FEEDBACK

The Official Newsletter of the
Georgian Bay Amateur Radio Club

January 2025

President's Message

Tex VE3USI

I wish all GBARC members and friends a Happy New Year. May you keep your resolutions that you have made. Looking forward to the activities of the new year.

73s Tex ve3usi

This will be my last message after two years as President of GBARC. Thanks to everyone who supported me at GBARC. It has been an interesting and educational experience. I will of course now carry on as Vice President, and do what I can to support Tex as he takes over the President's position.

As some in the club already know, RAC is preparing to officially launch the new Auxiliary Communication Service (ACS). This new program is being supported by the province. An official public announcement will be forthcoming at some point when there will be a joint RAC/Provincial announcement for this new program.

Once this happens I will be seeking volunteers for various aspects of the program here in Bruce County. Frank Gufler VE3GUF, has already completed one of the initial Aux-C courses, and has plans to become an instructor. Frank as already laid the groundwork for the roll out of this new program in Grey County by running an amateur radio certification course for staff of Grey County.

I anticipate following Frank's lead and doing something similar in Bruce County. GBARC could play a role in running a course or courses to get amateur radio operators on Bruce County staff as well as in

This Month

2023/ 2024 Executive

President … Tex VE3USI
Vice-President… Marvin VE3VCG
Treasurer…….. Doug VE3DGY
Secretary…..… Bobby VE3PAV

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each municipality if possible. I am currently working with Emergency Planners for Bruce County to help integrate amateur radio in the new Bruce County Emergency Communications Plan.

The new ACS program uses a new approach to Amateur Radio Emergency Communication from the old ARES program. Preparing for this new program to finally roll out has preoccupied much of my time over the last year, and I expect it to continue to do so in 2025 and beyond. This new ACS program is an acknowledgement that we face larger and more complicated threats to emergency communication than in years past.

It is my hope that as I work with the county I can count on the support of GBARC going forward. There are other exiting new opportunities to work with other clubs, and our Bruce County communities on other projects which I anticipate will be interesting, challenging and fun.

I will continue with my Winlink Tuesday project and this will eventually expand to include a JS8Call / digital comms group. I am also looking forward to having a “maker group” which will involve 3D printing as well as creating original electronics projects.

Elsie’s Breakfast

Elsie's is now open for breakfast at 09:00. (*Winter Hours*)
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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.

GBARC Winter Challenge 2024/2025

This is our annual fun challenge for members and non members. A friendly competition to work Canadian stations during the winter months.

Read More

QRP Go Box IC-705 Tom VA3TS

It was last year about this time, I finished up a go box using the Iom 7300. For details about that project you can review this in the January 2024 issue of feedback. This is, as you may know, is a 100 watt transceiver HF rig with some very nice features for use portable and most notably at events like field day. I tried to make that project as a self contained station with an integral power supply and connections available on the box for such things as radio usb, mic, key and antenna connectors. All in all it worked out very well and I got to practise my construction skills and use up some of the bits and pieces in the shack junk box.

I have been playing with an ic705 and making it into a self contained, portable qrp station, keeping with the ideas learned from the IC7300 project ...here are a few shots.

The radio makes for a great companion for camping because not only does it play ham radio well, it is also and AM and FM radio. It boasts such features as blutooth, Dstar and wifi however these features are for a future article.

The rig is capable of HF,VHF and UHF 5 watts with its own battery pack. Included with the IC705 is a speaker mic which reaches around easily so it can be used while walking or stationary.

The ability to lock the VFO knob means you won't accidentally qsy to another frequency while moving around. Also, a quick push of the power button will blank the display and save battey power.

I used an antenna switch to move between HF and VHF/UHF. It is simply ty-wrapped in place as I didn't want to make any extra holes in the backpack.

The backpack is the ICOM LC-192, made specifically for the 705, It has various features, such as ports for the antenna and for passing through coaxial and microphone cables.

