



FEEDBACK

The Newsletter of the Georgian Bay Amateur Radio Club

February 2023



Presidents Message

By Marvin Double VE3VCG

Is Amateur Radio EmComm Needed?

My simple answer to this question is yes. My reasoning is also simple.

Emergency Communication is like having a spare tire; Rarely is it needed, but you're glad to have it when it is needed.

I recognize that opinions on this subject vary widely and the subject is too large to cover in a newsletter. It is perhaps enough to say that one of the greatest threats we face is being created by the increasingly sharp ideological political and economic divisions in society.

Disruptions to normal life can arise from such divisions and become complex, destructive even dangerous events requiring us to quickly adapt.

If we learned nothing else from the pandemic it should be to expect the unexpected. In a world that is interconnected as never before a crisis half a world away can be on our doorstep in what seems like an instant creating a new normal.

Which is to say, in a world of increasing international tensions new unexpected threats to normal have emerged and will continue to do so as situations change over time.

There is a phrase I've heard recently which seems to apply here, "all emergencies are local". With that point of view, I think it

reasonable to have a locally specific amateur radio emergency communications plan in place.

The practical benefit of course, is that, we'll have that figurative spare tire if the day comes when it's needed.

In this month's GBARC Feedback:

Announcements:

Earthquakes in Turkey and Syria: In the aftermath of the massive earthquakes which hit Turkey and Syria Carlos Alberto Santamaria Gonzalez, CO2JC

Emergency Communications Coordinator International Amateur Radio Union, Region 2 sent an email which was forwarded to GBARC members as well other Canadian clubs by Alan Griffin RAC MarCom Director.

The email advises amateurs of Zone 2 that ITU members in Zone 1 are monitoring amateur radio traffic in the impacted areas and have determined that most activity in the affected area is on VHF locally. On HF emergency traffic is on 3.77 and 7.092. A request was made that we "protect" those frequencies.

We are further advised that Humanitarian Aid Groups are moving into the area. It was suggested that those who might wish to provide assistance do so by contacting the Turkish Embassy in each respective country.

On behalf of GBARC I extend our condolences to those who have lost someone in this terrible tragedy.

Winlink Wednesday: Beginning in March, I will begin doing a communications exercise called GBARC - Winlink Wednesday. Everyone can participate in this weekly event even without the use of RF. Winlink can be used over the internet using the Telnet option.

To participate you must first download and install the program Winlink Express, which is free. If you already have Winlink Express you're all set.

All the information you need to get Winlink is available here <https://winlink.org/WinlinkExpress>. Please send me an email using Winlink to my Winlink account VE3VCG@winlink.org and I will acknowledge and add your contact information to my Winlink contact list. If you already have a Winlink account you can send to my Winlink account by simply typing my call sign in the address field.

I am organizing a Winlink group mail list. I encourage everyone to participate in GBARC -Winlink Wednesday. Please join me, it will be fun, I promise.

It should be easy to remember the GBARC Winlink Wednesday because we have our club nets on Wednesdays.

Please Note: GBARC-Winlink Wednesday is not a part of the larger Winlink Wednesday event which runs on the third Wednesday of each month.

Club Business

- Minutes of the last meeting
- Next Club Meeting
- GBARC Nets
- Tech-Talks

- RES/ACS reports
- Social events

Feature Articles

- QRP Guys 3 Function Kit
- Digi-Link Nano vs Digi-Rig



Minutes of the January Club Meeting

Held 24 01 2023 at 19:00 local time

Location: M'Wikwedong Indigenous Friendship Centre, Owen Sound

Attendance:

Exec:

Marvin VE3VCG President, John VA3KOT Vice-President, Doug VE3DGY Treasurer

Regular Members:

Greg VE3RQY, Adam VE3FP, Janet VA3EAC, Bobby VE3PAV, Rijk VA3RYK, Tom VA3TS, Jim VE3JMD, Dave VE3WI, Dan VE3DNY, Philip VE3QVC, Richard VE3OZW, John Gainor (no callsign)

Guests:

Larry VE3WDF

Total attendance 3 exec, 12 regular members, 1 guest. We have a quorum.

Secretary's Report (Marvin VE3VCG pp Rob VE3RWY)

Rob is absent due to recovery from recent surgery.

Approval of minutes of last meeting (November 2022)

Motion: Adam VE3FP; Seconded: Philip VE3QVC

Motion carried on vote of members present.

Treasurer's Report (Doug VE3DGY)

For the month of January, we have collected \$225 in dues, no expenses. Current membership as of Jan 21 is 27. At the club meeting we've added 4. The meeting was advised of the current club bank balance (confidential, not for publication).

