

## **FEEDBACK** The Official Newsletter of the Georgian Bay Amateur Radio Club

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## In Memorium

The Club would like to express condolences to club member Bobby VE3PAV and family on the recent loss of his father, Dragutin "Dick" Pavlovic on October 18 2024 in his 88th year. obit



### **President's Message**

Marvin VE3VCG

I think it is an understatement to say the world

is changing. So too is the Amateur Radio hobby.

When I was in grade school in the 1950's the new cool technology which appeared as pocket sized, battery powered transistor radio's. The kid who brought a transistor radio to school was very popular on the playground especially during the World Series.

Teachers monitoring the playground would sometimes see a huddle of kids, and on closer investigation, discover a boy with a transistor radio at the centre tuned into the local rebroadcast of the national sports broadcast of the latest game in the series.

Transistors rapidly made radio's a more portable, and more affordable. I would argue, one of many transistor radio's were bits of technology which reflected, or perhaps helped stimulate cultural changes. These small portable units allowed anyone who had one to stay "connected" to music and entertainment or news.

Today of course, micro circuits and micro-processors have put

astonishing image, voice, two-way communication devices in virtually every pocket, adding another layer of instant connectivity and the potential very rapid social change. These small devices can make older analog radios seem like novel antiques.

## This Month

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### 2023/ 2024 Executive

President ...... Marvin VE3VCG Vice-President...... Tex VE3USI Treasurer.....Doug VE3DGY Secretary...... Dan VA3DNY

Club Constitution

<u>By-Laws</u>





The history of Amateur Radio has been one of innovation and adaptation. The question I pose here is if amateur radio can continue to be a place of innovation and adaptation or will it simply fade into obscurity? Where is the attraction that will attract new people into the hobby?

I believe the future of amateur radio is, in part digital. There is for me a certain attractive quality to analog, which should have never been underestimated. Having a real time live conversation with someone in Europe or Australia still impresses. However, in this era when most communication involves some manner of screen, audio only can be perhaps, somewhat less impressive.

Digital innovations for amateur radios continue to push the envelope of what can be done with wireless technology. The upsurge of interest in WiFi hot-spots, internet chat rooms other communications which blend together technologies, illustrate how our hobby is changing.

I argue that, to keep our hobby alive, and vital in the 21st century and beyond, we need to keep innovating as others have done in the past. We should always seek to be the cool kid with a transistor radio on the playground, attracting attention with the newest coolest RF technology.

### Power cords and bars VA3TS

Power and extension cords that are pinched, pierced, bent or otherwise damaged do not look very threatening, but they present serious fire and shock hazards. While we prepare for the holiday season, the use of temporary cords, lights fixtures and power bars are very common. To prevent a cord or power bar failure from catching you off guard make sure you do the following:



Keep power bars and cords away from moist or wet environments.

Make sure there is enough space behind couches, bookcases, beds, desks and countertop appliances to ensure plugs are not pushing against walls, as this can cause damage.

Keep cords away from carpets. Running a cord under a carpet may keep it out of sight, but it also keeps it from properly cooling and makes it easy to damage by foot traffic or furniture. Do not place boxes or furniture on the cords either.

Keep animals away. Do not let your pets chew on cords.

Inspect regularly. Check for nicks, damage or signs of overheating at the plug connections. Replace damaged cords.

Use as intended. Extension cords are classified as temporary wiring. Do not drape wiring over nails or affix extension cords to walls to create an extra outlet. Instead, get a permanent outlet installed.

Here's one you may not have heard before. Christmas trees are a serious fire hazard and can overwhelm a room in a short amount of time. If you have a spare smoke detector, nestle one amongst the branches as an early warning signal. That few extra seconds may make the difference between life and death.







## **My Story**

My name is Sarah VE3YRB, and I have been a municipal professional for the last

seven years. Growing up, my household's "family business" was public service. I was raised on stories of finding purpose and fulfillment in becoming a civil servant and supporting my community. For years after joining the workforce, I



2024 Niagara POTA Meet Up at Rock Point Provincial Park

saw ham radios tucked away in the corners of the municipalities I served. While I understood the abstract public service value that amateur radio provides during emergencies, it wasn't until recently that I experienced it firsthand.



