

# Bulkley Valley Amateur Radio Society

## *Affiliated with Radio Amateurs of Canada*

Hazelton 146.80, Smithers 146.88 and 444.9 (79.7Hz tone), Houston 147.06. IRLP 147.33, APRS 144.39 (no tone)

All repeaters, except as indicated, require 100Hz access tone. See [www.pgarc.org](http://www.pgarc.org) for wider network information.

## Newsletter – Fall 2010

### **Next Meeting: 2010 Annual General Meeting, Sunday Dec. 5<sup>th</sup>, 1pm at Ranger Park Building**

Be sure to mark your calendars. **Refreshments will be available!**

A good attendance is important to meeting our obligations under the Society Act and to the grant funding agencies. The meeting will include the (hopefully brief) formal AGM followed by a technical presentation and socializing.

An important part of the AGM is election of officers for 2011. Perhaps you want to serve or nominate someone?

#### **AGM Agenda:**

*Call to Order*  
*Introductory Remarks*  
*Adoption of Agenda*  
*Approval of Minutes from last AGM*  
*Consideration of the Financial Statements*  
*Report of the Directors*  
*Election of Officers*  
*Other Business* (Courses, repeater system update, etc.)  
*Adjournment*

#### **Current Officers/Directors:**

**President:** Bob Haslett, VE7CE  
**Vice-President:** Rick Friesen, VA7RDF  
**Secretary:** Doug Steventon, VE7EPT  
**Treasurer:** Gary Lobley, VE7LCP  
**Director:** Brian Butler, VY1BB

**Technical Presentation:** An APRS Primer/Demonstration, other items.

**Dues for 2011:** Dues for 2011 (\$5 per person) are payable starting at the AGM.

#### **BVARS News Items**

We now hold a formal Licence-of-Occupation for our Glentanna (146.88) repeater site. This gives us the authority to occupy the site and some protection from incompatible users.

As decided at the last AGM, the BVARs is now officially an affiliate club of Radio Amateurs of Canada (RAC). RAC ([www.rac.ca](http://www.rac.ca)) is the volunteer-run national organization that represent our interests to Industry Canada and internationally. RAC provides many services (including that cool callsign@rac email address) and publishes TCA (The Canadian Amateur, an informative magazine). The BVARs directors encourage you to consider joining RAC (\$52.50 including taxes).



The BVARs needs liability insurance for its amateur radio activities and to hold its own repeater site tenure. RAC provides this at very reasonable cost to affiliated clubs (free to individual members, included in the RAC membership fee). The cost of the insurance for the BVARs is based on the proportion of our members that are not RAC members and thus not already covered.

### ***Public Service, Repeater System Upgrading Project, and Emergency Preparedness***

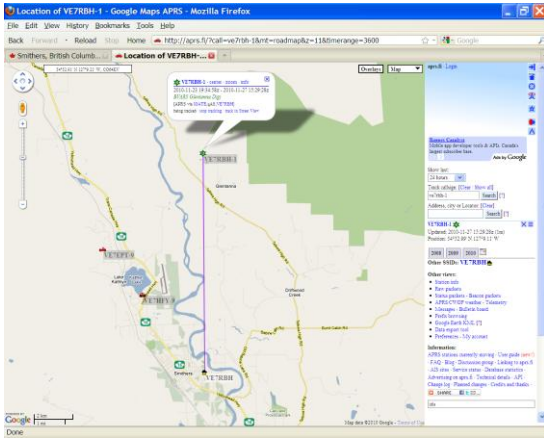
The primary reason the Amateur Service maintains its spectrum allocation and gets grant funding for projects like our repeater network, is our contribution to emergency preparedness and public service.

The Trade-show, Diabetes Walk, Tyhee Lake Triathlon, Northern Net Hamfest, and Scouts Jamboree on the Air events all went very well.



***Gary (VE7LCP) proudly showing newly installed 146.88 repeater, duplexer, charger (above his right shoulder) and link radios (mounted sideways on outside of rack).***

With our 2010 Gaming Grant, and some society funds we made good progress on modernizing our repeater system: A new UHF linking hub/repeater on Hudson Bay Mountain; new repeater, link radios, duplexer and battery charger at Glentanna (146.88 site), new link radios, charger and batteries at Houston site. An APRS-internet gateway was established in town, and a digipeater installed at the Glentanna site.



