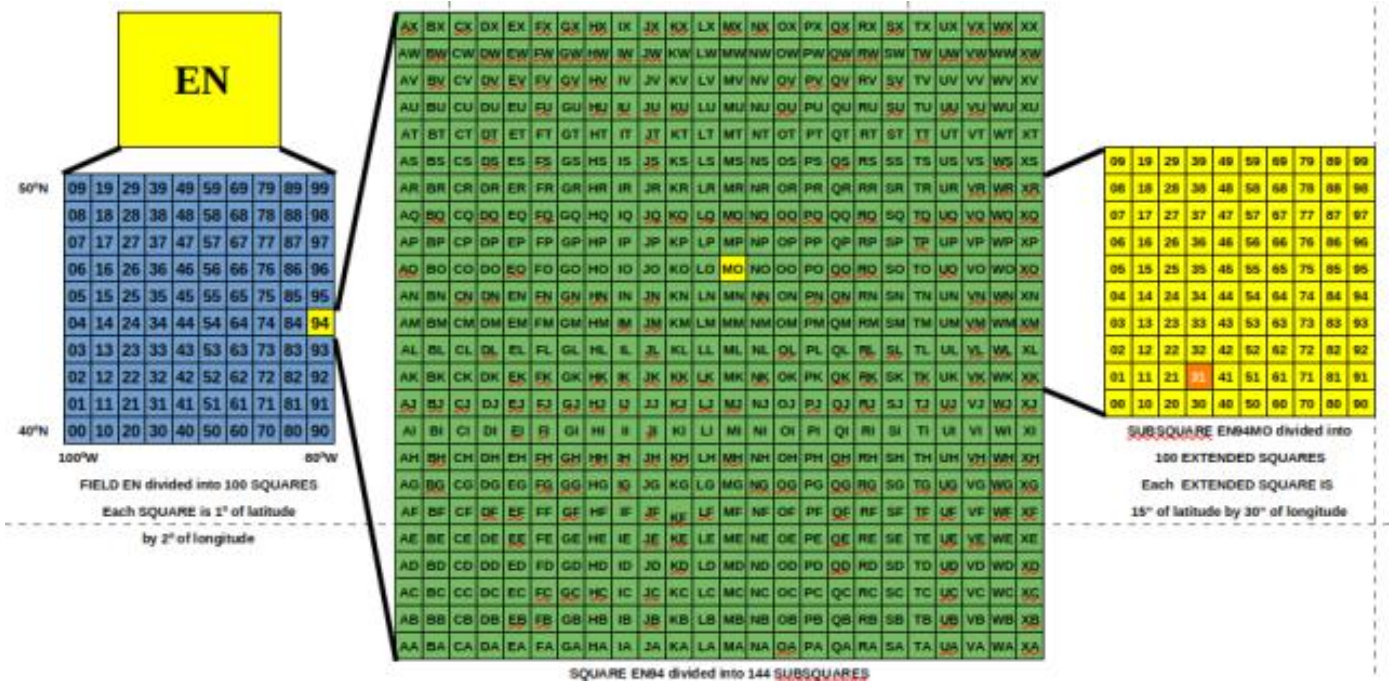
so easily confused by dialects and mispronunciation. If communication is hampered by background noise - like a roaring waterfall carrying spring meltwater downstream - we have ICAO phonetics to clarify the message.

Spring meltwater roaring over the Niagara Escarpment at Inglis Falls near Owen Sound, Ontario.

I once read about a radio message sent by British forces during the Second World War. The message was "Send Reinforcements we're going to advance" but due to poor propagation conditions it was received as "Send three and fourpence we're going to a dance" ("Three and fourpence" refers to an old money system used in the UK). The story probably isn't true, but it illustrates my point.

This prompted me to find out just how the Maidenhead Grid Squares system works. Most hams can probably remember the grid square for their home QTH, but how many really understand how those strange alternating alphanumeric characters are derived? It took me a while to figure it all out and the explanation is actually quite interesting.

I used the grid square reference for my own home QTH (EN94MO31) as an example. The first figure shows the overall construction of the grid square reference system. It might be a bit difficult to see the detail in this figure, but each element is separated in the other figures below.



Wikipedia was a great help in working out the basic concept, but I had to use some intuition to figure out the structure of the SQUARES, SUBSQUARES and the EXTENDED SQUARES. I checked my interpretation of the structure by examining the map on [F5LEN's locator site](#) to ensure my QTH is actually where the figures suggest it should be. I believe this analysis is correct but I am open to correction if I am wrong. I thought I was wrong once before, but I was mistaken [smile].

### Oh Planet Earth, our home and native land

So let's start off with the big picture - our home and native land, the Earth. The Earth is divided up into a matrix of 18 divisions of latitude and 18 divisions of longitude. That makes for a grid of 18x18 or 324 FIELDS. The first character represents longitude and the second character represents latitude. Fields are separated by 20 degrees longitude and 10 degrees latitude. My home QTH within field EN encompasses a large area of both Canada and the United States.

