

Newsletter

January 2010



Kingston Amateur News

Kingston Amateur Radio Club 2010 Executive

President: Steve, VE3KC

ve3kc@cogeco.ca

Newsletter Editor: Joan Clarke

joan.g.clarke@sympatico.ca

Vice-Pres: Chip, VA3KGB

va3kgb@rac.ca

Repeater Committee:

VE3KFS, Les Lindstrom

les.lindstrom.sympatico.ca

Treasurer: Doug, VE3FFR

ve3ffr@cogeco.ca

VA3GST, John Snasdell-Taylor

va3gst@kos.net

Secretary: David, VE3DZE

ve3dze@gmail.com

VA3KGB, Chip Chapman

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Past-Pres: Les, VE3KFS

les.lindstrom@sympatico.ca

VE3JCQ, John Wood

ve3jcq@rac.ca

2010 Committee Chairs

Two Meter Net Manager:

VE3KC Steve Cutway

ve3kc@cogeco.ca

VE3MNE, Don Gilroy

ve3mne@rac.ca

P.O. Box 1402 Kingston Ontario K7L 5C6

<http://www.ve3kbr.com>

VE3KAR
VE3KBR
VE3UEL
VE3KER
146.94(-) MHz



**The 2nd Repeater is now
Operational
147.090(+) MHz**

FROM THE PRESIDENT

It's hard to believe we're almost through the first month of 2010. I used to scoff at retired people who said they didn't know how they found time to work. I'm now one of them and I find myself wondering the same thing.

I'd like to thank Chip VA3KGB for filling in at the January meeting in my unplanned absence due to illness. I'm fully recovered now and am looking forward to the next meeting Feb. 3rd, which, for those who are old enough to remember, is "the day the music died".

One of my hopes for 2010 is to have presentations at the meetings. To this end, Rob VE3RPF will be discussing and demonstrating LED technology at the February meeting. It promises to be an informative and entertaining talk so I hope to see a large crowd on hand. We discussed possible future presentations at the executive meeting this week. If you have any suggestions for a presentation, or if you'd like to do one (it isn't hard), please contact any executive member. I'm sure you're all doing amateur radio activities that others aren't and we all would benefit from your knowledge and experience.

And speaking of the executive meeting, we have begun to consider some unfinished business from last year. We hope to have an announcement about the membership list shortly so stay tuned. We're also thinking about an appropriate disposition of equipment that may be surplus to KARC's current needs and what, if anything, to do about the letter to RAC.

And speaking of RAC, I joined earlier this month. I also think that I now have a complete understanding of the RAC Affiliated Clubs Insurance Program. Rather than bore you with the details here, I'll bore you at the February meeting. :-)) (Before you say, "oh no", I'll simply be responding to the discussion I missed in January.) But for the curious, you can learn as much as I did by visiting: <http://www.rac.ca/en/rac/programmes/affiliated-clubs/insurance/>

I hear a lot of discussion on the bands about the regulations that govern our hobby. There appears to be a lot of misinformation being disseminated. If you want proof, listen to the talk on the HF bands about the "Ontario Display Screens and Hand-held Devices" law.

One of the enormous benefits of the internet is the availability of information on every imaginable subject including amateur radio.

Thanks to Doug VE3FFR, I urge you to visit: <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01812.html>

There, you will find "Spectrum Management and Telecommunications - Questions and Answers - Amateur Radio". There is a wealth of pertinent information pertaining to the regulations that govern our hobby. So take a look, spread the word and dispel the myths.

In closing, I look forward to seeing everyone Feb. 3rd and to enjoying Rob's presentation. Until our next QSO, on the air, at the next meeting or in the next newsletter, as I say in e-mail, cheers & 73s, Steve VE3KC

From the Editor:

I am receiving a few articles but I really need more. If not articles then possibly a web address that will give information to the new and older ham, as well. If not, then what you will get will be a straight, no nonsense newsletter.....Joan

KARC Tuesday Night Net Control Script
Revised Jan. 12, 2010

[Before you start the net, please turn off the repeater identifier by issuing the key sequence '300' on your touchtone keypad. If you don't have a touchtone keypad, ask someone else to issue the key sequence for you.]