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The Newsletter of the Georgian Bay Amateur Radio Club

Introductions

Marvin VE3VCG called on the members and guests present to introduce themselves.

Club Radio

Marvin VE3VCG showed the club HF radio purchased (with a generous discount) from Jon VA3CIC. It is an Icom IC-707 with a VS 300A manual tuner and PSU. Marvin recommended new HF operators always use a manual, rather than an automatic tuner, in order to learn how to adjust the match between a transceiver and antenna. The club's HF radio is available for short term loan to club members in good standing who have not yet acquired their own HF equipment. The radio can also be used as a GOTA (Get On The Air) station at ARRL Field Day or in a public demonstration of the capabilities of amateur radio.

Delegated Examiner

The club's Delegated Examiner, Tom VA3TS, will relinquish the role in March 2023 when his term expires. A volunteer to replace Tom is being sought. The requirements are an Advanced Licence with Morse Code (5 wpm minimum).

New Business

Dave VE3WI advised that the RAC exam database is in the process of being revised and updated and that he has volunteered to contribute.

John VA3KOT advised the members and guests present that a number of laminated ham radio posters donated to the club by Jon VA3CIC had been brought to the meeting and were available for anybody who would like to take them.

Marvin VE3VCG proposed that the club should acquire its own laptop computer for use at club meetings. Greg VE3RQY advised that he may be able to donate a laptop once his new one has been delivered.

Marvin VE3VCG advised that he has assumed the role of newsletter editor and requested contributions of articles for publication. He also apologized for the spelling and grammatical errors that had crept into the January newsletter. These will be corrected in a revised issue shortly.

Winter Field Day: GBARC usually meets for Winter Field Day in the garage of Frank VA3GUF. Frank is away on an extended sailing trip. According to his website at komeekha.com he is currently in Puerto Rico having visited 111 ports on his voyage south from his home port of Wiarnton. GBARC will not be gathering for a group event this year but Adam VE3FP advised that members participating in the event log their QSOs as members of Georgian Bay ARC so that the aggregated scores will be credited to the club.

Scout Jamboree: Rijk VA3RYK advised that the local gathering for this year's World Scout Jamboree will be held at Harrison Park, Owen Sound and that he will be participating.

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Marvin VE3VCG proposed changing the name of the club newsletter from "Feedback" to "News and Views" but withdrew the proposal on the advice of Tom VA3TS who explained the historical association of the newsletter's name with the club.

Tech-Talk

At the conclusion of the business portion of the meeting Marvin VE3VCG gave a very informative and interesting presentation of solar power for ham radio and demonstrated several of the portable solar panels, charge controllers and Lithium Iron Phosphate batteries that he and his wife, Janet VA3EAC, use with their communications truck while demonstrating amateur radio emergency preparedness. Unfortunately, Marvin's laptop could not be connected to the TV set in the room but the improvised demonstration proved highly successful and was well received by the audience.

Adjournment

Meeting adjourned shortly before 9:00pm at which time the M'Wikwedong Centre closes for the evening.

-- Next club meeting

28 Feb 2023 at 19:00 local time

Location: M'Wikwedong Indigenous Friendship Centre, Owen Sound



GBARC Nets

Georgian Bay Amateur Radio Club meets on-the-air each Wednesday evening at 19:30 EST/EDT, except during the summer break in July and August. Check-ins from all licensed amateurs are welcome.

- Linked repeater VE3OSR (146.94 – CTCSS 97.4) in Owen Sound, Ontario
- Linked repeater VE3GBT (146.73 – CTCSS 97.4) in Paisley, Ontario
- Echolink node #333014
- Immediately after the VHF portion of the net we move to HF on 3783KHz +/-

GBARC nets are directed nets with a Net Control Station. Net Controllers are experienced hams who are skilled in coordinating on-air discussion and guiding newer hams in procedures that may be called upon during an emergency, or in support of a community event.

NET REPORTS are available at:

<https://www.gbarc.ca/ForumBB/forumdisplay.php?fid=15>



NCS Schedule: available here <https://gbarc.ca/meet.php>



Social Events

Breakfast Meet-up (Breakfast at Rockford)

GBARC Breakfasts are held on the second Saturday of each month at the Rockford Restaurant (Highway 6 and 10 at County Road 18, Owen Sound).

Next GBARC Breakfast: 11 Feb 2023



ARES/ACS Reports

Grey County Emergency Coordinator: Frank Gufler VA3GUF

Frank continues to be away on his sailing adventures in the Carribean and so is not available to post a report for ARES/ACS activity in Grey County.