[Skip to "Inside each field are 100 squares"](#)

Sidenote: *It is an interesting fact about the Earth's geometry that lines of latitude are parallel to each other, but lines of longitude meet at the poles. If you were to stand at the North Pole and face any direction you would always be looking south. You would also get quite cold, and since there is no land at the North Pole, you would be walking on ice that has a tendency to form large unpredictable cracks (called "leads") and deep crevasses. It would spoil your entire walk if you were to fall into either of those hazards. Of course, there is also the possibility of meeting one of the local inhabitants who stand ten feet tall, weigh up to 2000 pounds, wear thick white coats and are always hungry.*

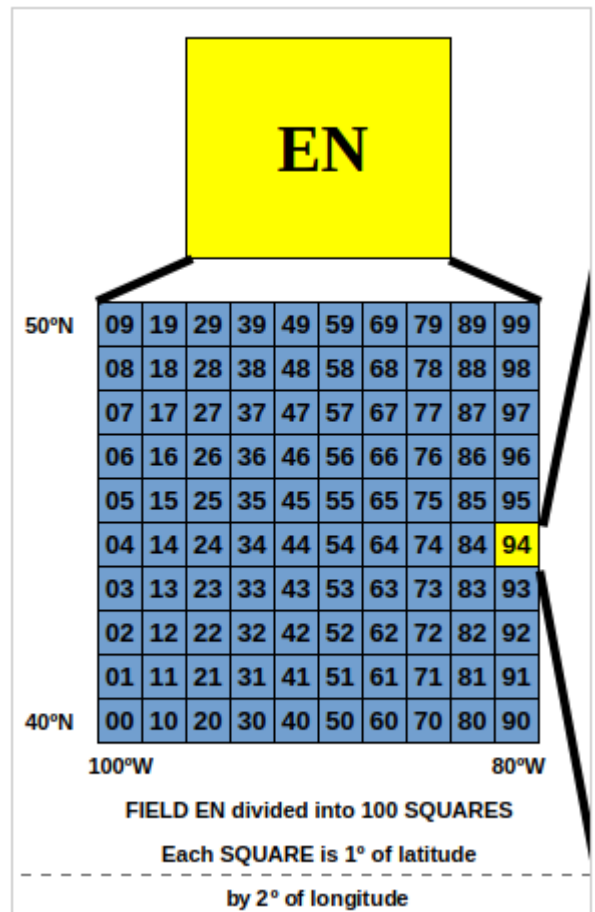


Crevasse warning on the Athabasca Glacier, Alberta, Canada

*A personal narrative: I was once young and intrepid enough to consider skiing to the North Pole. I inquired about an organized expedition that would meet in Moscow, then be taken by plane and helicopter to a point in the eastern Arctic Ocean 100 kilometers from the pole. We would ski to the pole from that point over the course of the next three days before being picked up by a chartered plane and returned to Moscow. I was seriously interested, but decided not to proceed. I had just recently had my article on decoding Russian military navigation satellite signals published in the United States and considered the possibility that Russian authorities might wish to engage with me about it. There was also the cost: twenty five thousand dollars.*

**Inside each field are 100 squares**

Field EN covers the area from 80 degrees west to 100 degrees west and from 40 degrees north to 50 degrees north. It encompasses a large area in which three of the Great Lakes - Superior, Michigan and Huron - are located. Most of Lake Erie is also within field EN. The boundaries run from just west of the Greater Toronto Area in Canada to Nebraska and the Dakotas in the west and the city of Winnipeg in Canada to the north. Every field is divided into 100 SQUARES each of which is 2 degrees of longitude by 1 degree of latitude. My own grid square is EN94 which is bounded by 80 and 82 degrees longitude, 44 and 45 degrees latitude and lies entirely within Canada. This is a much smaller area - one that I could drive all the way around in a single day (although perhaps not in a Southern Ontario winter). A significant portion of EN94 is covered by parts of Lake Huron and Georgian Bay (technically part of Lake Huron). This is a more manageable area of the planet's surface, but still too large to readily locate



somebody in an emergency, which is deplorable and perhaps a little irritating.

**Each Square is divided into 144 Subsquares**

But, the Maidenhead Grid Square system is further divided into 144 SUBSQUARES each of which is 5 minutes of longitude east to west and 2.5 minutes of latitude south to north. It should be noted that everything is measured east of the antimeridian of Greenwich and from the South Pole northwards and that dictates the organizational layout of Squares and Subsquares.

My home QTH lies within the Subsquare EN94MO which defines a fairly small area to the northwest of the City of Owen Sound, Ontario and includes the outer harbor of the Port of Owen Sound - not a busy port but we do enjoy the visits of several very large ships each year.

