

KINGSTON AMATEUR RADIO CLUB NEWSLETTER

Founded in 1947

June 2018

Executive Committee

President

Larissa Reise, VE3KGC

pres@ve3kbr.com

Vice President

Brian Hopkins, VA3BAH

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Treasurer

Douglas Richards, VE3FFR

treas@ve3kbr.com

Secretary

Chip Chapman, VA3KGB

sec@ve3kbr.com

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

Steve Cutway, VE3KC

netmanager@ve3kbr.com

HF Net Manager

David Wendt, VE3EAC

Membership Manager

Steve Cutway, VE3KC

<http://www.ve3kbr.com>



FROM THE PRESIDENT

Summer has arrived very suddenly this year, and it's almost time to dig out those rigs and antennas for Field Day as well as the various contests! For our part, KARC will be holding our annual Field Day at the QTH of Ralph VA3REF, between Elginburg and Sydenham on the shores of Loughborough Lake. If you haven't already, get in touch with him for details and to let him know you'd like to participate!

This summer promises to be fairly busy for me, starting with my annual participation in the ARRL VHF QSO Contest on the weekend of June 10th. If anyone is interested in participating, I'll be setting up a base camp just east of Carleton Place and roving around the grid conjunction of FN14, FN15, FN24, and FN25. The award-winning West Carleton Amateur Radio Club sets up their main station on Corkery Rd, so I have at least one pretty much guaranteed contact and/or "radio check" station available. I'm mentioning these details because I'm more than willing to accommodate extra participants or observer/spectators. To get in on the fun, even for just part of the weekend, please get in touch with me at ve3kgc@gmail.com.

In August, our friends on the other side of the St Lawrence are planning a Special Event Station to commemorate the 80th anniversary of the opening of the 1000 Islands International Bridge. The Special Event Station will be active on August 18th, and the 1000 Islands Repeater Club is hoping that some Canadians (ahem) might do something similar. At the very least, get on the air and give them a contact or two, or if you're in the area, maybe stop by their planned location at the foot of the US end of the bridge!

Whatever you do, stay safe, have fun, and see you all when our regular meetings resume in September!

Larissa VE3KGC

Heathkit SB-102 Restoration

Last year I had the opportunity to acquire a vintage Heathkit transceiver from a fellow ham operator in the Quite ham radio club. The rig was first donated to the Quite Club by John Mann, VA3MAV with hope that they would be able to find someone interested in restoring it. Apparently no one took up the offer so they advertised it with the Kingston club and I immediately jumped at the opportunity. In my younger days I was a Heathkit fanatic and have built numerous various kits for friends and family. I built my first Heathkit in grade 7 which was the AR-3 communications receiver. I was hooked after successfully building it and continued building them until they went out of business. I still have many of them in working condition today and am reluctant to get rid of them for nostalgic reasons. I was a very keen SWL'r but I never built any ham radio equipment as I needed to obtain my ham license. I had started to study basic electronics and learn the morse code and got to 7 or 8 words per minute but never quite made it as other interests took over.

After making arrangements to pick up the Heathkit SB-102 in Belleville I was pleasantly surprised to see that it came complete with a matching desk microphone and a few spare tubes. All for a very nominal price.

Initially the front panel looked pretty rough but closer inspection found that it had been covered with a clear mac tac which had lifted in several spots giving the impression that a new panel would be in order if available. When I realized it was mac tac I carefully removed it to find a like new panel. First thing to do was open it up and give it a close visual inspection to see if there was any signs of burned resistors, leaky capacitors and maybe even small rodents nests since this radio is almost 50 years old. Other than lots of dust and some chassis oxidation it looked pretty good. Still I wanted to clean it up before applying any power so I used isopropyl alcohol and a small bristle brush to clean up the PCB's.