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

The Kingston Amateur Radio Club Tuesday Night Net is an informal net that meets at 1930 hours every Tuesday evening using VE3KBR 146.940 MHz, with a 151.4 tone required on the input, located in Kingston. 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; to provide news from other radio clubs and 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 wishing to check in? Please call now.

Are there any 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 [callsign] returning the repeater to normal amateur use.

[Please remember to turn on the identifier again after the net by issuing the key sequence '301' on your touchtone keypad. If you don't have a touchtone keypad, ask someone else to issue the key sequence for you.]

KARC NET CONTROL SCHEDULE

FEBRUARY	MARCH
February 2 - VE3KC, Steve	March 2 - VE3TD, Mike
February 9 - VE3MUD, Ian	March 9 - VE3VJF, Roy
February 16 - VE3NFU, Bill	March 16 - VE3CAK, John
February 23 - VE3SIQ, George	March 23 - VE3DZE, David
	March 30 - VE3JPW, Warren

APRIL	MAY	JUNE
April 6 – VE3KC, Steve	May 4 – VE3TD, Mike	June 1 – VE3DZE, David
April 13 – VE3MUD, Ian	May 11 – VE3VJF, Roy	June 8 – VE3JPW, Warren
April 20 – VE3NFU, Bill	May 18 – VE3VJF, Roy	June 15 – VE3KC, Steve
April 27 - VE3SIQ, George	May 25 – VE3CAK, John	June 22 – VE3MUD, Ian
		June 29 – VE3NFU, Bill



FRONTENAC ARES Sunday night net on VE3KBR at 1930 hours. All are welcome to check-in.

FRONTENAC ARES Tuesday HF night net on 3.740 at 2030 hours.

* * * * *



**The THIRD MONDAY of every month at 7:00 pm.
is the KINGSTON ARES REGULAR MONTHLY MEETING
at the Woodbine Firehall, second floor**

KARC Web page designed and maintained by: VA3KGB, Chip

<http://www.ve3kbr.com/>

Publication Schedule of the KARC Newsletter will be February 24th, 2010

OF INTEREST

RAC Information of June 16, 2010

RE: Earthquake in Haiti

On Tuesday, January 12 at 4:53 PM, Haiti time (2153) UTC a magnitude 7.0 earthquake hit 15 kilometers west of Port-au-Prince, the nation's capital. Communications in and out of Haiti have been disrupted. The RAC requests that all Canadian Hams be aware of the emergency operations on the following frequencies: 7.045 3.720 MHz (IARU Region 2 Nets), 14.265, 7.265 and 3.977 MHz (SATERN Nets), and 14.300 MHz (Intercontinental Assistance and Traffic Net). The International Radio Emergency Support Coalition (IRESC) is also active on EchoLink node 278173 .

RAC News Bulletin - January 17th, 2010 Haiti, the Amateur perspective.

We have all seen the tragic human toll and devastation of the Haitian earthquake as reported by the media. We have been asked what the Amateur community is doing about it.

To our knowledge, since the earthquake, less than half a dozen Hams have been reporting from Haiti and have done so very sporadically. Most have severe constraints for electricity, fuel or other required facilities.

Apart from a couple of Hams embedded with the UN or the Red Cross, none other have succeeded to enter the country and stay to operate.

Yesterday, a convoy of Dominicans made up of representatives from that government and including 8 Amateurs, entered Haiti by road on its way to their Embassy in Port-au-Prince. Almost at destination they were attacked by gunfire resulting in one dead and several wounded. All 8 Amateurs are safe. The convoy turned around and is now safely back in the Dominican Republic.

Outside of Haiti, there are scores of Hams listening on the published HF frequencies for emergency communications and ready for any QSPs.

Here in Canada, our Vice President Field Services, Doug Mercer, VO1DTM, is watching the situation very closely, ready to give any help that might be needed.

We also have French speaking operators like Gerry, VE2AW and Richard, VE2DX, that are ready on the frequencies to speak to anyone in need in Haiti.

We are also getting ready for the future. At the Request of the Salvation Army SATERN I have recruited about 20 Hams, fluent in French, that are now poised to leave for Haiti when required.

This is the situation as of now and we will update you when we have something significant to report.