Mississauga Amateur Radio Club's station for this year's CQ World Wide DX SSB Contest a couple weeks back

When the opportunity came through work to take a course to prepare for becoming licensed as an amateur radio operator, I was immediately interested. Still, I felt a sense of apprehension. I had never considered myself a math or science person. I questioned signing up at the risk of failing in front of my peers, but the first thing our instructor shared was his confidence and commitment to our success.

Our instructor, Frank VA3GUF, went above and beyond, patiently answering my many, many (many) questions and selflessly sharing his knowledge, resources, and love for amateur radio. Even more so, he shared the hobby's fun, the endless opportunities for learning, and the community that ties it all together. Everyone in my cohort who took the test indeed passed, and

Frank continued his mentorship until I was ready to retake the test and upgrade my ticket to basic with honours.

To my surprise, I fell in love with the course and the hobby. I was immediately fascinated by the concepts of amateur radio, which felt like a kind of magic, the music of learning Morse Code, and the adventure of activating in parks for Parks On The Air (POTA). Since I began using what I learned, first by phoning into nets, then supporting local races, and later for POTA, the people I have been fortunate enough to meet and learn from have grown my passion for the hobby.

I have been fortunate to encounter amateur radio operations locally, from across Canada, and from other countries who have all gone out of their way to make me feel welcome in the hobby. From the





stranger on a RAC forum who went out of his way to help me test, purchase, and then use my first transceiver, the antenna gifted to me for that first race, and so much more, I am endlessly grateful for the support.

Since receiving my license, there have been several reminders of the public service that amateur radio can provide. In September of this year, I attended a POTA Meet-up in Rock Point Provincial Park on the Niagara Peninsula, which happened to be the weekend that Hurricane Helene made landfall and caused widespread destruction in the Southeastern United States.

During the meet-up, one of the operators received a call for a wellness check from a man in North Carolina, and another was able to pass the message that he was safe but without power to his sister. These recent events have highlighted for me the very real ways that amateur radio continues to provide a public good and holds a critical role in emergency preparedness. While I hope never to need to use the skills I've learned in amateur radio during an emergency, I am grateful to have them.

In becoming an amateur radio operator, I found a new way to support a needed public service, endless learning, and a community of incredible people who have gone out of their way to share their time, assistance, and passion for this hobby to a degree I have never experienced before.



An activation that Joseph VE3GKT and I did at Rockwood Conservation Area this October

Thank you to the many hams who have helped me along the way. I look forward to catching you on the air. 73, Sarah VE3YRB



## **Technical Skills Corner**:

### Box resistor circuit resistance?

Ohms Law skills every once in a while come into play when we set up a radio station while dealing with a 50 Ohm feed line and antenna. This little example below that my dad gave me when I started to learn ohms law as a young teenager can test and may even tax your Ohms Law knowledge skills. Each resistor is shown in thick solid black in the diagram and has a 1 ohm rating. Use whatever voltage or amperage you wish to trouble shoot the total



resistance across the voltage load. The grey square is the top of the box and the green is the bottom of the box. Red lines are there for visual purposes to help visualize the box and load connection points at the top rear and bottom front. They also help in setting up the 3 portions of the circuit.

Discuss amongst yourselves (use the GBARC forum if you like) how to best trouble shoot the solution so as to share your understanding of the circuit and learning's with each other. Final solution will be





posted in next months newsletter as soon as I receive an email of the solution with sufficient lead time to get it published, other wise it will be in the following months newsletter.

Email solution and how you derived it to va3-guf@outlook.com.

Cheers and have a bit of fun with this small problem.

### A solution

Technical Skills Corner: Box resistor circuit resistance solutions

The image of the box with the twelve 1 ohm resistors has many solution approaches but difficult to use with only the Ohms Law formulas as it is laid out and connected together in the 3 dimensional box/image.

1. Image as in original article

2. Rotated 90 degrees to answer solution



Using Image 2 above, we can redraw the physical circuit on paper as per the schematic below.



The 6 centre section resistors of the circuit labelled as B are sort of in series with those of the end sections A & C resistors. Yet looking at them all, they appear to be in parallel with a series component but not in series. So how to solve this resistance value without measuring a physical circuit.