**APRS digipeater (VE7RBH-1, relay station) and internet gateway in town (VE7RBH). See <http://aprs.fi>**

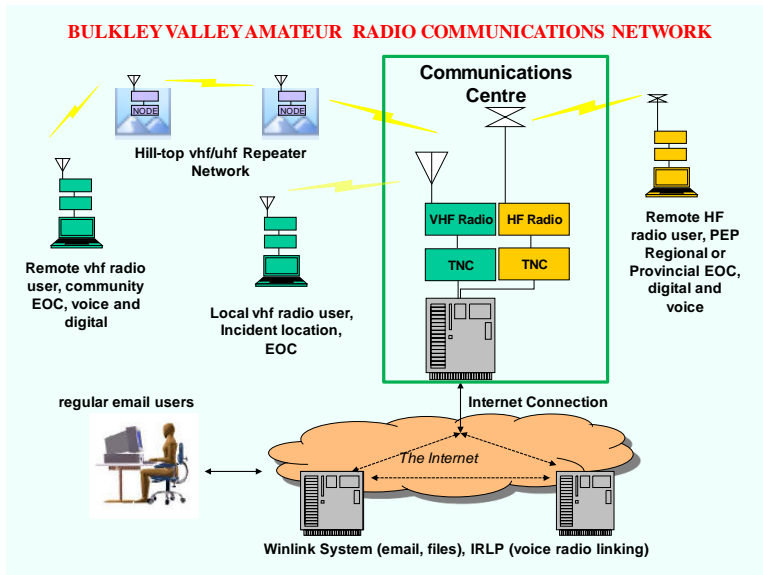
### **Sunday Morning Net at 09:30**

The Prince George club runs the Sunday morning (09:30) Northern BC VHF net on the repeater network. The net allows us to check operability of the linked repeater system. We can count check-ins as volunteer hours in our grant applications.

### **Message Centre (Club Station) Project**

This project is to set up an automated station at Ranger Park. As part of our 2011 Gaming Grant application (additional to completing the repeater system upgrade) we requested funds to purchase equipment. Here is the summary from the application....

**Purpose:** Equip, maintain, and operate an automated Communications Centre capable of routing local, regional, provincial, and national voice and data communications independent of commercial providers.



Grant funds will be focussed on establishing a central communications coordination centre including both voice and digital messaging capability using an integrated VHF (repeater system, local/regional coverage), high frequency (HF, regional to national coverage), and internet voice ([www.irlp.net](http://www.irlp.net)), and email gateway ([www.winlink.org/EmComm](http://www.winlink.org/EmComm)). Text messages, attachments, and position reports from locations outside regular internet service will move via radio links to the automated centre and onto the internet (or the reverse), or relayed further by radio if the internet is disrupted. The system will be regularly exercised for public service events,

vhf = very-high frequency (line-of-site), HF = High Frequency (long-range direct), PEP = Provincial Emergency Program, EOC = Emergency Operations Centre

exercises, and routine use by Industry Canada licensed Amateur Service operators.

BVARS members volunteer their personal equipment to connect into the centre from outlying communities and event locations (e.g., an Emergency Operations Centre). The concept is for the centre to be operated remotely via

radio or internet from anywhere within the range of the mountain top repeater system. This allows maximum flexibility of use and accessibility from multiple communities without physically moving the station or having a full station in each small community.

### ***'BC Shake-Out' event***

The Provincial Emergency Program and the BC Earthquake Alliance are sponsoring an awareness and preparation event for January 26<sup>th</sup>, 2011 ([www.shakeoutbc.ca](http://www.shakeoutbc.ca)). They are encouraging citizens to practice "duck and cover" for two minutes at 10:00, and for response groups to consider some sort of related event. Even though we don't live in a high hazard area, we will be looking at taking advantage of the event for some sort of short exercise (details not worked out yet).

### ***Member Profile***

Ric, VE7CUP was very busy this fall putting up a new tower at his QTH on Buck Flats Road south of Houston. He is in an interesting location, with a very good vhf path to Smithers. I have worked him on simplex like he was sitting next door!