First power up was done very carefully using a variac and inline ammeter to look for any possible shorts in the power supply transformer and capacitors. Things looked good with panel lights coming on with some background static. The S meter was reading off scale in the negative direction. No high voltage was showing on the meter so obviously further troubleshooting was required. At this point I decided to shut down and check the resistance of all carbon resistors as the older carbon composition resistors are known to drift substantially with age. Being this is a vacuum tube radio, checking the resistor values in circuit was fairly easy as there are few semiconductor junctions in parallel to affect the readings. I found at least 15 or more resistors which had drifted 20 to 30% on the high side. I also found that one of the voltage dividers in the HV circuit was completely open circuit which explained why no voltage was showing on the panel meter. I did not have all the resistance values required so decided to order a 1200 ½W resistor package from China for \$10 which would ensure that I had all the necessary values. I figured this would be more economical than ordering individual resistors.

A total recap of all power supply capacitors was also required since they were all original. In order to keep the power supply looking original I removed the outer cardboard tubes on the main HV capacitors then cut the

aluminum cans approximately 3/4" from the base and removed the internals of the capacitors. New capacitors were physically much smaller than the original so it was fairly easy to install them inside the old cans and use the old cardboard sleeves to make them look original as shown in the pictures. All other capacitors in the power supply were also replaced.





Next in priority was to see if I could check all the tubes before going any further. I used to have a Heathkit tube checker and gave it away several years ago thinking I would never see any tube equipment again. Who would have thought? Thanks to Dave Wendt, VA3EAC I was able to use his tube checker to sort out any weak tubes and check what spares I had and replace most that needed it. Thanks to George Harrington, VE3DFH for donating me a spare set of 6146 finals.

Next came a complete alignment which was made fairly easy using the Heath manual. This was fairly straight forward and only took a couple of hours. However alignment of the 15 meter band proved to be somewhat tricky as I found out that I had to tune the heterodyne oscillator coil slightly off peak as it would sometimes cut out completely due to the normal drifting that you get with tube circuits.

First full power up of the radio was very rewarding and found that I was able to receive some stations on the 20, 40 and 80m bands. I thought that the receiver sensitivity was somewhat low but found that even my Icom 756 ProIII was also fairly quiet due to the very poor band conditions we are having this year. Later that evening I listened in on the 40m band and heard someone in France so decided to try out the TX for the first time. I place my call and immediately heard back from F5RAG with a signal report of 5/7. When I told him that this was my first contact with my just restored Heathkit SB-102 he remembered that he was my first contact last year using my new to me Flex 3000. What a coincidence. What are the odds? I should have gone out and bought a sweepstakes ticket.

Having successfully restored this old Heathkit has fueled my interest in restoring other Heathkit ham radio gear so I have gone to several ham fests from Toronto to Smith Falls to see what I could find. So far I have been successful in getting an SB-303 receiver and just recently the only completely solid state transceiver made by Heathkit, the SB-104, which I have cleaned up and is now in full operating condition. I have not replaced any filter capacitors yet as preliminary testing showed no voltage drop even under 85 watts output. So far I have made 3 contacts with good signal reports. This is probably one of the simplest radios to operate as there is no tuning required whatsoever except of course the use of an antenna tuner if your antenna needs it.

As a final finishing touch to the restoration of these radios I decided that the cases should be repainted the pale Heathkit green. I took one of the cases to Home Depot and had them do a color match. I removed all my Heathkit cases and cleaned them up as best I could and then lined them up on a couple of 2 x 4's on an old card table in the garage and used my spray gun to give them a like new finish.

The following pictures show the Heathkits I have restored to date. As you can see from the pictures they really look just like new. I really don't have any plans to get anymore but you never know. I'm sure that I can find room for another if a great deal was to come along. Can't get enough of the old Heathkits.

Hopefully this little article will inspire others to restore some of these old collectibles which were so valued by many ham operators in the 60's and 70's

