



The QSO

Secretary/Treasurer—VE5AQ

Wow, here it is the May long weekend, and I am still wondering where spring went. I don't think we saw her here in Moose Jaw. Oh yes, we did have the odd day that was sort of a remnant of spring, but much cooler days prevailed. Hopefully, our farmers are able to get their crops in this year. As for other news, well, it looks as if there will not be a Saskatchewan Hamfest this year, which is a shame, but as hams we will survive. This is next year country, so maybe some club will take up the cause. So in saying that, in the absence, of a Sask Hamfest I had a suggestion from our RAC member BJ, that VE5s attend the Manitoba Hamfest and RAC AGM in Winnipeg. So, hopefully we can make our way east, and we will see you there. See more information further on in the QSO.

This issue of the QSO, has lots of interesting reading, and I basically had a hard time trying to figure out how to put it all in, but with the magic of the computer, fonts can be made larger or smaller, so my apologies to those who's eyesight is not what it used to be, mine included, but the following was just too interesting not to be put in.

There will not be a QSO in July, as I am taking a bit of time off, hopefully to go to some of the Hamfests that are listed here in the QSO. There is also a Special Event coming up in August, and I hope that folks give a listen to the International Lighthouse and Lightship Contest August 15-17.

Now last but not least, I hope all have read the last issue of the TCA. In that issue you will have noticed that on page 67 there is a nomination form for a Section Manager for Saskatchewan. The incumbent, Joan Bahnman, VE5JML has done 2 years and cannot allow her name to stand for another term. The company that she works for is expanding, and she will not be able to devote the time needed to carry out the SM job properly.

Joan has done an excellent job and I'm sure we will all miss her in that position. Joan is still going to carry on working on the Saskatchewan Silent Key database, and as you read further, any silent keys that you know off, please pass the information on to Joan or to Bj.

So in saying all that, please think of a person that you figure can do the job of the SM, and no folks, please do not put my name forward. I really do have enough to do with the SARL and my own club. This is a job that needs someone who can really do justice to the position, and who knows more about Ham Radio than I do.

So that's it for now. I hope you all have a wonderful summer, with just enough rain for all the crops, and plenty of warm breezes. I will catch you all in the August issue. **Deadline for articles is August 22, 2008**

73

Val

Moose Jaw Happenings: Val, VE5AQ

Well, Moose Jaw is doing just fine. The MJPARC will soon be winding down for the summer, but we still have the Learning Days to do at the Western Development Museum, June 4 and 5. Our Club will be manning the Wireless Room, and we may be on the air, but will have to check with the other club here in Moose Jaw to see if the antenna has been fixed. That is their project, and we will help them with it if we are asked. We will be having our final meeting before summer holidays with a BBQ picnic at Walkamow, June 14th. We will have the picnic and then a short meeting and then just sit around and enjoy the weather. We will all get together once again in September. So from Moose Jaw, here's wishing one and all a wonderful summer.

From Section Manager: Joan Bahnman, VE5JML

VE5BDI	James Barnes	January 1, 2008	VE5NFG	Bob Hilton	January 18, 2008
VE5GL	Jean Lacroix	April 14, 2008	VE5FMM	Freda Maylor	April 14, 2008

The last two were silent keys on the same day. Our prayers and thoughts are with the families.

INDUSTRY CANADA: Do you know your rules???

Rules & Regulations - Did you know???

As a holder of an Amateur Radio Operator's Certificate with Basic Qualifications you are subject to certain restrictions. Here are some excerpts from the Radiocommunication Regulations:

Radiocommunication Regulations Section 44 says:

A person who operates radio apparatus in the amateur radio service must hold an Amateur Radio Operator's Certificate with Advanced Qualification in order to:

- (a) Install or operate a transmitter or a radio frequency amplifier that is not commercially manufactured for use in the amateur radio service; or*
- (b) Install any radio apparatus to be used specifically
 - i. For receiving and automatically retransmitting radiotelephone communications within the same frequency band; or*
 - ii. For an amateur radio club station**

What does this mean?

This section means that basic certificate holders are not permitted to use radio equipment that was designed for a purpose other than amateur radio. Examples would include commercial brand names such as Motorola, EF Johnson, General Electric, some Kenwood and Icom equipment, Midland, etc. Regardless of whether or not the radio was reprogrammed or re-tuned by an amateur with advanced qualifications or even by a professional radio shop, as a basic certificate holder, you are not permitted to operate that equipment without an advanced amateur present.