Bruce County Emergency Coordinator: Marvin Double VE3VCG

As announced at the January club meeting of GBARC, Marvin will continue working to develop an Emergency Communications Program specific to the local needs of communities in Bruce / Grey counties.

This will be an independent program and will be rolled out locally. Such a program will be in the spirit of HAM's helping HAM's. The objective of developing this program is not to have a perfect emergency response network, but to have a functional emergency response network of some kind.

More information available at: https://www.gbarc.ca/acs_ares.php

ARES/ACS Activity

Current Month: There were no activities this month

Next Month: There are no planned activities for March aside from continued development of the community emergency communications program for GBARC.



Other Club Business

TechTalk

Why use Win-Link?:

Discussions about the use of Winlink often confuse some of the key points about why it is used and to what end. It is important to state that Winlink is not a universal communications multi-tool which can solve every communications problem. It is one tool in a tool box of communications tools available to amateur radio operators. It has limits and is subject to a variety of complicating factors which might come into play during any emergency event. However, it's value in solving complicated communications problems, especially during emergency events far outweigh what might be called negatives.

The value of Winlink is only realized when it is included as part of a complete emergency communications plan. When used casually and occasionally it can seem to be more a novelty than a useful tool. This because it can create a long term anti-Winlink bias which is hard to overcome. Understanding the importance of Winlink is only possible when it is seen in a proper context.

Like all emergency communications modes and methods using Winlink requires practice and experience to be useful. The program is not difficult to use but is not as simple as other commercial email platforms. Becoming familiar or comfortable with Winlink can only be gained by direct experience. The best way to gain experience is with a practice group.

Winlink is the defacto standard emergency communications tool for "formal" Emergency Communications for several reasons. The uses for this system apply equally for personal emergencies and formal use when supporting a served agency. While Winlink is strongly associated with Emergency Communications this tends to limit appreciating the program for personal non-emergency use.

- Winlink operates a worldwide network of linked stations which are connected via the internet. However, some of these stations can also function in the absence of the internet using RF to relay messages across the Winlink net. This provides a very robust means of moving messages from point to point even during emergency events where

the internet is unavailable. Increasingly there more so-called “Hybrid” stations join the network providing additional capacity to move traffic during an emergency.

- It is a well established fact that during emergency events, supported agencies want to maintain email service. For emergency managers this is a high priority. Amateur Radio operators using Winlink can maintain email when local internet service is disrupted. This capability will be especially important if a wide area long duration blackout event makes the internet unavailable over large regions. It goes without saying that such capabilities will also apply to maintaining personal email service under such conditions.
- Professional Emergency Managers have both liability and accountability issues as these relate to how they respond to any emergency situation. Winlink offers the ability to track communications by providing date, time and address information in real time and as a record and later reference.
- Winlink provides a means of communication which does not require operators to be on-the-air at the same time. So-called “off-set” operation timing is especially important when operating with different operators on different schedules in different locations. Messages sent through the Winlink network can sit on a Winlink server waiting until retrieved by the recipient.
- Written messages reduce operator error. A written message which is dated, numbered and provides sender information along with the actual body of the message. Such message be printed and be passed through a chain of command and read in plain English by anyone. Sharing information in this fashion is more efficient than providing it verbally. This is especially important when sending complex medical or technical information where accuracy is critical.
- Printed messages can be stored for reference by both sender and recipient and used as part of after-action reports.
- Winlink can send a lot of information quickly especially when paired with the new VARA software TNC. Under good conditions on HF, VARA’s throughput is nearly that of a PACTOR Dragon. Forward error correction ensures accuracy. This speed allows a large

amount of information to be transmitted in a short span of time. It also allows that information to be broadcast to multiple recipients in a single transmission.

- Winlink also supports UHF/VHF and point to point communications.

In summary, Winlink today is not the Winlink of yesterday. It is a modern communications tool which has proven its usefulness in real grid-down disasters like the major earthquake in Nepal, the hurricane in Puerto Rico and many other disaster situations.



Feature Articles

QRP Guys Kit to build \$40 USD 3 -way Meter

By Marvin Double VE3VCG



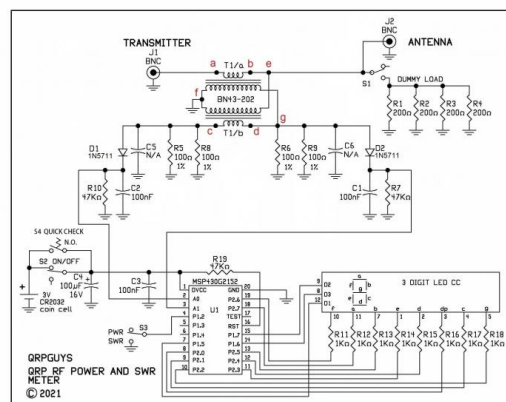
Kit builders and DIY makers alert, here's a project that is not only cool but practical.