The antenna switch has a dual band antenna that fits nicely on one port of the antenna switch, the other goes to the MAT705 qrp antenna tuner. The tests I have done are very favourable as this little tuner works very well. The tuner I have is powered by an internal li-ion battery charged with a usb-c cable.

So moving between HF and V/UHF is easily done without actually changing connectors.

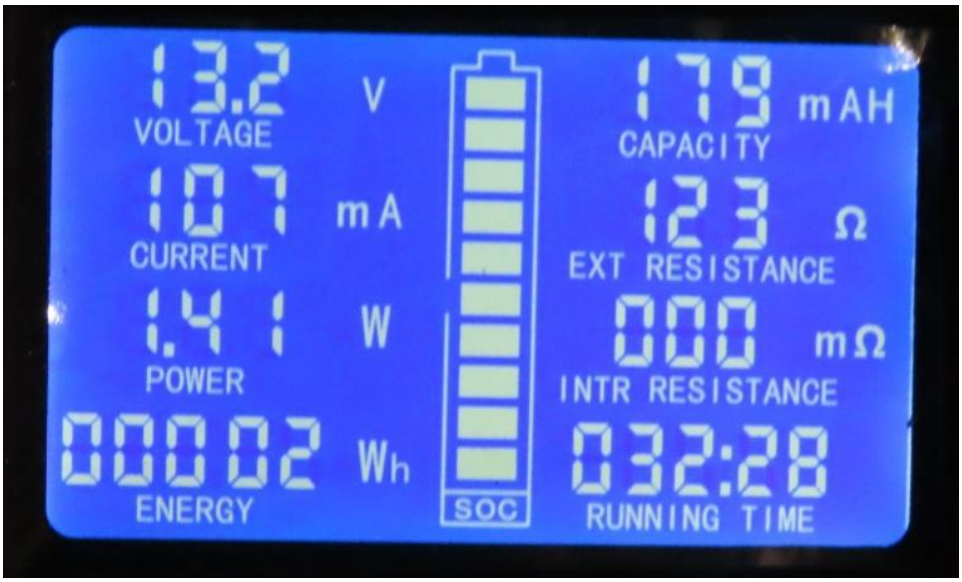
The other side of the backpack holds a qrp hf autotuner, controlled by that antenna switch. All the wires and cables are routed through the interior of the back pack so nothing is there to catch on things. The connector hanging out is for the HF antenna and uses a bnc connector so hooking up and disconnecting is easy. Those connectors are smaller as well.

Inside the pack is a aluminum holder for various i/o connectors, a 12vdc LiFePO4 battery and the means to charge it without taking it out of the pack. There are connectors for usb to a computer and a CW key jack. I used a small buck converter to allow charging the internal battery in the auto tuner. When the internal 12v battery is switched on, the rig now puts out 10 watts. As a bonus this also charges the ic705 battery pack. Should get a whole day out of it easily. The aluminum frame is made from ½" angle from the local Peavy Mart. The front panel scrounged from the junk box as well as the switches and usb connector. Almost all connections on the frams are made with rivets. The knob on the bottom right allows me to open the hinged front door for access to the internals. Its main function besides being a

sturdy holder for the 8ah LiFePO4, is to provide stability for the backpack itself. It should survive a drop to the ground.

Everything connect to the radio via connectors. This means the internal frame can be easily removed for what ever reason and replaced.

This battery monitor uses a shunt to keep track of current drain and other things. All parameters can be reset to zero.



The whole thing weighs 11 pounds.

…next month, the Comet HFJ-350 Series Portable Telescopic Antenna.

