

KINGSTON AMATEUR RADIO CLUB NEWSLETTER

Founded in 1947

November 2017

Executive Committee

President

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Vice President

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Treasurer

Douglas Richards, VE3FFR

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Secretary

Chip Chapman, VA3KGB

sec@ve3kbr.com

Past President

Paul Taenzer, VA3LX

KARC Repeaters

VE3KBR

146.940(-) MHz

151.4Hz Tone, IRLP Node #2750

VE3UEL Hartington APRS Node

144.390 MHz

VE3KER Kingston Packet Node

145.070 MHz Simplex

Committee Chair Members

VHF Net Manager

Brian Hopkins, VA3BAH

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HF Net Manager

David Wendt, VE3EAC

Membership Manager

Steve Cutway, VE3KC

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FROM THE PRESIDENT

New Executive Volunteers Needed for 2018

Although I can certainly think of another presidency that I wish would end in two months, my presidency at KARC will be coming to an end in December. With that we're looking for new volunteers for 2018, particularly for the positions of President, Vice President, and Secretary. If you are interested in helping the club for next year, please e-mail me at pres@ve3kbr.com.

Software Defined Radios Sparking Lots of Interest

While SDR is not new, and most of us had an inexpensive USB-type dongle for a while, there has been a lot of renewed local interest in it particularly among those who mostly monitor rather than talk. I've recently upgraded to an SDRPlay model from a \$30 USB dongle, and was surprised at how many responses I've received when I put the old SDR up for sale. There's been lots of chatter on mailing lists since and at least two other hams in the area are also planning to purchase mid-end units.

SDR is too vast of a field to cover in this column, but it offers an amazing advancement over our older desktop rigs that can only monitor one frequency (maybe two) at a time. For example, vast parts of the spectrum can be monitored at the same time, and recorded for later playback and analysis. If you are interested in listening to utility transmissions from marine, air, military and others, SDR lets you find those transmissions very easily by visual scanning of the spectrum. These types of short transmissions on nearly random frequencies would ordinarily elude a listener trying to find them by spinning a dial. Lots more can be written about the advantages (and some disadvantages) of SDR, but see Figure 1-1 for an illustration of the difference.



Figure 1-1: Conventional vs SDR: A regular radio operator is shown on the left, an operator with Software Defined Radio on the right.

My Top Ebay/Aliexpress Picks

These are some of the handiest items I've found online.

1. SMD Tweezers



If you are do a lot of board level work, there are times when you may have to check a dozen or two dozen diodes, resistors, or caps. These tweezers will make that process go much faster than trying to wrestle conventional probes around.

Cost: ~\$6

<http://www.ebay.ca/itm/SMD-Inductor-Test-Clip-Meter-Probe-Tweezers-Resistor-Multimeter-Capacitor-Module-/201961688160?roken=cUGayN&soutkn=XPdJnS>

2. Tevo Tarantula 3D Printer



There's many 3D printers at \$250 price range available. Now reality is that at this price point none are going to be perfect or even fully thought out. The Tevo Tarantula comes with aluminum construction and delivers good value without relying on an outmoded acrylic frame that many of its competitors use. Great way to start with 3D printing.

Cost: \$245-\$260 (depending on how terrible the loonie is doing this week)

<https://www.aliexpress.com/item/2017-Latest-TEVO-Tarantula-Prusa-i3-3D-Printer-DIY-kit-Smooth-Printing-Mks-base-Board-2/32788641698.html?spm=a2gos.9042311.0.0.p8zOgw>

3. Tiny SATA-USB Adapter



This is a great item to have in your toolbox. Instead of having a lug around a giant hard drive enclosure for when you might need to get data off a drive, this tiny USB adapter plugs directly into the hard drive and is ready to work with no screws or fuss. At \$3 you can't go wrong by having one of these around.

<https://www.aliexpress.com/item/Professional-USB3-0-2-0-to-SATA-22Pin-Cable-for-2-5inch-HDD-Hard-Drive-Solid/32805754942.html?spm=a2gos.9042311.0.0.p8zOgw>

4. Tiny programmable thermostat



This small module is easily installed in any equipment you want to monitor the temperature of or control with a heating/cooling relay. It's great for quieting down gear that comes with giant fans that run all the time or controlling the temperature of the beer fermenting in your garage. At less than \$2 each, you can install one of these in just about anything that needs temperature control.