73, Daniel A. Lamoureux, VE2KA, Vice President International Affairs, Radio Amateurs of Canada

RAC Bulletin 2010-003E

Haiti Earthquake Traffic – 2010-01-24

As the recovery in Haiti continues, the IARU would like to thank Hams of the world for being there for the people of Haiti. Many messages have been successfully passed over the airwaves. Effective immediately the frequencies 7.045MHz and 3.720MHz are released with gratitude to all who have kept them clear in the last days.

73, Doug Mercer VO1DTM,

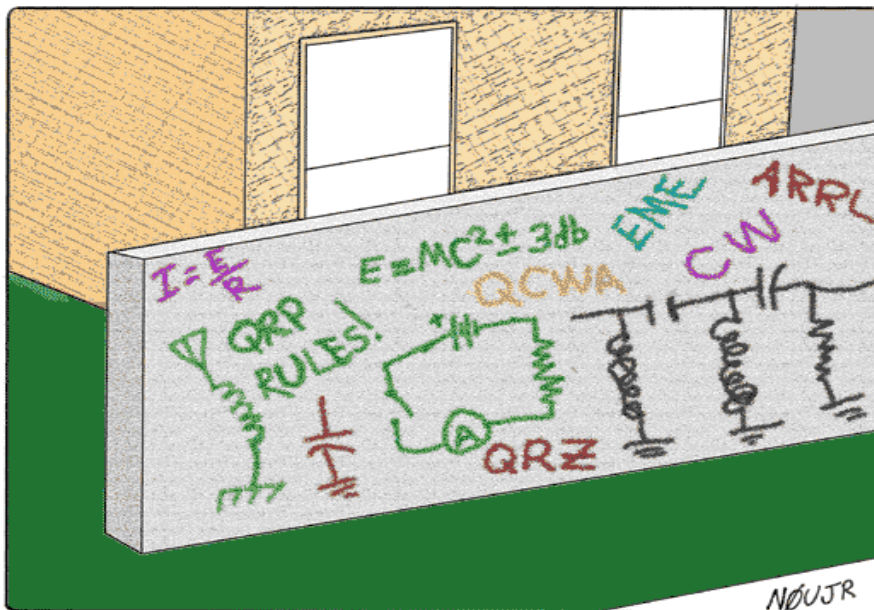
Vice President Field Services - Radio Amateurs of Canada

WEB SITES OF INTEREST

From Dave, VA3DAC: There are a couple of interesting articles in **Linux Journal**, for January, about amateur radio. Some applications seem available for free. APRS and a number of other digital modes.

And from Terry, VA3TRM: Lots of info about military radios and ham radios on the link below:

<http://www.syzen.com/milradio/RelatedSites.html>



Ham graffiti.

Following is another article written by Phil Salas, AD5X
ENJOY!!!!

Compact Voltage Protector/Fuse Assembly for 100-watt transceivers Phil Salas – AD5X

Introduction

Do you worry about protecting your mobile transceiver from voltage transients on the mobile DC line? And in your home station, how about the possibility that your station power supply might lose regulation and put excessive voltage on your transceiver? Some power supplies have over-voltage crowbar protection to protect against this possibility, but many don't. And since many radios have un-switched DC on their final amplifier transistors and internal power lines for electronic on/off switching, any voltage in excess of the maximum spec'd voltage (typically 16-18 volts) can be damaging even when the radio is off.

Now for very little outlay in cost and effort, you can do a good job of protecting your transceiver from unforeseen powering failures and transients, and unintentional powering accidents that can be very destructive. Further, as many transceivers use 1-1/4" cartridge in-line fuses in the DC power cord, you can incorporate the fusing and voltage protection in a small enclosure that takes up no more room than the existing fuses. Finally, this voltage protector unit connects to your transceiver and power supply or batteries with Anderson Powerpole™ connectors (I have standardized on these for all my DC applications). Obviously, you can connectorize this unit with whatever connectors you've standardized on.

The Voltage Protectors

I built two versions of the voltage protector – one using standard 1-1/4" fuses and the second using automotive blade fuses.