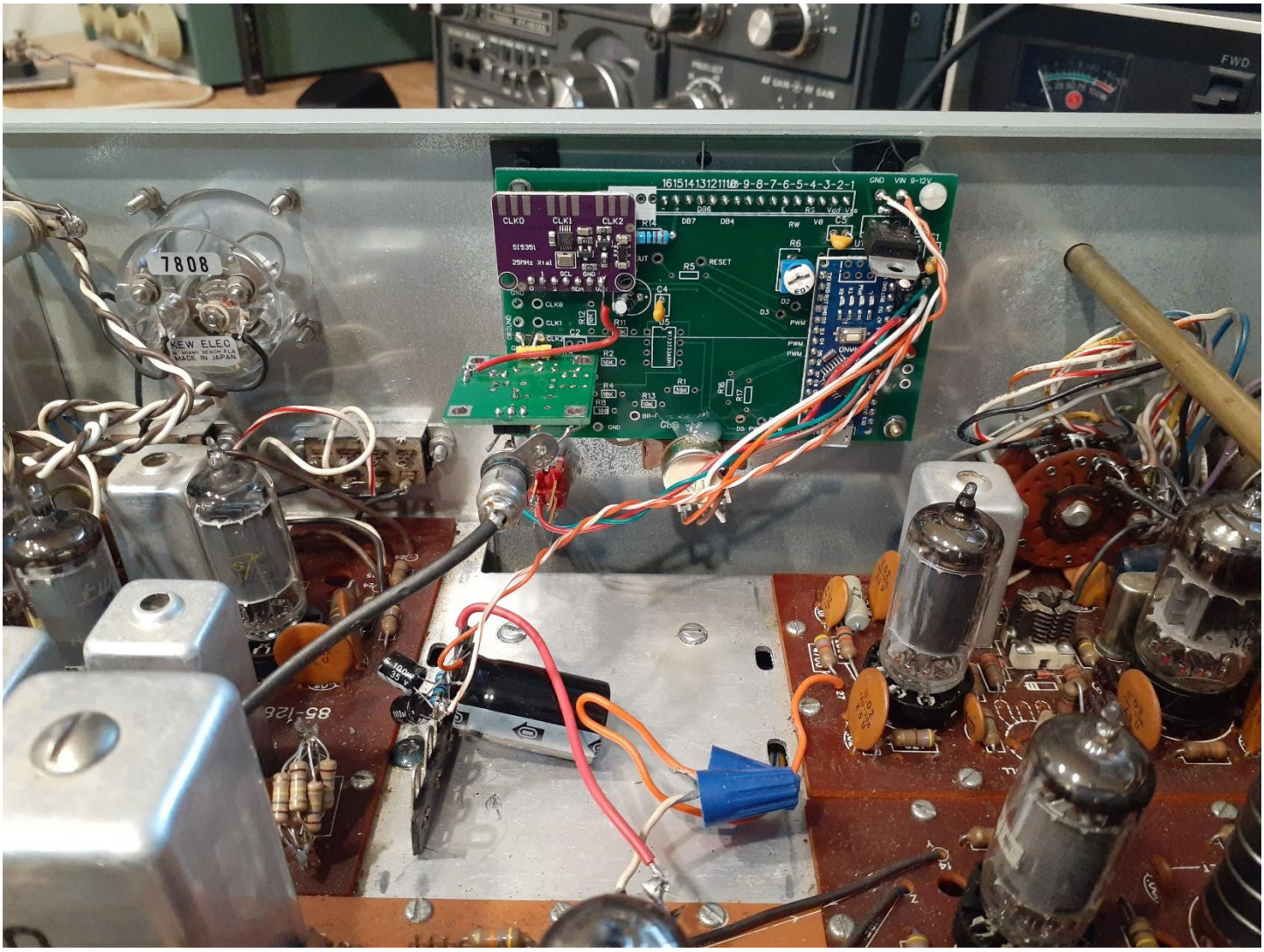
New Life for an old classic rig. Don VE3IDS

In the seventies Heathkit sold more than 30,000 HW -101 transceiver kits. Many are still around after 50 years and still on the air but most are on back shelves somewhere. They are very nice to listen to with quiet receivers and make for pleasant operating. They do have their shortcomings compared to modern rigs though. They do drift a bit until they are warmed up and the analog dial doesn't give you the precise frequency readout that we are used to now. They are fun to use as you get to participate more in the experience as you do have to tune up the rig when you change bands but I compare it to driving a classic old pickup with a stick or driving a new car with many automatic features and you are just along for the ride.