Dave Fasken VA3DLF







My Heathkit Collection

MEETING MINUTES

Kingston Amateur Radio Club

Minutes of the Meeting

1 May 2018

Held at Smitty's Restaurant

Kingston, Ontario

1. The meeting was called to order at 7:00pm by the President Larissa, VE3KGC.
2. There were 19 members and guests present.
3. A minute of silence was held for Derek Walter, VE3HRW
4. Minutes of the Previous Meeting:
 - a. It was moved by Chip, VA3KGB, and seconded by Jack, VE3YCJ, that the minutes of the April meeting be approved as posted in the May Newsletter.
 - b. Carried.
5. Treasurer's Report:
 - a. a. It was moved by Doug, VE3FFR, and seconded by Ralph, VE3REF, that the Financial report be approved as posted in the April Newsletter.
 - b. Carried.
6. Old Business:
 - a. Logo Items:
 - i. Greg, VE3PJ, has taken over this project for Brian VA3BAH.
 - b. ARRL Field Day, 23/24 June 2018:
 - i. Ralph VE3REF, volunteered to be the coordinator and host Field Day at his place. Chip, VA3KGB, volunteered to help, but will not be at Field day. Basic information on Filed Day will be sent out on the Group List.
7. New Business:
 - a. Web Hosting/Domain Renewal:
 - i. Chip, VA3KGB, gave a brief on the updating costs to have the web site as a secure site which would cost approx. \$10 more per year. The web site fees are due 1 June. Chip, VA3KGB, moved and Steve, VE3KC, seconded that the Club upgrade to a secure web site at a cost not to exceed \$500.00.
 - ii. Carried.
 - b. Repeater Use Request:
 - i. Ron, VE3GO, indicated that there has been a request to use the repeater for back up communications for the Ottawa-Kingston Bicycle Rally June 9/10. The Bicycle Rally have priority for using the repeater if required except for emergency traffic.
 - c. CANWARN:
 - i. Ron, VE3GO. CANWARN training will be in Kingston 11 June at Calvin Park Library. Registration is through geoff.coulson@canada.ca.
 - d. Swap Shop:

- i. Ron, VE3GO, reminds everyone to keep him updated as to the status of items they have listed with him.
 - e. 1000 Islands Bridge Special Event:
 - i. Steve, VE3KC, reminded everyone of the upcoming event and wondered if the Club might participate.
 - f. Donation on behalf of Derek, VE3HRW:
 - i. Steve, VE3KC, moved and seconded by Ralph, VE3REF, that the Club make a donation to the University Hospital Kingston Foundation in memory of Derek of a sum of \$500.00.
 - ii. Carried
8. Reports:
 - a. 2m Net Manager: Steve, VE3KC, thanked the controllers. Check-ins 7-11, net length 28-39 minutes
 - b. HF Net: Dave, VE3EAC – Nil.
 - c. C.F.A.R.S.: Les, VE3KFS.- Ops normal.
 - d. HF Remote station: Antennae survived the windstorms.
 - e. Hearts and Flowers: Nil.
 - f. KAREX: Peter, VE3POA, - Internet of Things experimentation still ongoing.
 - g. Other Reports: Nil
9. Date of Next Meeting: 5 June 2018
10. 50/50 Draw: \$29.00, Split Club/Ron, VE3GO: \$14.50. Donated back to Club.
11. Adjournment:
 - a. It was moved by Les, VE3KFS, and seconded by Eric, VE2PEF, that the meeting be adjourned.
 - b. Carried.
12. Presentation: Chip, VA3KGB, gave a presentation on the VE6JY Contest Station at Lamont AB (NE of Edmonton).

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

VHF NET REPORT

June 5, 2018

Thanks to the controllers who kept the VHF net alive during May: Larissa VE3KGC, Pieter VE3NXE, Peter VE3POA and “yours truly” VE3KC. Check-ins ranged from 9 to 12 and net duration ran from 28 to 39 minutes. Thanks also to Ron VE3GO for continuing to do the swap net. If you have items to trade, buy, swap or sell, get hold of Ron.