<u>AX</u>	<u>BX</u>	<u>CX</u>	<u>DX</u>	<u>EX</u>	<u>FX</u>	<u>GX</u>	<u>HX</u>	<u>IX</u>	<u>JX</u>	<u>KX</u>	<u>LX</u>	<u>MX</u>	<u>NX</u>	<u>OX</u>	<u>PX</u>	<u>QX</u>	<u>RX</u>	<u>SX</u>	<u>TX</u>	<u>UX</u>	<u>VX</u>	<u>WX</u>	<u>XX</u>
<u>AW</u>	<u>BW</u>	<u>CW</u>	<u>DW</u>	<u>EW</u>	<u>FW</u>	<u>GW</u>	<u>HW</u>	<u>IW</u>	<u>JW</u>	<u>KW</u>	<u>LW</u>	<u>MW</u>	<u>NW</u>	<u>OW</u>	<u>PW</u>	<u>QW</u>	<u>RW</u>	<u>SW</u>	<u>TW</u>	<u>UW</u>	<u>VW</u>	<u>WW</u>	<u>XW</u>
<u>AV</u>	<u>BV</u>	<u>CV</u>	<u>DV</u>	<u>EV</u>	<u>FV</u>	<u>GV</u>	<u>HV</u>	<u>IV</u>	<u>JV</u>	<u>KV</u>	<u>LV</u>	<u>MV</u>	<u>NV</u>	<u>OV</u>	<u>PV</u>	<u>QV</u>	<u>RV</u>	<u>SV</u>	<u>TV</u>	<u>UV</u>	<u>VV</u>	<u>WV</u>	<u>XV</u>
<u>AU</u>	<u>BU</u>	<u>CU</u>	<u>DU</u>	<u>EU</u>	<u>FU</u>	<u>GU</u>	<u>HU</u>	<u>IU</u>	<u>JU</u>	<u>KU</u>	<u>LU</u>	<u>MU</u>	<u>NU</u>	<u>OU</u>	<u>PU</u>	<u>QU</u>	<u>RU</u>	<u>SU</u>	<u>TU</u>	<u>UU</u>	<u>VU</u>	<u>WU</u>	<u>XU</u>
<u>AT</u>	<u>BT</u>	<u>CT</u>	<u>DT</u>	<u>ET</u>	<u>FT</u>	<u>GT</u>	<u>HT</u>	<u>IT</u>	<u>JT</u>	<u>KT</u>	<u>LT</u>	<u>MT</u>	<u>NT</u>	<u>OT</u>	<u>PT</u>	<u>QT</u>	<u>RT</u>	<u>ST</u>	<u>TT</u>	<u>UT</u>	<u>VT</u>	<u>WT</u>	<u>XT</u>
<u>AS</u>	<u>BS</u>	<u>CS</u>	<u>DS</u>	<u>ES</u>	<u>FS</u>	<u>GS</u>	<u>HS</u>	<u>IS</u>	<u>JS</u>	<u>KS</u>	<u>LS</u>	<u>MS</u>	<u>NS</u>	<u>OS</u>	<u>PS</u>	<u>QS</u>	<u>RS</u>	<u>SS</u>	<u>TS</u>	<u>US</u>	<u>VS</u>	<u>WS</u>	<u>XS</u>
<u>AR</u>	<u>BR</u>	<u>CR</u>	<u>DR</u>	<u>ER</u>	<u>FR</u>	<u>GR</u>	<u>HR</u>	<u>IR</u>	<u>JR</u>	<u>KR</u>	<u>LR</u>	<u>MR</u>	<u>NR</u>	<u>OR</u>	<u>PR</u>	<u>QR</u>	<u>RR</u>	<u>SR</u>	<u>TR</u>	<u>UR</u>	<u>VR</u>	<u>WR</u>	<u>XR</u>
<u>AQ</u>	<u>BQ</u>	<u>CQ</u>	<u>DQ</u>	<u>EQ</u>	<u>FQ</u>	<u>GQ</u>	<u>HQ</u>	<u>IQ</u>	<u>JQ</u>	<u>KQ</u>	<u>LQ</u>	<u>MQ</u>	<u>NQ</u>	<u>OQ</u>	<u>PQ</u>	<u>QQ</u>	<u>RQ</u>	<u>SQ</u>	<u>TQ</u>	<u>UQ</u>	<u>VQ</u>	<u>WQ</u>	<u>XQ</u>
<u>AP</u>	<u>BP</u>	<u>CP</u>	<u>DP</u>	<u>EP</u>	<u>FP</u>	<u>GP</u>	<u>HP</u>	<u>IP</u>	<u>JP</u>	<u>KP</u>	<u>LP</u>	<u>MP</u>	<u>NP</u>	<u>OP</u>	<u>PP</u>	<u>QP</u>	<u>RP</u>	<u>SP</u>	<u>TP</u>	<u>UP</u>	<u>VP</u>	<u>WP</u>	<u>XP</u>
<u>AO</u>	<u>BO</u>	<u>CO</u>	<u>DO</u>	<u>EO</u>	<u>FO</u>	<u>GO</u>	<u>HO</u>	<u>IO</u>	<u>JO</u>	<u>KO</u>	<u>LO</u>	<u>MO</u>	<u>NO</u>	<u>OO</u>	<u>PO</u>	<u>QO</u>	<u>RO</u>	<u>SO</u>	<u>TO</u>	<u>UO</u>	<u>VO</u>	<u>WO</u>	<u>XO</u>
<u>AN</u>	<u>BN</u>	<u>CN</u>	<u>DN</u>	<u>EN</u>	<u>FN</u>	<u>GN</u>	<u>HN</u>	<u>IN</u>	<u>JN</u>	<u>KN</u>	<u>LN</u>	<u>MN</u>	<u>NN</u>	<u>ON</u>	<u>PN</u>	<u>QN</u>	<u>RN</u>	<u>SN</u>	<u>TN</u>	<u>UN</u>	<u>VN</u>	<u>WN</u>	<u>XN</u>
<u>AM</u>	<u>BM</u>	<u>CM</u>	<u>DM</u>	<u>EM</u>	<u>FM</u>	<u>GM</u>	<u>HM</u>	<u>IM</u>	<u>JM</u>	<u>KM</u>	<u>LM</u>	<u>MM</u>	<u>NM</u>	<u>OM</u>	<u>PM</u>	<u>QM</u>	<u>RM</u>	<u>SM</u>	<u>TM</u>	<u>UM</u>	<u>VM</u>	<u>WM</u>	<u>XM</u>