Approach 1:

Ignore the formulas for a bit and start with an arbitrary 6 amp (or any amount of your choosing) load on the power source. Since all the resistors are of equal value, the amperage distribution across the 3 sections is easier to determine. 6 amps into Section A resistors with the following resistor sequence being evenly distribution has 2 amps going through each of these A resistors. The same would hold true for Section C resistors with each having 2 amps exiting each resistor for combined total of 6 amps.





So how many amps goes through each of the six B resistors seeing that there are only 2 B resistors connected to each A resistor.

#### Wattage calculation solution;

Lets start analyzing with only one A resistor since the loads of the combined two B resistors are equal to the 2 amps from the A resistor, each B resistor will therefore be passing 1 amp each. With this info we can calculate the total circuit wattage using the formula  $W = A^2 * R$  for each resistor where R equals ohms. Having determined that the A & C resistors each pass the same current of 2 amps, these six resistors each operate at 4 Watts a piece (2A \* 2A \* 1 $\Omega$  = 4W). Total wattage for these three A resistors and three C resistors is 24 Watts. Now we calculate the B resistors total wattage the same way. Each of the six B resistors wattage calculation is; 1A \* 1A \* 1 $\Omega$  = 1W for a total of 6 Watts. Total circuit wattage load is 24W+ 6W = 30W. Using the formula W = A<sup>2</sup> \* R, becomes W/A<sup>2</sup> = R so 30W / (6 A \* 6A) = 30 / 36 becomes 03 / 33338.0 = 63'\Omega 33338.0( ohms). Answer using wattage calculations is 0.833333' $\Omega$  with the 3' running to infinity.

#### Voltage drop calculation solution;

Starting with Approach 1 and again using a 6 amp load as in the wattage calculation solution, we use the voltage formula V = A \* R instead. Knowing the amps passing through each resistor per the above paragraph, each A & C resistor has a voltage drop across it of 2A \* 1R = 2 V. Section A resistors and C

resistors have a total of 4 volts drop for the 2 sections. Each of the B resistors voltage drop using the formula V = A \* R is 1A \* 1R = 1V (1 volt) each resistor for a total B resistor section voltage drop of 1 Volt. Total circuit voltage drop equals the source voltage of 5 volts. Now using the formula V = A \* R for the whole circuit, 5V = 6A \* R becomes 5V/6A = R, hence  $5 / V33338.0 = A6\Omega 33338.0$  (ohms).

Answer using voltage drop calculations is  $0.833333^{\circ}\Omega$  with the 3' running to infinity.

Approach 2:

After analyzing the circuits amperage flow/paths using an arbitrary total circuit amperage (will use 6 amps again here), we can actually simplify the circuit schematic to one of equal value and section distribution to use ohms law Series and Parallel formulas to calculate the Series ohms value of each path and then the Parallel ohms value of the total combined 3 circuits.

Redrawing the circuit (circuit 1);

After analyzing the A & C resistor current flows above, we can simplify the schematic without altering the resistor values or currents in or current out with the following diagram;



Since the above circuit has the same resistor currents and voltage drops, we can combine 3 of the above circuits to emulate the original box schematic to;







Calculate for one path first with the two 1 $\Omega$  B resistors, we get a B section value of 1/2 ohm. Sum the three resistor values of the top/single path we have end to end on the first path 2.5 ohms total for 1 row. This now calculates to three parallel circuits or 2.5 ohms each row, we get the parallel resistance formula of  $1/R = 1/2.5\Omega + 1/2.5\Omega = 3/2.5\Omega$ , becomes  $3/2.5\Omega$  333338.0 =  $\Omega$  333338.0 (ohms).

Answer using circuit 1 resistance calculations is  $0.833333^{\circ}\Omega$  with the 3 running to infinity.

Redrawing the circuit (circuit 2);

After analyzing the A & C resistor current paths/flows with the simplified schematic of 2 parallel 1 ohm resistors, we see that the schematic can be simplified even further from;



To replacing two 1 ohm B resistors to one D resistor with a value of 1/2 ohm since any 2 resistors in parallel of the same value has half the resistance value of one resistor;



Since the above revised circuit is a  $1\Omega + .5\Omega + 1\Omega = 2.5\Omega$  circuit which has the same IN & OUT current and voltage characteristics of the original Box resistor diagrams of each of the IN & OUT 3 legs, we now create the following refined simplified schematic;



Sum the three resistor values of the top/single path we have end to end on the first path 2.5 ohms. This now calculates to three parallel circuits or 2.5 ohms each, we get the parallel resistance formula of  $1/R = 1/2.5\Omega + 1/2.5\Omega = 3/2.5\Omega$ , becomes  $3/2.5\Omega = 333338.0\Omega$  33338.0( ohms).