***Ric's (VE7CUP) tower during installation of antennas and web cam.***

### ***The Hi-Tech and Equipment Corner***

There is much more to Amateur Radio than only the 'traditional' modes and operation (as much fun as those are). Interfacing radio with the internet is one example - IRLP, EchoLink, WinLink email, TCP/IP over radio, APRS etc. Amateur Radio these days includes integration with the internet and other computer-based activities/modes. In the last news letter I discussed 'Software Defined Radio', which uses software to do what used to be done by hardware.



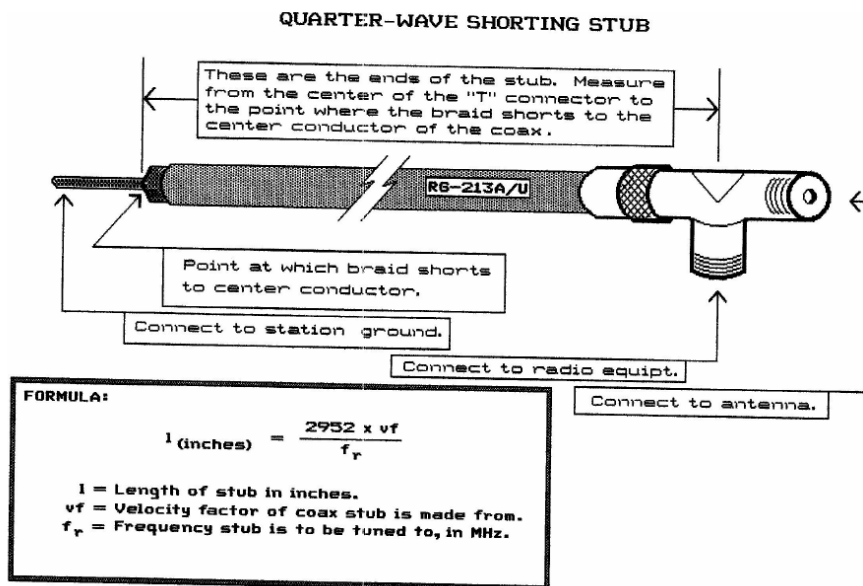
***Ten-Tec Omni VII transceiver***

Remote station operation via radio or internet links has been in place for some time now. Usually that included a computer assisted transceiver (CAT), and an analogue audio link via rf. That setup required a computer at both ends, and can

work well. Ten-Tec<sup>1</sup>, however, has recently introduced the first commercial HF ham rig (Omni VII) that has a fully functional Ethernet connection built-in. Just plug into the internet or a TCP/IP radio link, and you can fully control the radio and pass audio to/from the radio remotely. It doesn't come cheap though, at about \$3,000.

### **Lightning Protection for VHF/UHF Antennas**

Protecting our gear from lightning-induced energy flowing down from our antennas and feed-lines can be a big concern, especially at hill-top repeaters but also at home. One line of defence is to use antennas that are a DC grounded, such as folded dipoles, J-poles, etc. (assuming their mounting posts are properly grounded!). A second line of defence is a lightning arrester in the transmission line. Some of these are expensive and need to be frequently replaced to remain effective. A simple, low cost device for vhf and above is a shorted, grounded quarter-wave stub made of coax. I got this from a write-up by Ed Butoraja AAR4J/KM4QQ. The stub is seen as very high impedance at the resonate frequency and treated by signals as if it isn't there. For other frequencies, it is seen as very low impedance and a short to ground. Most of the energy in lightning is at very low frequencies well outside the tuned frequency of a vhf stub, and thus gets shunted to ground. Fortunately, a stub designed for two meter use (144-148mhz) will essentially cover all the band, and will also work for 70cm (3x multiple of the design frequency). We have been installing these on our repeater antennas with no noticeable effect on performance.



For more information, see the full article at:

<http://www.zianet.com/nmamars/techcorner/lightning%20avoidance.pdf>

<sup>1</sup> Mention of manufacturer or specific piece of equipment does not imply endorsement by the BVSARS, and is supplied for information only.