<u>AL</u>	<u>BL</u>	<u>CL</u>	<u>DL</u>	<u>EL</u>	<u>FL</u>	<u>GL</u>	<u>HL</u>	<u>IL</u>	<u>JL</u>	<u>KL</u>	<u>LL</u>	<u>ML</u>	<u>NL</u>	<u>OL</u>	<u>PL</u>	<u>QL</u>	<u>RL</u>	<u>SL</u>	<u>TL</u>	<u>UL</u>	<u>VL</u>	<u>WL</u>	<u>XL</u>
<u>AK</u>	<u>BK</u>	<u>CK</u>	<u>DK</u>	<u>EK</u>	<u>FK</u>	<u>GK</u>	<u>HK</u>	<u>IK</u>	<u>JK</u>	<u>KK</u>	<u>LK</u>	<u>MK</u>	<u>NK</u>	<u>OK</u>	<u>PK</u>	<u>QK</u>	<u>RK</u>	<u>SK</u>	<u>TK</u>	<u>UK</u>	<u>VK</u>	<u>WK</u>	<u>XK</u>
<u>AJ</u>	<u>BJ</u>	<u>CJ</u>	<u>DJ</u>	<u>EJ</u>	<u>FJ</u>	<u>GJ</u>	<u>HJ</u>	<u>IJ</u>	<u>JJ</u>	<u>KJ</u>	<u>LJ</u>	<u>MJ</u>	<u>NJ</u>	<u>OJ</u>	<u>PJ</u>	<u>QJ</u>	<u>RJ</u>	<u>SJ</u>	<u>TJ</u>	<u>UJ</u>	<u>VJ</u>	<u>WJ</u>	<u>XJ</u>
<u>AI</u>	<u>BI</u>	<u>CI</u>	<u>DI</u>	<u>EI</u>	<u>FI</u>	<u>GI</u>	<u>HI</u>	<u>II</u>	<u>JI</u>	<u>KI</u>	<u>LI</u>	<u>MI</u>	<u>NI</u>	<u>OI</u>	<u>PI</u>	<u>QI</u>	<u>RI</u>	<u>SI</u>	<u>TI</u>	<u>UI</u>	<u>VI</u>	<u>WI</u>	<u>XI</u>
<u>AH</u>	<u>BH</u>	<u>CH</u>	<u>DH</u>	<u>EH</u>	<u>FH</u>	<u>GH</u>	<u>HH</u>	<u>IH</u>	<u>JH</u>	<u>KH</u>	<u>LH</u>	<u>MH</u>	<u>NH</u>	<u>OH</u>	<u>PH</u>	<u>QH</u>	<u>RH</u>	<u>SH</u>	<u>TH</u>	<u>UH</u>	<u>VH</u>	<u>WH</u>	<u>XH</u>
<u>AG</u>	<u>BG</u>	<u>CG</u>	<u>DG</u>	<u>EG</u>	<u>FG</u>	<u>GG</u>	<u>HG</u>	<u>IG</u>	<u>JG</u>	<u>KG</u>	<u>LG</u>	<u>MG</u>	<u>NG</u>	<u>OG</u>	<u>PG</u>	<u>QG</u>	<u>RG</u>	<u>SG</u>	<u>TG</u>	<u>UG</u>	<u>VG</u>	<u>WG</u>	<u>XG</u>
<u>AF</u>	<u>BF</u>	<u>CF</u>	<u>DF</u>	<u>EF</u>	<u>FF</u>	<u>GF</u>	<u>HF</u>	<u>IF</u>	<u>JF</u>	<u>KF</u>	<u>LF</u>	<u>MF</u>	<u>NF</u>	<u>OF</u>	<u>PF</u>	<u>QF</u>	<u>RF</u>	<u>SF</u>	<u>TF</u>	<u>UF</u>	<u>VF</u>	<u>WF</u>	<u>XF</u>
<u>AE</u>	<u>BE</u>	<u>CE</u>	<u>DE</u>	<u>EE</u>	<u>FE</u>	<u>GE</u>	<u>HE</u>	<u>IE</u>	<u>JE</u>	<u>KE</u>	<u>LE</u>	<u>ME</u>	<u>NE</u>	<u>OE</u>	<u>PE</u>	<u>QE</u>	<u>RE</u>	<u>SE</u>	<u>TE</u>	<u>UE</u>	<u>VE</u>	<u>WE</u>	<u>XE</u>
<u>AD</u>	<u>BD</u>	<u>CD</u>	<u>DD</u>	<u>ED</u>	<u>FD</u>	<u>GD</u>	<u>HD</u>	<u>ID</u>	<u>JD</u>	<u>KD</u>	<u>LD</u>	<u>MD</u>	<u>ND</u>	<u>OD</u>	<u>PD</u>	<u>QD</u>	<u>RD</u>	<u>SD</u>	<u>TD</u>	<u>UD</u>	<u>VD</u>	<u>WD</u>	<u>XD</u>
<u>AC</u>	<u>BC</u>	<u>CC</u>	<u>DC</u>	<u>EC</u>	<u>FC</u>	<u>GC</u>	<u>HC</u>	<u>IC</u>	<u>JC</u>	<u>KC</u>	<u>LC</u>	<u>MC</u>	<u>NC</u>	<u>OC</u>	<u>PC</u>	<u>QC</u>	<u>RC</u>	<u>SC</u>	<u>TC</u>	<u>UC</u>	<u>VC</u>	<u>WC</u>	<u>XC</u>
<u>AB</u>	<u>BB</u>	<u>CB</u>	<u>DB</u>	<u>EB</u>	<u>FB</u>	<u>GB</u>	<u>HB</u>	<u>IB</u>	<u>JB</u>	<u>KB</u>	<u>LB</u>	<u>MB</u>	<u>NB</u>	<u>OB</u>	<u>PB</u>	<u>QB</u>	<u>RB</u>	<u>SB</u>	<u>TB</u>	<u>UB</u>	<u>VB</u>	<u>WB</u>	<u>XB</u>
<u>AA</u>	<u>BA</u>	<u>CA</u>	<u>DA</u>	<u>EA</u>	<u>FA</u>	<u>GA</u>	<u>HA</u>	<u>IA</u>	<u>JA</u>	<u>KA</u>	<u>LA</u>	<u>MA</u>	<u>NA</u>	<u>OA</u>	<u>PA</u>	<u>QA</u>	<u>RA</u>	<u>SA</u>	<u>TA</u>	<u>UA</u>	<u>VA</u>	<u>WA</u>	<u>XA</u>