Answer using circuit 2 resistance calculations is  $0.833333^{\circ}\Omega$  with the 3 running to infinity.

These are 4 methods of solving the resistance value of the original box circuit. Each approach ends up with the same ratio leading to the same answer. Math seems to have a way of solving a problem in different ways by ending up with the same ratio. I hope you enjoyed the schematic puzzle and had a bit of fun with it. I would be interested if anyone has another method even if advanced math is used. Cheers

Frank Gufler VA3-GUF / VE0-GUF / VE0-VET





## Walkerton EOC

On Tuesday November 5th Frank Gufler (VE3GUF) and I met at the County of Bruce Administrative offices in Walkerton. The primary purpose for our mission was to catalogue and test amateur radio gear stored in at that location.

The gear tested is a Kenwood TS-570D HF transceiver and a Kenwood VHF/UHF transceiver. Also tested was the Alinco power supply, associated coax jumpers and cords. In addition a static SWR sweep was one on the associated antenna permanently installed on the building. These include an EFHW 10-80 for HF and a vertical dual band VHF/UHF vertical.

High SWR readings were noted on the 80 and 40 meter bands. No issues were found on the dual band VHF/UHF vertical. Both radios could power on and transmit into a dummy load but no on-air tests were conducted on the available antenna's. All functions seemed to be usable on both radio's.



Bruce County Gear Check Meeting Marvin VE3VCG, Ray Lux CEMC, Frank Gufler VE3GUF

All gear was catalogued with serial numbers and test information

was recorded and captured in a file for future reference. It was noted that the HF rig has no internal tuner and there is no external tuner available for this station. Recommendations were made as to where the required tuner could be purchased. Gear was stowed away and securely packed in a large plastic box. In addition to testing gear we had a free ranging discussion with Ray Lux, the current CEMC for Bruce County and Krista Miller, the Emergency Communications Specialist for Bruce County. Krista is currently creating a new emergency communications plan for Bruce County. Subjects discussed included the new RAC/ACS (AuxComm) program. Specifically mentioned was the new AuxComm course which Frank recently completed, as well as his intention to complete the ACS instructor course.

I took sometime to explain the difference between the former ARES program and the new RAC/ACS-AuxComm program. I briefly touched on the origination of AuxComm as an initiative of FEMA under the direction of the US government. I also mentioned that in many US states, counties and municipalities AuxComm training is now required by law for those involved in emergency communication.

Also mentioned was the recent course Frank ran for the staff of Grey County. This resulted in three newly certified amateur radio operators. Frank advised that he intends to run the course again. I recommended that Bruce County should consider offering such a course for staff of Bruce County. The objective would be to have amateur radio operators on the county staff across the county.

I have since followed up our meeting by providing additional resource and reference materials as related to how amateur radio is now being incorporated into emergency communications plans at all levels, in the US and Canada.





## Elsie's Breakfast



Elsie's is now open for breakfast at 08:00. Read More

## **Christmas Luncheon**



Our annual Christmas luncheon is planned for Saturday, December the 7th at 1pm at Elsie's restaurant.

If you have anything to donate to give away as a door prize, please bring it to the next meeting. Wrapped or in a gift bag would be appreciated.

### Tech Talk Doug VE3DGY



Each month at our club meeting we start off with a Tech Talk. Members are encouraged to offer their presentations. Subject can be anything of interest in Ham radio, maybe you installed a new radio or antenna, or discovered something new on you-tube. Don't assume that what you have isn't good enough. Bring it along for discussion. This month by Richard VE3OZW Hamclock How To



We are sad to report the passing of one of our founding members, Dave Dixon VE3DXO, from Markdale, in his 98th year. Club President in 1976, Secretary/Treasurer in 1984 and 1990, a good friend.