As it pertains to "automatically retransmitting," which we refer to as a repeater station, you are not allowed to install, maintain or license a repeater station with basic qualifications. This does not refer to digital "simplex" type of relays such as APRS digi-peaters or packet radio relays as the retransmission is delayed. This also does not pertain to "cross-banding" which is common with dual band mobile or portable radios.

Radiocommunication Regulations Section 47 says:

A person who operates radio apparatus in the amateur radio service may only:

- (a) Communicate with a radio station that operates in the amateur radio service.*

What does this mean?

Many amateurs modify their radios for out of band transmissions, however, the regulations clearly state that you are only permitted to communicate with another station within the amateur service.

For more facts and information, see the Radio Amateurs of Canada website under "Regulatory Info" or visit the Department of Justice website to read the regulations.

Ladies and Gentlemen:

By now you have all read in the latest "*The Canadian Amateur*" of the news in where RAC has created a national programme to enhance the already extensive RAC Amateur Radio Emergency Service and National Traffic System. The announced team is here to assist you, the Section Manager, to help RAC bring about a national team for the sake of mutual aid during national disasters. This team could very well be asked to help other RAC and or ARRL Sections during a major disaster.

Now - let us all get down to the business of making this happen in Canada. First - as Section Manager it will be your responsibility to disseminate as widely as possible the word about this programme. By working with your respective SEC and STM, who can involve all DEC's, EC's and NM's, to bring interested members in becoming part of this national database. Further - we know this programme will not be for everyone.

While you are giving thought of how you will go about doing this - I will be establishing what credentials and other criteria the members should have in order to be accepted for the RAC national database. In that the database is national in scope - it is beneficial that RAC's criteria be closely tied to that of the ARRL. My ARRL counterpart (his title is Emergency Preparedness and Response Manager), Dennis Dura, K2DCD, has been extremely busy on road trips telling Amateurs about ARRL's programme. He has been hard to track down but, I plan to talk with him soon and after doing so, I will have a better idea of what the minimum criteria should be for RAC registrants to our

database. In fact - I invite you as the Section Manager to give me your thoughts on what you feel should be the minimum criteria for registrants to the Canadian Amateur Radio Emergency Database. I am not saying we can use all the suggestions we receive but, it does give us some guidance and direction to this end.

In the meantime - stay tuned for further information on this front. If any of you have questions - please do not hesitate to ask. I/we are here to help you. Remember - we are a team. We all have a vested interest in this programme which belongs to all of us and our respective communities. Let us all work toward this end to make the RAC Amateur Radio Emergency Service a proud entity, which it is.

73,

Ken Oelke - VE6AFO
RAC National Emergency Coordinator

The Southwest Amateur Radio Club: provided communications to the MS walk May 4 in Swift Current The following Amateurs were involved: Harry VE5HB, John VE5JAH, Bill VE5WJH, Dick VE5LI, and myself Jack VE5AY. There were about 125 walkers who completed the course. Weather was ideal light breeze high teens. No problems were reported and a good time was had by all.

Jack VE5AY

From Industry Canada's current statistics:

- 57077 individual Amateurs in Canada (less than 125 years of age)
- 1427 clubs in Canada
- 1322 new certificates were issued
- 383 notices of deceased Amateurs were received
- 1241 exams were given by Accredited Examiners and 70 by Industry Canada
- there are 323 Accredited Examiners across Canada.

RAC complained about the inaccuracy of Industry Canada's database and was told that, for IC to respond to an SK notice, they MUST have at least an obituary. A letter from the family would be better to allow them to release the callsign back into the pool. Callsigns are currently designated to an individual for 125 years. IC maintains that there is really no way for them to improve the accuracy of their database. So, **if you are aware of a Silent Key**, please send the information to me so that I can inform IC and be sure to include an obituary notice. They won't just take our word for it!

From: Bj. Madsen - VE5FX
RAC MidWest Regional Director
Box 2860 - Tisdale - SK - S0E 1T0
Voice: 306-873-4346
E-mail: ve5fx@rac.ca

Or send information to Joan, VE5JML at: ve5wx.ve5jml@sasktel.net

The **Antenna Structure** issue was discussed with IC and the short of it is that structures of 15 metres or shorter are "off the table", meaning that neither IC nor municipalities are to be concerned about them. IC was strongly reminded to make sure that their cross-Canada offices all understood this and react similarly to complaints (which have no merit) from individuals or municipalities.