Cost: \$1.84

<https://www.aliexpress.com/item/1PCS-W1209-DC-12V-heat-cool-temp-thermostat->

temperature-control-switch-temperature-controller-thermometer-thermo-
controller/32411258645.html?spm=a2gos.9042311.o.o.lfk9Es

5. 5V RGB Led Strips

Gleco



These super handy RGB strips ship with an adhesive-backed strip and a USB powered controller. They can be set to various colors and pattern combinations as desired just by pushing a button on the controller. I've used them to make PCs more interesting, improve holiday decorations and as interesting mood lighting/conversation starter for befuddled guests. Once you have them, you'll find a use for them in something.

Cost: \$5-\$10 depending on options.

<https://www.aliexpress.com/item/LED-Strip-2835-SMD-flexible-light-12V-Non-Waterproof-60LED-m-5m-lot-low-power-high/1857949964.html?spm=a2gos.9042311.o.o.QT7eEY>

Assaf

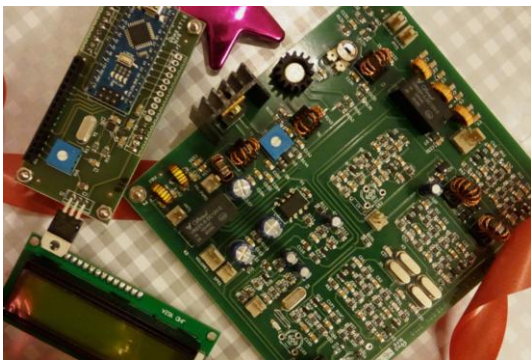
VA3PCI

GUEST ARTICLE

There are so many aspects to Amateur Radio that make it such a wonderful hobby. For me, it's homebrewing my own equipment, whether its test instruments, accessories, or transceivers. In the case of the latter, I've built radios from kits and from schematics only. Each project has prospects to afford a learning opportunity that for me, is what makes homebrewing even more rewarding. An example of this is during the course of designing and building the last and a current project, I learned that simply making RF measurements can lead to problems. Strange things happen at RF and simply measuring a circuit may introduce errors that can lead you down the proverbial garden path, or, more eloquently put, drive you crazy.

Understanding measurement errors and how to avoid them can go a long way towards creating a rewarding experience. While trying to sort out these measurement issues, and subsequently making impedance measurements, a whole new area of concern opened up that needed to be resolved. Sometimes this can lead to more projects and in the case of measurement issues, it was probe attachments. However, in the case of impedance measurements, something far more complicated than probe attachments will be required. But that's another story.

Where I'm going with all of this is the BITX series of transceiver kits. Here is a kit where there are really no worries about whether it will work or not.



The BITX is a 40 metre transceiver that was designed by Ashhar Farhan VU2ESE. This is not your typical kit in that the actual transceiver board is already built and pre-aligned. All you have to do is wire up, mount controls, jacks, and an LCD into a case. The beauty of this project is you can concentrate on hardware and software modifications instead of the actual process of installing components and getting the RF chain, etc., to work properly. This would be the perfect kit for not only the first-time builder but for those who are a little more experienced and might be interested in hacking into a radio. As a matter of fact, hacking into the BITX is not only encouraged, it's expected. As good as it is out of the box, there are some

things that you will want to change. The good news is fixes have been published so you don't have to start from scratch if you don't want to. Mods such as AGC, RIT, turning this rig into a multiband rig or even just putting it onto another band are achievable. The rig is controlled by an Arduino Nano and the code is open source.

I was lucky enough to meet Ashar at *Four Days in May* during the Dayton Hamvention this year and had a considerable amount of facetime with him. He's very knowledgeable and freely gave his time. He also frequents the groups listed below.

Myself, along with Paul VA3LX, and Dave VE3EAC, bought the BITX and recently met at Dave's place for a pleasant afternoon build session.

Dave not only has all the usual electronic test equipment you would ever need, but has all the tools needed to work on your cases. This makes things go so much smoother. No need to mess around with inappropriate tools to accomplish what would ordinarily be a simple task. Using a 3D printer, Dave printed up bezels for the LCD screens. This made for a nicely finished front panel that would not have been possible in my hands with all the nibbling and filing.