<u>obit</u>



Minutes of Meeting By Dan VA3DNY GEORGIAN BAY AMATEUR RADIO CLUB

22nd of October 2024

Call to order by Marvin VE3VCG at 7:05 PM

#### ATTENDANCE

Executive: Dan Mills VA3DNY Secretary, Marvin Double VE3VCG President, Doug McDougall VE3DGY Treasurer

Members: Greg Larocque VE3RQY, Janet Double VA3EAC, Bobby Pavlovic VE3PAV, Frank Gufler VA3GUF, Tom St.Amand VA3TS, Jim Reeves VE3JMD, Dave Newcombe VE3WI, Sarah Goldrup VE3YRB, Richard Osborne VE3OZW, Philip deKat VE3DPB, Bernie Monderie VE3BQM





#### QUORUM: Yes

#### **TECH TALK:**

Dave VE3WI: LiFePO4 Batteries

Dave started his presentation with a summary of the chemical composition and structure of Lithium Ion and LiFePO4 batteries. He explained that Lithium Ion produces oxygen when punctured and will always self-ignite (don't try to put out with water...use sand). LiFePO4 uses an electrolyte that is polymer gel based. It usually doesn't self-ignite when punctured unless seriously damaged.

The batteries have a recommended charge current based on their capacity and require a special charger. They need to be charged with constant current until nearly charged and then constant voltage to top up or maintain. Multiple cell batteries need a Battery Management System that keeps the cells balanced and protects against several risks such as overcharge current, high temperatures, discharge under voltage etc. The BMS draws some power from the battery and shouldn't be stored for long periods without charging.

The biggest advantage to using LiFePO4 is the voltage will remain fairly constant right across the power draw cycle. A Sealed Lead Acid battery will have a voltage drop off on a slope right across the power draw.

#### **PREVIOUS MINUTES:**

Minutes of the September Meeting were published in the newsletter and on the GBARC website. The minutes were accepted as written and passed by vote. (motion: Phil VE3DPB, second: Janet VA3EAC)

#### **TREASURER'S REPORT:**

Doug VE3DGY submitted the finance report up to the October meeting.

Members: 12 renewed so far for 2025, Dues received (\$75), 50/50 earned (\$25), service charges (\$8), and website fee (\$29.37). Balance: \$xxxx.73

The treasurer's report was accepted and passed by vote. (motion: Bernie VE3BQM, second: Richard VE3OZW)

#### **OLD BUSINESS:**

Executive Elections: Starting January 2025 Tex Brown VE3USI will be our new President, Marvin Double VE3VCG will be Vice President, Doug McDougall VE3DGY will once again be Treasurer, and Bobby Pavlovic has volunteered to be our secretary (no one nominated accepted the position during the election). Congratulations to our new executive!

Dave VE3WI and Doug VE3DGY have indicated that the LOTW account corrections are still underway.

#### **NEW BUSINESS:**





Doug VE3DGY advised us that GBARC will be getting a financial audit prior to the end of the year to make sure the books are in order.

There was a discussion about Winter Field Day. It will be held in Ferndale again this year. Bobby VE3PAV has agreed to make the booking of the facilities again on behalf of the club. We will plan a

meeting prior to the event to test the radios and N1MM etc.

Marvin provided details about this year's Christmas Luncheon at Elsie's Diner. It will be held at 1 PM on December the 7th. The RSVP form is on the website and the deadline to register is November 21st.

Bernie VE3BQM donated the proceeds (\$100) from the sale of some old equipment to the club. Thank you Bernie.

Sarah VE3YRB asked for some radio contacts on November 6th for an on air event during a bring your kids to work day.