SQUARE EN94 divided into 144 SUBSQUARES

Each SUBSQUARE is 2.5' of latitude by 5' of longitude

Subsquare EN94MO includes both urban and rural areas. The rural areas are heavily wooded with some quite challenging and dangerous trails to explore. The Niagara Escarpment runs right through it and there are some precipitous drops over sheer cliff edges as well as numerous wide chasms in the exposed rock of the escarpment. Search and Rescue teams still have quite a challenge to locate a hiker - or itinerant amateur radio operator like myself. Perhaps that is still deplorable, irritating and, close to the lake in the fall, fragrant with the smell of decaying fish during the annual salmon spawning run.

Not to worry though, the Maidenhead Grid Square system still has a few more aces up its sleeve. Each Subsquare is divided into 100 EXTENDED SQUARES each of which is 30 seconds of longitude east to west and 15 seconds of latitude south to north. My home QTH lies within Extended Square EN94MO31. Now we are down to a very small suburban area in which it would be very easy for emergency services to find me if I should fall off a ladder while rescuing my antennas. Strangely though, emergency services don't actually use the Maidenhead Grid Square system or the "deplorable, irritating" What 3 Words system.

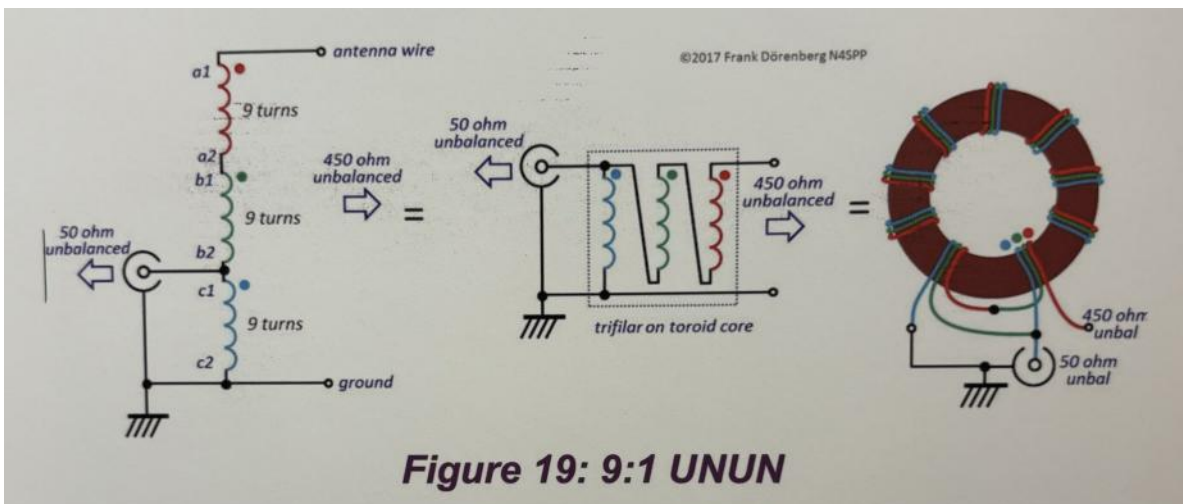
I think they should consider adopting Grid Squares; the road system in the City of Owen Sound can be very confusing with discontinuities in many roads that got me lost many times when I first moved here. Hams would be pleased to work with Emergency Services to explain the benefits of our grid squares system.

The Maidenhead Grid Square system can be infinitely divided into more accurately defined areas using alternating "base 10" and "base 12" definitions. One particular ham radio activity, RaDAR - Rapid Deployment Amateur Radio, calls for exchanging grid square locators down to 10 characters. Generally 4 or 6 character locators are used in ham radio and are useful when mapping contacts made during an activity like Parks on the Air (POTA).

Finally, the location identified by What 3 Words as "Deplorable Irritating Fragrance" is at grid square EN94MM86TD or Echo November Nine Four Mike Mike Eight Six Tango Delta. I know which reference I would prefer to be overheard shouting into a microphone!