The 1-1/4" fuse version parts list is shown in Table 1, and the schematic is shown in Figure 1. For both transient and overvoltage protection I used a 1.5KE15A 15-volt transient suppressor diode (Mouser 625-1.5KE15A). This is basically a very high current 15-volt zener diode which can handle a peak current of over 70 amps! All the circuitry is contained in a 1.97"x1.38"x0.67" plastic box. I mounted a Powerpole connector pair directly on this box (epoxied in place) which interfaces to the transceiver's pendant DC cable (see Figure 2). The rectangular cut-out for the Powerpole pair is easily made with a nibbling tool. A Powerpole terminated 12-gauge DC-input pendant cable connects to the power supply or battery. I used heat-shrink-covered braid for the interface to the epoxied-in Powerpole connector pair. To really make assembly easy, you may wish to use pendant cables for both the DC input and output. Note that it is important to properly orient the fuse assembly with respect to the 1.5KE15A so as to ensure that the diode properly provides both over-voltage and reverse voltage protection. Photo A shows the cartridge fuseholder, the plastic box and the installed (but not yet epoxied-in) PowerPole connectors. Photo B shows the fuseholder with the 1.5KE15A diode installed.

Referring to Figure 3, wire up everything and then epoxy the dual fuseholder to the box. I had to trim one corner of the fuseholder so it would clear the cover mounting post of the

box. Snap the two fuses into place and you're ready to go. I labeled this voltage protector box with Casio white-on-clear labeling tape.

Table 1: Parts List for 1-1/4" x 1/4" glass fuses

<u>QTY</u>	<u>Description</u>	<u>Source</u>
2	25-amp 1/4x1.25" fuse	Mouser 504-AGC-25
1	1/4x1.25" Dual Fuseholder	Mouser 534-3537
1	1.97"x1.38"x0.67" box	Mouser 546-1551GBK
1	15V/1.5KW Volt.Prot.Device	Mouser 625-1.5KE15A
2 pr	Anderson Powerpole	*Connex PP-30-KIT