The 50/50 Draw winner: Jim VE3JMD amount: \$32.00

**Meeting Adjourned** at 8:35 PM (motion: Janet VA3EAC, second: Richard VE3OZW)



## **Interesting Websites**

Hammond Museum of Radio https://www.hammondmuseumofradio.org/ https://youtu.be/Tu\_hcxdWv8M

Radio Direction Finder Antenna Device https://www.handi-finder.com/ https://www.homingin.com/hfinderfix.html

Internet Archive is a non-profit library of millions of free texts, movies, software, music, websites, and more.

https://archive.org/

https://ontars.com/







## Membership as of 15<sup>th</sup> Of November

Red text indicates 2025 Membership Paid

VE3FP	Adam Karasinski	Elmwood
VE3TUQ	Aubrey Alderdice	Meaford
VE3BQM	Bernie Monderie	Owen Sound
VE3MPG	Bob Baillargeon	Sauble Beach
VE3LKD	Bob Droine	Owen Sound
VE3PAV	Bobby Pavlovic	Lions Head
VA3WBO	Bruce Poirier	Wasaga Beach
VA3DNY	Dan Mills	Owen Sound
VE3WI	David Newcombe	Port Elgin
VE3BAK	David Rosenfeld	Owen Sound
Assoc	Dennis Knott	Meaford
VA3NBP	Don Hall	Lions Head
VE3DGY	Doug McDougall	Owen Sound
VA3GUF	Frank Gufler	Owen Sound
VA3STG	Fred Lorch	Teeswater
VE3RQY	Greg Larocque	Owen Sound
VA3EAC	Janet Double	Paisley
VA3KOT	John Corby	Owen Sound
VE3JMD	Jim Reeves	Port Elgin
VA3RCA	Kevin Adams	Alliston
VE3WDF	Larry Price	Port Elgin
VE3VCG	Marvin Double	Paisley
VE3MMJ	Marc MacDonald	Southhampton
VA3FIN	Mark Lindstrom	Owen Sound
VA3NIR	Norman Reintamm	Flesherton
VA3HYM	Paul Peters	Ayton
VE3QVC	Phillip De Kat	Owen Sound
VE3OZW	Richard Osborne	Mildmay
VA3RYK	Rijk Van Huisstede	Owen Sound
VE3RWY	Rob Walker	Owen Sound
VA3SGZ	Sheldon Greig	Chatsworth
VE3USI	Tex Brown	Flesherton
VE3CAB	Terry Darling	Meaford
VA3TS	Tom St.Amand	Shallow Lake
VA3TVA	Tom vanAalst	Owen Sound
VA3TFW	Tom Welden	Port Elgin



# JOIN GBARC TODAY





### ACS Update Marvin VE3VCG

On Sunday, November 17th I had a long telephone conversation with Allan Boyd, the new President of RAC. This conversation was in response to my request for an update to the new Auxiliary Communication Service (ACS) program.

As some already know the roll out of ACS has been delayed several times. A part of this delay was because of COVID lock downs. Further delays resulted from cabinet changes in the Ontario government which impacted funding for this new program.

There has also been a rather long and involved consultation process which involved RAC and all the "stake holders" the ACS program is intended to serve. In this instance "stake holders" include various governments, the representatives from Public Safety community, both nationally, provincially and locally and NGO's (Non-Governmental Organizations ie, Red Cross, Salvation Army.

Bluntly stated, the new ACS program has been developed in fits and starts and the process has not been smooth. Those who have followed articles by Jason Tremblay in The Canadian Amateur magazine will be aware of the many proposed objectives of the new ACS organization. Based on my conversation with Allan, I am aware that the end result of this process will differ from some of the original objectives.

Much of what Allan told me I can not share. The reason for this is that, at some point in the near future, likely in 2025 there will be a formal joint announcement by the provincial government and RAC with regard to the new ACS program.

All I can share here is that, ACS is significant new approach to amateur radio emergency communications. I think it fair to say that, this new approach will provide for a more responsive, efficient, effective and professional approach to amateur radio emergency communications.

Until the program is officially announced I will not be able to provide more information. I can say that this the new ACS program as been a long awaited and, based on what Allan shared, should create a good deal of excitement once finally announced.







## The Last Word

A few words of appreciation to those that contribute to this newsletter by submitting news stories or interesting web links or ideas. If you have something then send us a an email with <a href="https://gbarc.ca/contact.php">https://gbarc.ca/contact.php</a>, and we will get back to you.

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Membership for details regarding membership in the club click here: Membership

## Join the Radio Amateurs of Canada

### Our National Voice https://www.rac.ca/





# Join us for our weekly get together "On the Air"

The club meets each Wednesday evening on VE3OSR 146.940 T97.4 hz at 7:30 pm local time, and on 3.783 Mhz +/- immediately following.