09	19	29	39	49	59	69	79	89	99
08	18	28	38	48	58	68	78	88	98
07	17	27	37	47	57	67	77	87	97
06	16	26	36	46	56	66	76	86	96
05	15	25	35	45	55	65	75	85	95
04	14	24	34	44	54	64	74	84	94
03	13	23	33	43	53	63	73	83	93
02	12	22	32	42	52	62	72	82	92
01	11	21	31	41	51	61	71	81	91
00	10	20	30	40	50	60	70	80	90

**SUBSQUARE EN94MO** divided into  
**100 EXTENDED SQUARES**  
 Each EXTENDED SQUARE IS  
**15" of latitude by 30" of longitude**

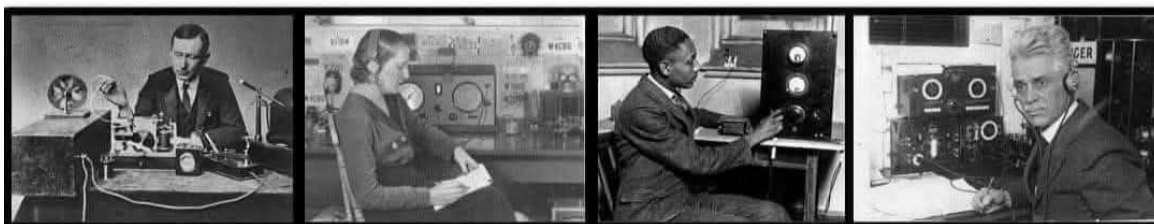


**Figure 19: 9:1 UNUN**



**From  
the  
PAST**

## ***On This Date In Amateur Radio History***



**April 15, 1912**

**A Welsh ham radio operator named Artie Moore picked up the distress signals from the Titanic on his homemade radio. “CQD CQD SOS de MGY Position 41.44N 50.24W.**

**Require immediate assistance. Come at once. We have struck an iceberg.**

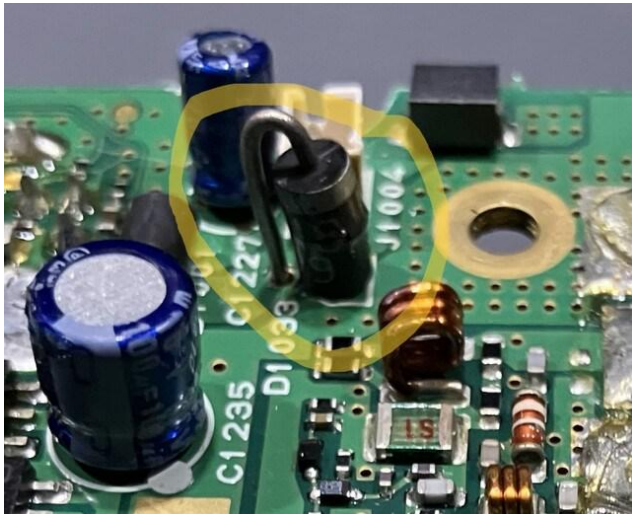
**Sinking....We are putting the women off in the boats...” Then came the final signal:**

**“Come as quickly as possible old man; our engine-room is filling up to the boilers”.**

# Repairing a Yaesu FT-7800 Dual Band Transceiver

## By Hagen Kaye VE3QVY

**W**hen John VE3JXX contacted me about repairing his mobile transceiver, I admit I was a little unsure if I was capable or had the right equipment (my test bench is geared to HF not VHF/UHF). John described an incident involving a power surge that blew the fuse and after replacing the fuse the radio had a dead short across power input to the radio. Armed with the confidence and service manual that John provided with the radio I was set to do my first repair on a commercial radio.



There are a lot of screws that bolts the main board to the chassis. Good thing I just got a nice electric screwdriver for Christmas and now I have something I can truly use it on. After removing all the screws, the antenna connector had to be desoldered from the board remove the board completely. With board in hand and schematics (which are very large) I followed the circuitry on the power input looking for any what I thought would be typical components that could cause the short. I started with the electrolytic capacitor thinking it might have been compromised.

Removed the capacitor, the short was still there. Tested the capacitor with my LCR meter and it was well within spec. Continuing down the power supply input on the circuit there was a zener diode. Easy to remove so I removed that component. Ta Da! The component causing the short was the zener diode. After looking up the part number I found out that this particular diode is a TVS diode. A TVS diode protects the radio from voltage transients by absorbing the excess voltage/current.

In this case, the diode did its job, took one for the team by shunting the excess current and shorting itself out. A quick radio check, everything seemed to be working. Could not Tx full power because the radio was not completely together - the RFI was driving my programma-

ble power supply haywire. So I ordered up and replaced diode - 82 cents at DigiKey. Replaced the diode, fully assembled the radio which involved resoldering the Antenna connector again and putting all those screws back in with the electric screwdriver.

Tested on the bench with a dummy load - full power 50W output. Clean signal on the spectrum analyzer. Time to make a QSO on the Elmira repeater - Got a signal report with full quieting.

I really enjoyed this repair, from a dead radio to one that is fully functioning by replacing a 82 cent part. Learned quite a bit, including what a TVS diode is.

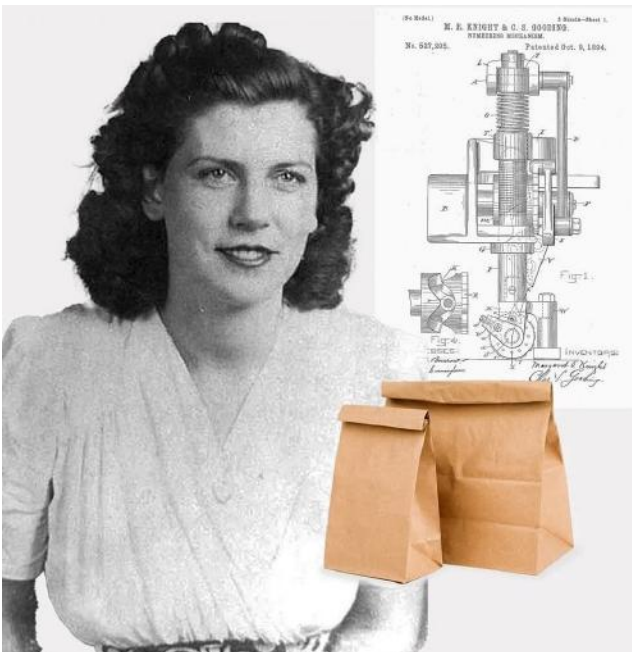


## Female inventor

Did you know that one of the most practical inventions we use daily was created by a woman who also had to fight to defend her authorship in court? This is the inspiring story of Margaret E. Knight, a brilliant 19th-century inventor, often referred to as the “female Edison” for her creativity and determination .