I have been building a few digital vfos and decided to install one in my HW -101. The rig now has no drift and the digital display has a resolution of 100 Hz. It is quite stable enough for digital modes if desired.
Here is a pic of a HW -101 with the original analog dial

Here is the rig with the digital display

The zero set button for the old disk dial is replaced with a momentary pushbutton that allows you to select vfo A or vfo B, USB or LSB and gives you access to set up changes such as sideband offset, band edges, tuning rate, etc. Here is the digital vfo board inside with the bare part of the chassis where the analog vfo was.



The new vfo is powered from the heater supply in the rig by the simple DC supply on the terminal strip on the middle of the pic. The marrettes are on the unused HV supply wires for the old vfo.

The project is quite inexpensive. The board was made at a PCB manufacturer for $6 shipped for 5 boards. The brains of the circuit is an Arduino Nano for $4, a si5351a breakout board for $3, a 10k pot for $1 and a level amp board for $12. There are a few other small junk box parts that would cost $5 to buy. The project is completely reversible. No holes were drilled, no parts modified. And the Arduino sketch (software) is free and you just need a common USB cable to program it.

It was a fun project and using something that you have some connection to makes the operating that much sweeter. This project could be done to any of the SB 100 or HW 101 type rigs and could be adapted to many similar boat anchors as they often use a similar design. Warm up that iron!

73 Don ve3ids

HF Signals by Ted Spencer

A few µBitxv6 transceivers have been using interesting components here for some years, and I recently came upon a YouTube video (from the Radio Society of Great Britain) in which Ashhar Farhan, the driving force behind HFSignals.com, speaks at length about his unique electronics journey, and how the µBit transceivers, and now the sBitx transceiver (his new 25 watt SDR), came to be. As one would suspect, these radios didn't arrive, fully fledged, in Ashhar's mind; they are the later steps on a long path. His light dance along that path is fun to watch, as well as being rather inspiring. The video is found here: https://www.youtube.com/watch?v=OARYpMjAbgI&t=1s. Of particular interest, near the end of that video, he outlines his gobsmacking approach to doing SDR in a Raspberry Pi.

The µBitxv6 schematic is, for someone (like me) who loves electronics for its own sake, an absolute gem. It works 160 to 10 m, with about 5 watts out. The magic, for me, is that it's fully broadband, except for 4 automatically-switched low pass filters after the transmitter. The thing is tuned entirely by a single software controlled oscillator with 3 RF outputs. Upper and lower sideband and CW modes are all effected by clever frequency choices in this brilliant double conversion radio. Doubly double, since the transmit path, in a real stroke of brilliance, is the receive path going the other way, and uses the same mixers and crystal filters. Poring over this schematic leaves one struck, not by its outlandish complexity as is so often seen in commercial radios, but by its brilliant simplicity. It does not claim to go head to head with a commercial radio costing ten times as much, but it's no slouch. I've got pages of contacts with this thing and my homemade quarter wave vertical; of them, I grin most about talking (from suburban Flesherton, ON) with Tom VA7TA in Courtney BC on the trans-Canada net only a few Sundays ago.

As with almost everything cool these days, there's an Arduino doing the grunt work in the background: driving a comprehensive colour touch screen and overseeing the triple VCO. Like the Arduino itself, all of the µBitx software and hardware are in the public domain: you can work from the schematics and build your own hardware, and program the Arduino with GitHub-stored software. A radio for the price of the components. I've bought several from HFSignals because this guy deserves tangible recognition, and he's got a collective of women in India who wind the many toroids. Most of us can afford to help them out. The complete radio is ~USD210.