* www.connex-electronics.com

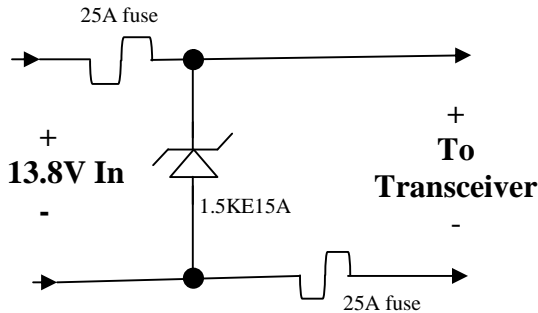


Figure 1 – 25-amp Voltage Protector

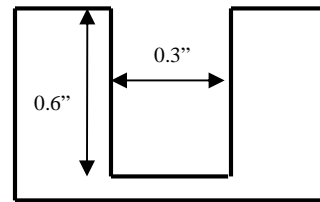


Figure 2: Side View – PowerPole cutout

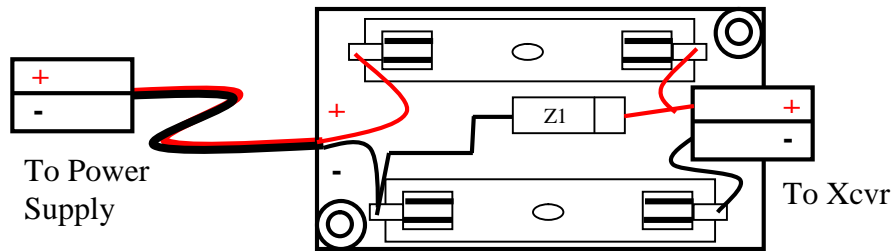


Figure 3: Internal Component Mounting



Photo A: Cartridge fuseholder & box

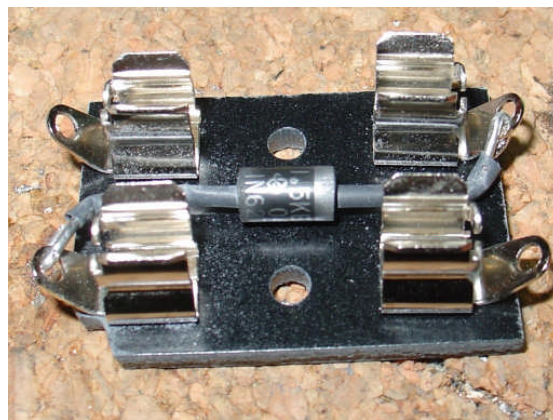


Photo B: Fuseholder with 1.5KE15A

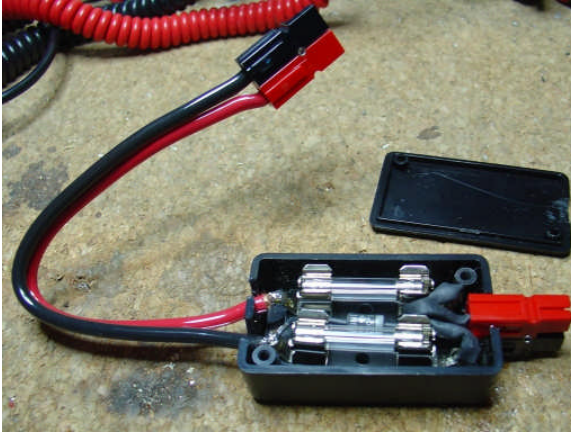


Photo C: Internal view of fuse assembly



Photo D: Final cartridge fuse assembly

Transient/Over-Voltage Testing

To check the ability of the 1.5KE15A to clamp transients, I diode-or'd a 50-volt current-limited power supply with a 13.8VDC power supply as shown in Figure 4. I keyed the relay with an external signal generator/transistor switch and observed the voltage across the 1.5KE15A. The oscilloscope waveform is shown in Photo E. As you can see, the 1.5KE15A does an excellent job of clamping the voltage to 16V maximum.

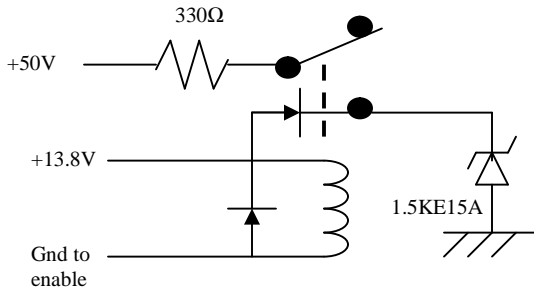


Figure 4: Test Circuit

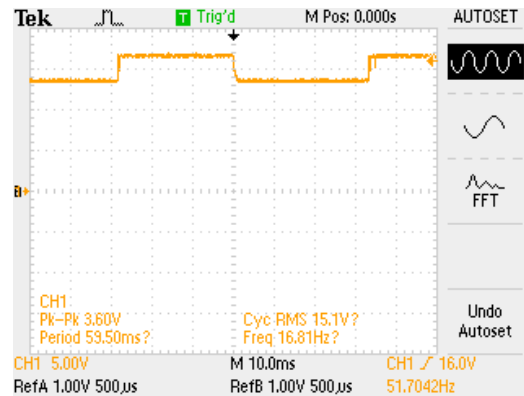


Photo E: Clamping waveform test

To check the over-voltage condition that could result from loss of power supply regulation, I put two 12V gel-cell batteries in series and connected the +24V output to the fuse assembly. The fuse blew immediately. I did this several times, and I did have one occurrence where the 1.5KE15A diode failed. It failed shorted, so the protection was still provided. Possibly I caused the failure by repeatedly testing the over-voltage protection with the same 1.5KE15A diode.

Finally I ran some reverse voltage protection tests. I did this twice - with no radio connected of course! The fuse blew immediately and there was no apparent damage to the transient suppressor diode.

Automotive Fuse Version

Because of the popularity of automotive blade fuses, I built a second voltage protector that uses these popular fuses. And because I used a larger box for the automotive fuse holders, I added crowbar protection as seen in the schematic in Figure 5. In this circuit, the 1.5KE15A still clamps and absorbs fast over-voltage transients as well as provides reverse-voltage protection. However, longer sustained over-voltage conditions, such as a power supply that loses regulation, will trip the triac which will blow the fuse. The 1uf capacitor makes the circuit insensitive to very short duration transients and noise on the incoming DC line. With this circuit the 1.5KE15A diode won't fail with any over-voltage condition.