The **BASIC Study Guide** will continue to be available but is being considered for replacement, which will happen within the next year.

Currently, RAC is in an improving state, financially, but a lot of improvement is needed. Of Canada's 56800 Amateurs, only 4945 are RAC members, representing an average of 8.7% nationally. I made a presentation to both Industry Canada and the Board meeting on the **Restructuring of Amateur Radio in Canada** issue. I will be making this same presentation at the Winnipeg Hamfest this summer.

Bj. Madsen - VE5FX

MARMFEST - August 15 - 16 at Austin Manitoba's Agricultural Museum which also hosts the Amateur Radio Museum. See <http://www.marminc.ca> for details.

Peace Gardens 45th International Hamfest - July 11, 12 & 13 at the International Peace Garden south of Brandon, MB. See: <http://www.mts.net/~holderr/ihf.htm> for details.

Winnipeg Amateur Radio Club Hamfest - August 8, 9 & 10, 2008.

Hilton Suites - Winnipeg Airport - 1800 Wellington Avenue - Winnipeg - MB - R3H 1B2

Book toll free at 1-800-445-8667 (mention the Winnipeg ARC for preferred rates)

See <http://www.mts.net/~warc/hamfest> for details.

This Hamfest will host the RAC Annual General Meeting as well as a RAC Forum, displays and sales table. Several representatives from RAC will be present.

Special Event Station

VE5LGT Cochin Lighthouse.

August 15-17, 2008. (During the International Lighthouse and Lightship Weekend).

by Eric, VE5EL and Murray, VE5MC.

Two stations, 100watts, SSB only, Dipoles and Vertical.

ILLW No. CA0013

QSL: QRZ.com or Buro.

News from The Last Mountain Club group for spring 2008.

The few of us left to operate through the Last Mountain Repeater VE5AT, on 146.850 MHz. are trying to have a QSO or two a week through the repeater.

I was able to purchase a small wind charger to ensure more reliable power supply at the repeater during the dark winter months. This is a small 12 volt DC machine made in mainland China and comes complete with instructions from a group in New Zealand that upgrades these units to give them a better chance of survival during unattended operation. It came with a control box, which contains diodes and a 12 volt heater to act as a load when the batteries become fully charged.

The main unit consists of a cast iron frame about the diameter of a truck alternator which contains the 3 phase stator windings which are coupled through the slip rings on the vertical tower mount to a heavy cable feeding the control box, in our case not far from the batteries. The windings are electrically driven by the rotor, which contains modern neodymium alloy super magnets. The front of the rotor shaft is a tapered fit to the cast iron hub which holds three fiberglass blades. The blades are raw fiberglass and need to be painted before operation. I had the blades finished at the local automotive body repair shop, which gave them a very glassy hard finish with ultra violet protective paint. I will report on the success (or otherwise) of the windcharger, next fall.

In the past two years Brian VE5BJM has installed a UHF repeater. The UHF frequency is 449.950 -. It is a fully functioning repeater and is coupled through the LinkCom controller to the 2 meter repeater and also to the IRLP system. Node 1344.

At this date (May 12) there is still no sign of any reliable signal propagation on 15 metres (21 Mhz. band). During late winter there were a couple of openings that lasted only a few hours. I check the broadcast band just above 21.450 Mhz. for signals. There are a couple of powerful transmitters to the South East, which begin to show up about the time the band is open to Florida and the East Coast. Check the band between 21.450 Mhz. and 21.580 Mhz. for the first signs of activity.

For the Severe Weather Watchers among us, it is time to review the thunder storm "handbook" that we were given during the training sessions, so many years ago. By "Severe Weather" here on the prairies we normally refer to high wind events such as Tornadoes, Plough Winds, and Hail Storms. These damaging events are more easily survived if there is some advance warning of their probability and development. I have had a request to do a presentation on the Severe Weather Watch program at the local Museum on June 14th. There are a few interested people in the district; I can plug Amateur Radio at the same presentation. Saskatchewan weather watch, "man in charge" is Bob Cormier from the Environment Canada office at Saskatoon. I attended two of his training sessions in the 90s; one at Saskatoon and the other at Watrous. In a telephone conversation this week, Bob explained that future training will be done "on line" for individuals. There is a "power point" computerized presentation available for training groups. I will be able to see this presentation and may be able to use parts of it in my meeting. While this will not be any type of training meeting, it will serve to emphasize the importance of the Severe Weather

Watch program to public safety. The “CanWarn” group with Amateur Radio is the only Weather Watch training that is available from Environment Canada. Other individual weather watchers are appreciated but have to study on their own initiative.