Born in 1838 in Maine, USA , Margaret showed an early talent for mechanics. At just 12 years old, she designed a safety device for textile looms to help prevent accidents in factories where many—including herself—worked .

Years later, she invented a machine that revolutionized packaging: one that could mass-produce flat-bottom paper bags, making them much more practical and sturdy than the envelope-like ones used before . This invention had a big impact on how goods were packed and transported.



However, during the patent process, someone else tried to steal her idea and register it as their own. Margaret didn't give up . She took the matter to court, presenting her sketches, prototypes, and notes as evidence. In 1871, she officially won the patent, becoming one of the first women to receive a U.S. patent for her work .

Throughout her life, she registered over 20 patents, including innovations in engines and cutting tools . Though her name was forgotten for many years, today her story serves as a powerful reminder of resilience, innovation, and justice .

Let's celebrate the pioneers who paved the way, often against all odds.

**Thanks to Tony VE3DWI**

# Tech Tips

## EASY DIY VERTICAL HF ANTENNA

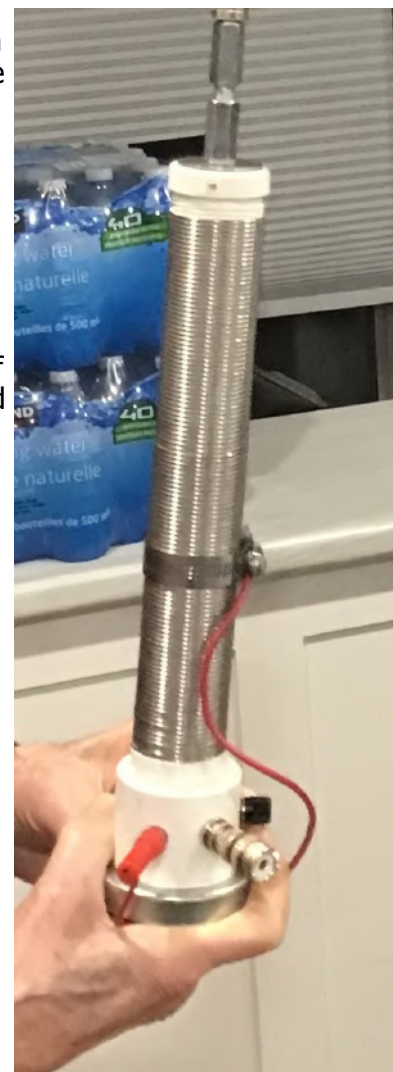
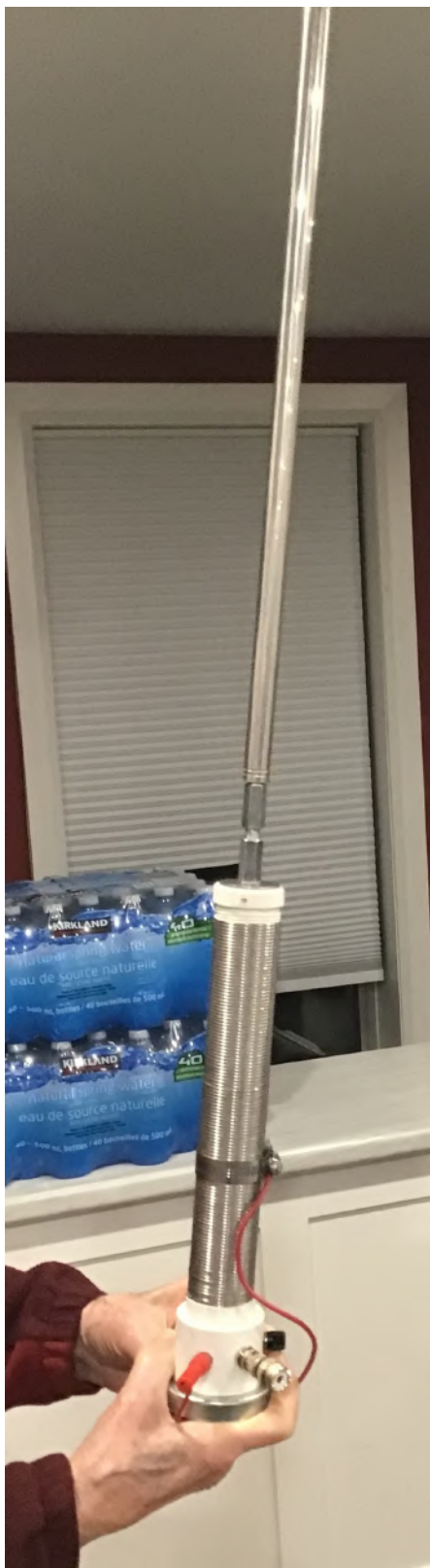
At our club meeting John VE3JXX showed an easy to build vertical HF antenna which can be adjusted for any of the bands. The top part is an extendable antenna for up to 17 feet. It is easily available on Amazon.