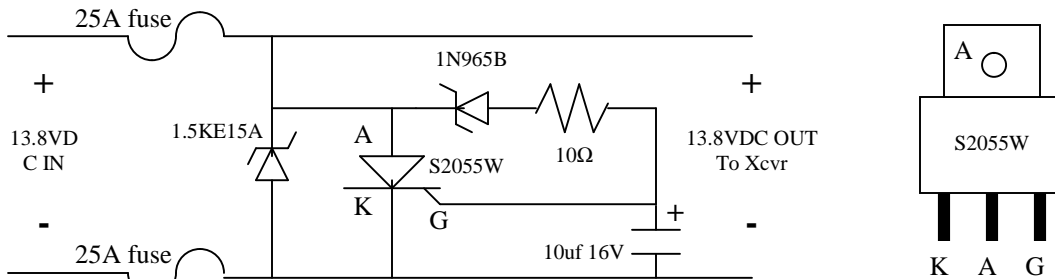


Figure 5: Crowbar Circuit

Table 2 shows the parts list for this version. The automotive fuseholders slide together to make a dual-fuse assembly which even has a position for a spare fuse. I cut out a 1" x 1.4" opening in the plastic cover of the box with a nibbling tool, and then epoxied the fuse holders into place. PowerPole mounting brackets hold the transceiver-side connector in-place, although you can use pendant cables for both the DC input and output. All parts were built on a small piece of perf-board as you can see in Photo F. Photo G shows the final assembled voltage protector (note the spare fuse). I used a Sharpie™ silver permanent marker pen to label this voltage protector unit.

Table 2: Parts List for automotive fuses

<u>QTY</u>	<u>Description</u>	<u>Source</u>
2	25-amp automotive fuse	Mouser 576-0257025.PXPV
2	1/4x1.25" Fuseholder	Mouser 534-3560
1	1.12"x22.13"x3.27" box	Mouser 563-CU-1941
1	15V/1.5KW Volt. Prot. Device	Mouser 625-1.5KE15A
1	S2055W triac	Mouser 576-S2055W
1	15V zener diode	Mouser 512-1N965B
1	10 ohm 1/4-watt resistor	Mouser 660-CFS1/4CT52R100G
1	10uf 16VDC electrolytic capacitor	Mouser 647-USV1C100MFD
2 pr	Anderson Powerpole	*Connex PP-30-KIT
1 pr	PowerPole mounting brackets	*Connex 146-2G1

* www.connex-electronics.com

I connected a high voltage variable power supply to the unit to test the crowbar circuitry. I found that the SCR would trip at 15.6 volts.

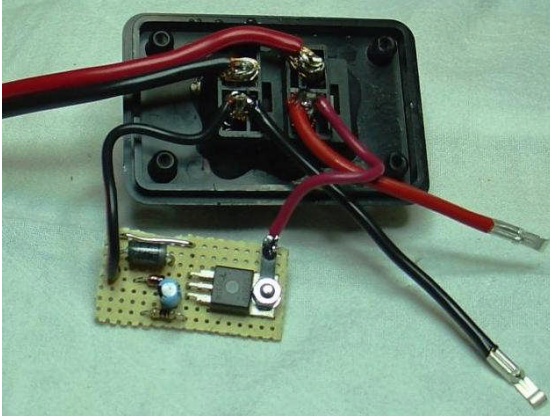


Photo F: Crowbar circuitry

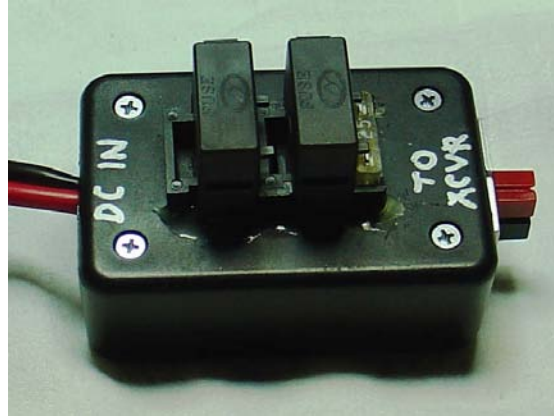


Photo G: Completed assembly

Summary

I've described two in-line voltage protectors for 20-amp 100-watt transceivers. These assemblies are compact, yet provide over-voltage and reverse voltage protection and fusing. Build-up one of these units for your transceiver and ensure you're your radio is protected from inadvertent power supply transients, power supply over-voltage failures or connection mistakes.