There are lots of SDR meters on the market ranging from larger complex and expensive units to less expensive units like the small but powerful Nano VNA.

For those who like to build kits and save money, the QRP Guys

<https://qrpguys.com/> have brought to market a new DIY device which offers 3 important functions on the same board, power, swr and dummy load.

There is a 3D printed case for the completed device at this URL <https://www.thingiverse.com/thing:5333701>



Presidents Footnote: During a recent GBARC net the idea to do a “Tinkering Night” was offered as a suggestion. As I looked at this kit I considered the idea doing a group buy of these kits for interested parties for the purpose of tinkering and getting an end product as a result. Those who want to build something else are free to offer suggestions. Various things come to mind including some of the tiny “Altoid Tin” QRP type radio kits on the market etc. There are lots of possible projects out there. I’d be curious to hear suggestions.

Another consideration would be to invite kids from local schools to come and build a crystal radio kit. I had a crystal radio kit as a kid and remember how its function seemed to be almost magical. Even in such a hi-tech world I suspect a crystal radio set might still seem somewhat magical, even to kids jaded by smart phones.



Digi-Link Nano, Digital vs Dig-Rig Mobile vs Signalink HAM radio Interfaces

By Marvin Double VE3VCG

It is true There is more than more than one way to do digital radio. Some of these techniques use very simple but primitive, methods using output from computer speakers to an open mike. These are cheap and functional to a point, but not practical in everyday use.

To do digital modes consistently requires a reliable, well organized and easily used setup.

For those who like to build things, there are various plans available to build your own digital interface. For those seeking a DIY project for a well established source, which claims to be the “gold standard for interface boards, follow this link <https://nonstopsystems.com/radio/pdf-hell/pc-rig-interface-kk7uq.pdf>

A DIY interface board is always an option, but, speaking for myself, I don't mind paying for a professional built product. Because of my involvement with emergency communications, I need gear I can rely on which also looks professional.



Many newer radios such as the ICOM 7300, come with internal sound cards and a built-in interface. It is my understand that including a sound card to radio design is a recent innovation. For those using radios that have no built in sound card some manner of digital interface is needed.

In recent years various companies have made an interface device. The dominant players have been Signalink from Tigertronics and Rigblaster from West Mountain Radio. I am excluding the RigBlaster from this

article)

There are two are ultra-compact tiny devices light weight simple devices suitable for field or shack.

At \$89 USA the more expensive of the two, seen above, is from HB9ZHK, manufactured and shipped from Switzerland. The DigiLink Nano “*separates your rig from your computer through its built-in audio transformers and optocoupler to avoid ground loops and RF interference*”.

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It requires the purchase of the correct radio specific interface cable which can be made by those with the ability and desire to do so.

A less expensive competitor the DigiLink to at \$49.97 USD is the digiRig, seen here in the image above and to the right The digirig also provides isolation of the radio and can also be used with 2 meter radios. The digirig has serial CAT interface and PTT control. The company also sells prebuilt cables for many popular radios can custom cables can be ordered if needed.



I have 2 digirigs and have found them to be excellent in build quality and function, especially for portable operations. They work nicely and are much more compact and easier to carry than Signalink. I do own and use a Signalink in my shack. In fact, I own two but only have one in use in the shack at the moment.



I felt it important to also provide a quick overview of the Signalink because for some this may be a better option.

Signalink is a well-established brand manufactured by Tigertronics. More information about the unit can be found on their website

<http://www.tigertronics.com/slusbmain.htm>

As I write this the current base price is \$209 CDN from a well know local retailer.

Before the unit can be used it requires being setup. This is accomplished by taking the interior board out of the enclosure and configuring the jumpers for the specific radio in use. This is not a complicated procedure and jumper wires and a diagram are provided.

Preconfigured jumper modules are available for the unit. I have also just discovered a ancillary product which allows a mic to be connected to the Signalink. For radios where the data connection is made via the mic jack this device eliminates the need to disconnect the Signalink to use the mic.

As with other digital radio interface products the Signalink requires a radio specific cable. Prebuilt cables are available from the company.

One of the features I like about the Signalink are the front mounted knobs. These allow for quick and easy adjustment of input RX or output TX power.