The bottom section is a coil form made on a 3-D printer. The program put a thread along the outside of the form and John wrapped a stainless steel wire along the thread and put a hose clamp over top.

The hose clamp can be moved to any position along the coil to tune for different bands. The hose clamp is connected to a banana plug which in turn is connected to the centre of an SO-239 connector. The ground of the SO-239 is connected to a second banana plug to allow for a ground plane to be attached.

John also added a magnetic mount on the bottom so a vehicle could alternately be used as the ground plane.

It is an ingenious design that can be assembled in minutes.



## CONGRATULATIONS

April 12 was exam day for the class of students who took the Amateur Radio Basic course. Eight students attended the course which began last September and culminated this month. Out of the eight, four passed the exam. Congratulations goes out to:

Ryan VA3HCO (Basic with Honours)  
Simon VA3KOE (Basic with Honours)  
Katharine VA3KZM (Basic with Honours)  
Brian VE3NXX (Basic)

As well, three adults who expressed a desire to also write the test all passed. Congratulations to:

Dan VA3WPZ (wrote the Advanced Exam)  
Al VE3XAW (Basic)  
Stewart VE3HWS (Basic with Honours)

A very special thanks to Rob VE3PCP who along with his son Justin VA3AQZ came to administer the exams.

Also a very heartfelt thanks to several ERC club members who kindly donated various radio equipment for these new young hams. It was much appreciated.



## Elmira Radio Club VE3ERC Monthly Meeting Minutes

Wednesday, April 23, 2025

**VENUE • Elmira Fire Hall – 44 Howard Ave, Elmira, Ontario**

7:00pm Virtual Eyeball QSO – Setup, Social time & Coffee

Meeting Call to Order, Welcome - Frank VA3FJM - Frank called the meeting to order at 7:34 pm EDT. Frank spoke of 2 members that became silent Keys. Al Dee. and Jim Litwiller, both of whom suffered long and painful ailments. He related some of the experiences he had with both of them. There was a moment of silence for both.

Roll Call & Quorum – In attendance in person at the Firehall were: Graham VE3BYP, Ken VE3KCY, Paul VA3PDC, Bob VE3IXX, Tony VE3DWI, Tom VE3DXQ, Frank VA3FJM, Ted VE3TRQ, Haygen VE3QVY, John VE3JXX, John VA3PT, Roger VE3RKS, Steve VE3BVS, Ken VE3KCY, Mike VE3FE (online), VE3CZ Linda (online), Curtis VE3EFI, Dave VA3DAS, Mark VA3AZH, Stewart VE3XAW, Al VE3XAW, JIMVE3JMU (online), Jay VE3CNM (online).

Adopt Agenda – Tom VE3DXQ • Motion to adopt Agenda for April 23, 2025 meeting 2<sup>nd</sup> by Tony VE3DWI carried.

### Presentations/Speakers/Workshop

Emergency Preparedness - John VE3JXX John said that since the last meeting he sent out the form to join the emergency coms group. He said he had 10 people volunteered for that, and is pleased about it. He has contacted RAC to find out about their emergency preparedness. He has not heard back from them as yet. John mentioned he would like to start a Can-warn Group. He would like to start some RF testing in the area in this regard. This would be feeding back to the Emergency Operations Centre and the Arena (Woolwich Township). He would also like to have a monthly meeting on Google Meet for the emergency coms group. He would also like to get us involved again in the CAER group for Woolwich township which is a one day event with various emergency response groups.

They set up demos at the Arena. He said he plans to meet with the new Lady in charge of Emergency Response for Woolwich Township.

John showed us various types of Go-boxes and antennas. Also passed around antenna connectors with ground rods attached to them.

The new fire chief is working on getting us internet access at the firehall.

John is making an emergency response manual from different articles found on the web, he said so far it is about 50 pages.



John VE3JXX, in his presentation showed his Go Box as well as other Emergency Preparedness equipment.



5. Secretary's Report Tom VE3DXQ • Motion to accept Minutes of March Meeting. Seconded by Tony VE3DWI. Carried.

6. Treasurer's Report Ted VE3TRQ • Monthly Financial Report as submitted by Ted

Financials are in good shape and we have enough for up coming antenna work. Ted also handed out club caps to new members. Ted made a motion to accept the report seconded by Tony VE3DWI.

7. President's Report - Frank VA3FJM – Frank report was covered under call to order and welcome. He also mention up coming military exercises for those interested. Also some email issues he had with attachments being blocked.

8. Committee Reports • Repeater Technical Committee -Tony VE3DWI – Tony said when the weather gets a little better he wants to visit the ERC repeater site and make sure cabinets are weather proof, and check cables and connections and do an antenna sweep. Next time Tony does the Wednesday night net he will do it on Simplex to see what coverage is like.

9. Unfinished Business •

10. New Business

In preperation for the AGM in May, a slate of nominees interested in standing for the Executive is needed. Ted VE3TRQ advised the following positions are needed: President, VP, Treasurer, Secretary, and Trustee. Nomination Committee formation

11. Announcements

Next meeting: Wednesday, MAY 28, 2025@7pm Elmira Firehall

Wires-X Net - Thursday of the month -Thursday, April 24 **TOMORROW!** ON VA3TETControler is needed?. Rod is away

Future GH AuxComService Training Workshops-Next Workshop

12. Adjournment • Motion to adjourn the meeting- Frank adjourned the meeting at 9:20 pm EDT