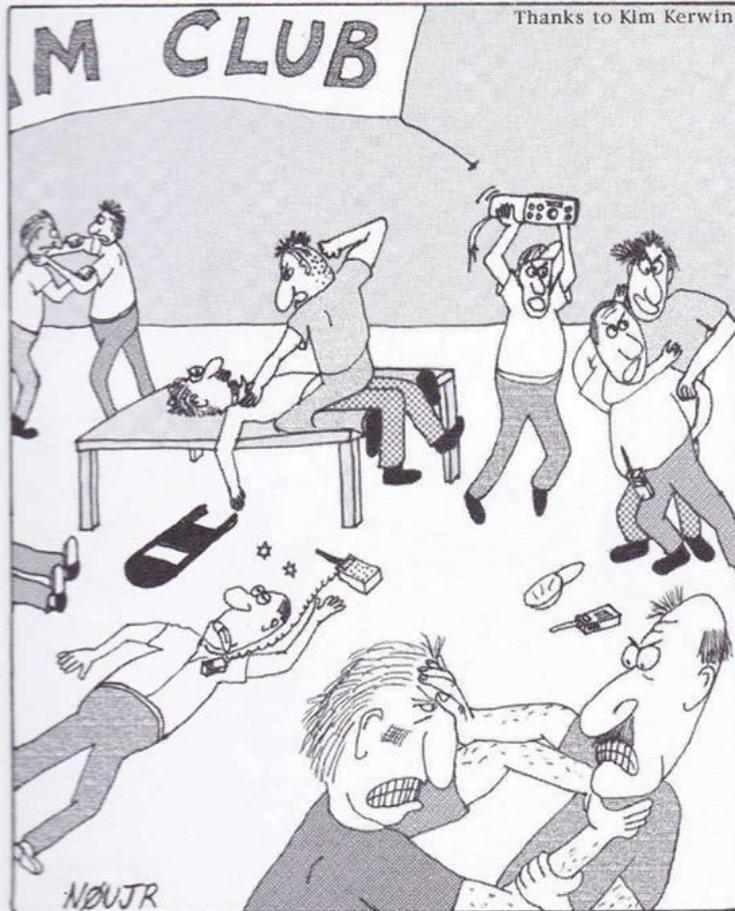
The net will continue all summer and I will do my best to e-mail each controller when it’s your turn; and I’ll also try to remember to send a weekly net reminder to the KARC Google Group on Tuesday.

I hope everyone has a wonderful summer.

Steve VE3KC

VHF Net Manager

NOUJR Cartoons



Violence erupts at the first annual 14.313 Users Group Meeting.

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:
6. New Business:
7. Reports:
 - a. Net Manager (Steve VE3KC)
 - b. CFARS
 - c. "Hearts and Flowers"
 - d. Other Reports
8. 50/50 Draw
9. Presentation: Phillip from the Repair Café Kingston will be speaking about the café.
10. Date of next meeting: 3 July 2018
10. Adjournment

FINANCIAL REPORT

KARC FINANCIAL REPORT – May 2018

May 29, 2018

Opening Balance

| | |
|-------------------------|----------------|
| Cooperation Plus | 5814.49 |
| Dividends Share | 289.81 |
| Equity Shares | 25.00 |
| Total | 6129.30 |

Income

| | |
|-------------------|--------------|
| Int | .05 |
| 50 50 Draw | 14.50 |
| Donation | 14.50 |
| Membership | |
| Total | 29.05 |

Expenditures

| | |
|-------------------------|---------------|
| Donation to UHKF | |
| In memory of | |
| VE3HRW | 500.00 |

Closing Balance

| | |
|-------------------------|----------------|
| Cooperation Plus | 5343.59 |
| Dividends Share | 289.81 |
| Equity Shares | 25.00 |
| Total | 5658.40 |

NET CONTROL SCHEDULE

March 13 VE3POA Peter
March 20 VE3WIO Carlyle
March 27 VE3KC Steve
April 10 VA3BAH Brian
April 17 VA3PCI Assaf
April 24 VE3CAK John
May 8 VE3KC Steve
May 15 VE3KGC Larissa
May 22 VE3NXE Pieter
May 29 VE3POA Peter
June 12 VE3WIO Carlyle
June 19 VA3BAH Brian
June 26 VA3PCI Assaf
July 3 VE3CAK John
July 10 VE3KC Steve
July 17 VE3KGC Larissa
July 24 VE3NXE Pieter
July 31 VE3POA Peter
August 7 VE3WIO Carlyle
August 14 VA3BAH Brian
August 21 VA3PCI Assaf
August 28 VE3CAK John
September 11 VE3KC Steve
September 18 VE3KGC Larissa
September 25 VE3NXE Pieter
October 9 VE3POA Peter
October 16 VE3WIO Carlyle
October 23 VA3BAH Brian
October 30 VA3PCI Assaf
November 13 VE3CAK John
November 20 VE3KC Steve
November 27 VE3KGC Larissa
December 11 VE3NXE Pieter

December 18 VE3POA Peter

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.