Just a reminder:

We are now accepting 2010 membership dues. They can be paid at a meeting through any executive member or sent to:

Kingston Amateur Radio Club

ATTN: Treasurer-Membership

PO BOX 14, STN MAIN

KINGSTON ON. K7L 5C6

Kingston Amateur Radio Club Inc.

Monthly Financial Report

January 2010

Income **January 2010**

Membership **\$200.00**

Donations **5.50**

50/50 Draw **9.00**

Total Income **\$214.50**

They were no expenses.

Balance in the bank **\$6,232.39**

Doug VE3FFR

Treasurer

Kingston Amateur Radio Club

AGENDA
KINGSTON AMATEUR RADIO CLUB, INC

FEBRUARY 3rd, 2010

At Smitty's Restaurant, back room

7:00 pm.

- 1. Members Introduce themselves**
- 2. Additions to the agenda**
- 3. Minutes of the January 2010 meeting - errors/omissions/approval (David VE3DZE)**
- 4. Treasurer's report (Doug VE3FFR)**
- 5. Business arising from the Minutes**
 - a) KARC response to the inquiry about the APRS problem at the airport – Steve will update**
 - b) Other items from the floor if any**
- 6. New business**
- 7. Reports:**
 - a) President**
 - b) RAC
 - c) Net Manager - VE3KC
 - d) KARC Newsletter
 - e) Web page - VA3KGB
 - f) Frontenac County ARES
 - g) 'Hearts and Flowers'
 - h) Other reports
- 8. 50/50 draw**
- 9. Date of next meeting – March 3, 2010.**
- 10. Adjournment**

Guest Speaker: Rob VE3RPF – LED technology

**Minutes of Meeting
of the
Kingston Amateur Radio Club, Inc.**

**held on
Wednesday, 6th, January, 2010
At Smitty's Restaurant
Princess St, Kingston Ontario**

1. **Call to Order:** Vice Pres Chip called the meeting to order at 7:PM.
2. **Introduction** of members and guests: There were 18 members present
3. **Corrections:** Chip read the noted corrections regarding web pages, and Nick's call sign was printed wrong as it is VE3NJG not ngk. David VE3DZE moved the corrections be entered into the minutes and seconded by Roy VE3VJF, it was passed.
4. **Treasurer's report:** Bill VA3OL read the report and stated there was a couple of changes to update the report to its current statement. VA3OI nominated the report to be correct as read and seconded by Bill VE3CLQ. The nomination passed.
5. **Old Business:** There was none.
6. **New Business:** There was a discussion on an APRS problem that appears to be caused by Barry Smith at the airport. The club has decided to ask Barry to attend to the problem and if no response then see if he can be "Blocked".
7. **Reports:**
 - a) **RAC:** There was a heated debate about RAC, as they have not answered any questions regarding their insurance.
 - b) **Net Manager:** VE3KC via printed report (he and Les were absent due to illness) that the numbers of check ins has been in the 12 to 17 range and that we have another volunteer Assaf VA3PCI for net control.
 - c) **KARC Newsletter:** Joan has again made an excellent Newsletter and we again remind every one to send articles directly to her.
 - d) **Web page:** Chip continues to correct errors found on the site pages as they are found or reported to him.
 - e) **Other Reports:** Don VE3MNE has access to the Clarendon Station repeater and it will soon have tones (151.4) so as to be an almost twin of KBR. Bill VE3CLQ has the equipment ready for the IRLP stage of deployment (part of the FCARES repeater system) and it will be ready to operate as soon as the repeater is up and running on 146.805- toned to 151.4.
8. **Fifty/Fifty draw** was won by VA3PCI Assaf. His share was \$9.

9. **Date of next meeting:** The next meeting will be on Feb 3rd, 2010.

10. **Rob Parker VE3RPF will do a presentation.**

11. **Adjournment:** It was moved by Roy VE3VJF and seconded by Bill VE3CLQ that the meeting be adjourned. Motion carried.

David Sellick VE3DZE

Secretary

Kingston Amateur Radio Club.