So how did our mini buildathon go? Well, I got no further than mounting the LCD, circuit board and the various controls and jacks. I did manage two connections as well but I decided that layouts and mounting the hardware was time better spent first. Paul, however, went in a totally different direction and wired up the whole thing first. Putting it into a case will

be a problem to be worked on later. I have a vision of Paul ending up with a big ball of wire with the LCD and controls protruding out in appropriate places!

While filing out the square hole for my LCD, it wasn't too long before we heard the hiss of 40 metres from across the room. After connecting up an antenna, we were able to hear some strong SSB signals and were very pleased with the initial results. Dave completed his layout designs and mounted the circuit board.

Paul is thinking about modifications to support the digital modes. I'm thinking about moving the rig to 60 metres but perhaps turning it into a multiband would be a better idea. There is an active on-air BITX net that will be quite interesting to take part in once the rigs are on the air that is.

Hopefully, over the next couple of weeks we can all get the rigs on the air and make some contacts. If you're interested in the BITX kit, let us know and we would be more than happy to show off our new toys and share our experiences. Dave, thanks for hosting a great afternoon; hope we get invited back.

Support for the BITX is available with a very active worldwide group at <https://groups.io/g/BITX20>. As well, there is a blog for BITX hacks: <http://BITXhacks.blogspot.ca/>

The BITX can be obtained at <http://www.hfsigs.com/>

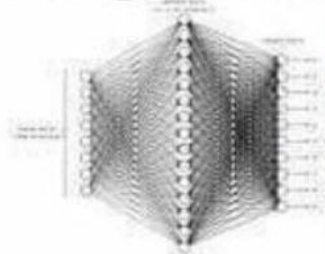
73, Peter

Ve3poa

One day



i'm gonna be a computer



- ✓ immortal
- ✓ smells nice in there
- ✓ get to beep
- ✓ Microsoft Excel

and there's NOTHING you can do to stop me

MEETING MINUTES

Kingston Amateur Radio Club

Minutes of the Meeting

3 October 2017

Held at Smitty's Restaurant

Kingston, Ontario

1. The meeting was called to order at 7:08pm by the President, Assaf, VA3PCI.
2. There were 17 members and guests present.
3. Minutes of the Previous Meeting:
 - a. It was moved by Chip, VA3KGB, and seconded by Jack, VE3YCJ, that the minutes of the May meeting be approved as presented in the October Newsletter.
 - b. Carried
4. Treasurer's Report:
 - a. It was moved by Doug, VE3FFR, that Financial be approved as presented in the October Newsletter
 - b. Carried.
5. Old Business:
 - a. Remote HF Station Update:
 - i. Chip, VA3KGB, reported that the Windows 10 Skype update no longer recognizes the older version of Skype and does currently not have Auto-Answer feature. He is looking into other programs such as RemAud and Mumble.
 - b. RAC Insurance:
 - i. Steve, VE3KC, provided information that the RAC insurance costs for non-RAC members of the club are being borne by the Club at present. There was discussion on raising the membership costs to include a surcharge for non-RAC members. As the membership rate has been set for 2018, the rate will not increase this year but is to be looked at by the Executive for 2019 membership rates.
 - ii. It was moved by Steve, VE3KC, and seconded by Doug, VE3FFR, that the sum of \$500.00 be approved for the RAC Insurance renewal.
 - iii. Motion Carried.
6. New Business:
 - i. Nil.
7. Reports:
 - a. 2m Net Manager:
 - i. Brian, VA3BAH, reported that the net has been active, with an average of 10-12 check-ins, and is looking for net controllers. The swap shop continually produces results.
 - b. C.F.A.R.S.:
 - i. Les, VE3KFS, - HF SSB exercise was held with the Reserves recently and CFARS will be participating in Ex Noble Skywave in late October. This is a multinational HF military exercise with MARS and CFARS stations also participating.
 - c. Hearts and Flowers: Nil Report
 - d. Other Reports:
 - i. Web Page: Chip, VA3KGB, indicated that the KARC has had a web presence for 20 years this month.