The details for the radios described above are all available at HFSignals.com.
Ted VA3YWA

This is a reprint of the November 2024 minutes

Minutes of Meeting

By Dan VA3DNY
GEORGIAN BAY AMATEUR RADIO CLUB

Minutes of the Monthly Club Meeting 26th of November 2024

Call to order by Marvin VE3VCG at 7:00 PM

ATTENDANCE

Executive: Dan Mills VA3DNY Secretary, Marvin Double VE3VCG President, Doug McDougall VE3DGY Treasurer, Tex Brown VE3USI Vice President

Members: Greg Larocque VE3RQY, Janet Double VA3EAC, Bobby Pavlovic VE3PAV, Tom St.Amand VA3TS, Jim Reeves VE3JMD, Dave Newcombe VE3WI, Richard Osborne VE3OZW, Philip deKat VE3DPB, Mark Lindstrom VA3FIN, Marc MacDonald VE3MMJ, Mary Watson VA3ILT

QUORUM: Yes

TECH TALK:

Richard VE3OZW - HamClock on the RaspberryPI

Richard presented an overview of HamClock, what all it can do, and some configuration tips. It can be set up to display a lot of current band conditions, solar flux, dx cluster info, satellite information, etc. One of the most useful options is to access it remotely from any browser on the same network. This means you can use your phone to quickly look at band conditions etc.

All of the information and links from this tech talk will be posted on the forum.

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: Dave VE3WI, second: Tom VA3TS)

TREASURER'S REPORT:

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

Transactions: Dues received ($210), Donated equipment sales ($100), 50/50 earned ($35), service charges ($7), and Winlink and VARA Licence ($129.00). Balance: $xxx.65

The treasurer's report was accepted and passed by vote.

(motion: Tex VE3USI, second: Janet VA3EAC)

OLD BUSINESS:

Marvin VE3VCG presented an update on Winter Field Day. Bobby VA3PAV has made the reservations for us in Ferndale. Marvin has asked for volunteers to assist with the organization of the event. Last year there weren't any tables so Marvin will bring one.

Marvin also updated us on the Christmas Luncheon on December 7th seating at 12:30 and meal at 1:00 at Elsie's Diner. The meal selections have been submitted to the Diner.

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

NEW BUSINESS:

Doug VE3DGY explained to us that GBARC passed its financial audit and presented the letter from the auditor.

Marvin VE3VCG introduced the beginning of a WinLink & Digital Modes Development Group. He plans for it to become a weekly digital net for people to develop skills with digital modes. Please contact Marvin if you are interested.

Marvin also indicated that there have been new developments for ARES and ACS. There will be a big announcement in the new year and we will get more details at that time.

Greg VE3RQY suggested that the club should consider a gift to the Executive Director who allows us to have access and use of our meeting space free of charge. Dave VE3WI made a motion for Greg to buy a suitable gift for approximately $100. Phil VE3DPB seconded the motion and it was passed by vote.

The 50/50 Draw winner: Dan VA3DNY amount: $30.50

Meeting Adjourned at 8:05 PM

(motion: Janet VA3EAC, second: Richard VE3OZW)

Interesting Websites

Send your interesting web finds in and they will be posted here

Installation Manuals & Tuning Instructions Sinclair
https://www.sinctech.com/pages/installation-manuals-tuning-instructions

Upgrade to Win11 on unsupported hardware
https://www.youtube.com/watch?v=g3aWGBkH9P4

Learn to Code
https://www.w3schools.com/

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 https://gbarc.ca/contact.php, and we will get back to you.

Help US Out *Would you like to receive email notifications when this newsletter is posted? Sign up for our mailing list. No ads and no personal information, your email address is never shared with anyone else.* *Subscribe*

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.

I am gunna tell my kids these wires went to the fridge, for the ketchup, mayonnaise, and mustard dispenser