8. Date of Next Meeting: 7 November 2017
9. 50/50 Draw:
 - a. A total of \$24.00 with Les, VE3KFS, and the Club each receiving \$12.00
10. Adjournment:
 - a. It was moved by Brian, VA3BAH, and seconded by Eric, VE2PEF, that the meeting be adjourned.
 - b. Carried
11. Presentation:
 - a. Doug, VE3FFR, gave a presentation on a home brew dummy load.
 - b. Dave, VE3EAC, gave a presentation on of the Beloit ARC Membership Test Questionnaire (PowerPoint – humour).

Clifford ('Chip') Chapman, VA3KGB
Secretary
Kingston Amateur Radio Club

MEETING AGENDA

1. Members and Guests introduce themselves
2. Additions to the Agenda
3. Minutes of the last Meeting: errors / omissions / approval (Chip VA3KGB)
4. Treasurer's Report
5. Old Business:
 - a. HF Remote Station Update
6. New Business:
 - a. No new business
7. Reports:
 - a. Net Manager (Brian VA3BAH)
 - b. CFARS
 - c. "Hearts and Flowers"
 - d. Other Reports
8. Presentation: Carlyle VE3WIO will have a presentation on celestial navigation.
9. Date of next meeting: 05 December 2017
10. 50 / 50 Draw
11. Adjournment

FINANCIAL REPORT

KARC FINANCIAL REPORT – Oct 2017

Oct 23, 2017

Opening Balance

Cooperation Plus	5355.64
Dividend Shares	45.89
Equity Shares	261.62
Total	5663.15

Income

Int	.04
50 50 Draw	12.00
Membership	150.00
Total	162.04

Expenditures

Closing Balance

Cooperation Plus	5557.72
Dividends Shares	282.51
Equity Shares	25.00
Total	5865.23

NET CONTROL SCHEDULE

05 September 2017	NO NET, Meeting @ Smitty's
12 September 2017	Brian, VA3BAH
19 September 2017	Assaf, VA3PCI
26 September 2017	Steve, VE3KC
03 October 2017	NO NET, Meeting @ Smitty's
10 October 2017	Larissa, VE3KGC
17 October 2017	Pieter, VE3NXE
24 October 2017	Peter, VE3POA
31 October 2017	Carlyle, VE3WIO
07 November 2017	NO NET, Meeting @ Smitty's
14 November 2017	John, VE3CAK
21 November 2017	Brian, VA3BAH
28 November 2017	Assaf, VA3PCI
05 December 2017	NO NET, Meeting @ Smitty's
12 December 2017	Steve, VE3KC
19 December 2017	Larissa, VE3KGC
26 December 2017	Pieter, VE3NXE
02 January 2018	NO NET, Meeting @ Smitty's
09 January 2018	Peter, VE3POA
16 January 2018	Carlyle, VE3WIO
23 January 2018	John, VE3CAK
30 January 2018	Brian, VA3BAH
06 February 2018	NO NET, Meeting @ Smitty's

NET CONTROL SCRIPT

Revised April 16, 2013

Good evening. This is [name and callsign], net control station for the Kingston Amateur Radio Club's Tuesday night Net.

The Kingston Amateur Radio Club Tuesday Night Net is an informal net that meets at 1930 hours every Tuesday evening on the KARC repeater, VE3KBR. We welcome participation by all amateurs.

Before continuing, is there any emergency or priority traffic? Please call now.

The purpose of the net is to take check-ins; to inform you of KARC activities; and to provide news of interest to Radio Amateurs. Information about KARC may be found on the web site (www.ve3kbr.com) or by contacting any of our club executive members.

I will take check-ins giving priority to mobiles, portables and stations checking in via EchoLink or IRLP. When checking in, please give your call sign phonetically, your name and location, and indicate whether you have any traffic or announcements for the Net.

Are there any stations using EchoLink or IRLP wishing to check in? Please call now.

Are there any mobiles or portables wishing to check in? Please call now.

Are there any base stations wishing to check in? Please call now.

Trivia Time

Here's tonight's trivia question(s).

Swap Shop

Are there any items for the swap shop?

Closing

Are there any additional check-ins or announcements before I end the Net?

That concludes this evening's Kingston Amateur Radio Club Tuesday Night Net. Thank you for participating. We had [number] check-ins this evening. 73. This is [name and callsign] returning the repeater to normal amateur use.