The “CanWarn” program is overseen by the Amateur Radio Emergency Service in Canada. All future requests by Environment Canada for “on site” storm observations will be referred through Saskatchewan Section Emergency Coordinator, Rob Bodie VE5ROB at Moose Jaw. (ve5rob@sasktel.net). CanWarn volunteer observers can initiate reports to Environment Canada’s Stormline the same as before. I would suggest that Observers leave their Cell Phone numbers with Rob as these observations lose their value if there is any delay in reply.

Planting season is upon us again for those few of us still involved. That would be Brian VE5BJM and myself VE5UJ. While we visit on the 146.850- repeater, any listeners are encouraged to “speak up”. We have “tractor mobile” stations on VHF and are both working toward HF “field mobile” as well. Life on “mobile” can be easier if the 15, 12, and 10 metre bands are open. Antenna systems for these bands are much simpler than for the lower bands. Most larger tractors and combines are diesel powered so the ignition noise is absent. Digital monitoring equipment and even the D.C. motors driving cab ventilation systems can produce noise on H.F. I have operated out of a car that appeared to have no ignition noise at all, and was so pleased with my “bonding” of exhaust parts etc. until I discovered that the noise from the heater fan motor was covering up the other electrical noise.

Now for some “on the air” observations that I have noticed in recent years. Call this a “rant” if you will. For those of us who leave the 2 metre receiver running all the time, and usually on “scan, we are missing calls because the caller didn’t wait around long enough for the operator to get to the radio or switch it off scan and find the frequency that was active.. I have had occasion to dry my hands and walk to the radio only to find the caller gone. How long should we wait “on frequency” after making a call? I think it only courteous to stick around at least two minutes. Five would be nice, but not all operators have that kind of patience.

I hope to see reports from some of the other “silent” areas of the province, next issue. 73, Gordon VE5UJ.

Hello from the Great South East

I don't have much to report this time. We are ready to go with the G5RV antenna install at the fire hall this long weekend. Our Fire Chief is moving to Swift Current so there will be some rearrangements in the Weyburn & District EMO Structure when we get a new Chief in place. That is all I have this time around.

The following article was submitted from Jerry Dixon VE5DC.

Fifty years of Amateur Radio

After 50 years in amateur radio I thought it would be interesting to recall what it was like back in the 50’s compared to the present day.

First of all the amateur exams were a lot tougher and more detailed than they are now. The first license was the AMATEUR license which entitled you to operate Morse Code on all the HF bands and operate voice and code on the VHF bands above 10 metres.

The exam for this license was conducted by the radio inspector at the Department of Transport Office in Regina. This exam had three parts: the written theory test, the regulations and the Morse Code test. The written exams were all essay type questions, not multiple choice as they are now. Also part of the theory were drawings you had to do of transmitters, receivers and power supplies. The Morse test was sending and receiving at 10 words per minute.

The second amateur license was the ADVANCED AMATEUR which allowed full operating privileges on all the HF and VHF bands. This license could be obtained after a year of operation with the AMATEUR license on CW on the HF bands. The requirements were much the same as the first license but the more difficult theory and the Morse Code speed was 15 words per minute. By the way the code test were 5 minutes sending and receiving.

Back in those days there was very little if any 2 metre FM activity and no repeaters. So 80 metres was the band to get to know who you fellow hams were. You could go on 80 metres CW just about any night and work several stations in Sask., Manitoba or Alberta and also in the US. AM phone was king in those days and most amateurs would call into the Sask. phone net in the evenings. SSB was just starting to come in about 1960 and was not very popular with most hams because the receivers we had were not easy to tune in SSB.

My first station consisted of a WRL Globe Chief transmitter and a National NC88 receiver. The antenna was an all band trap dipole. I did manage to work lots of DX on 10 metres CW and Phone. Little did I realise that we were at the top of Cycle 19 sunspot cycle which was one of the best cycles in decades. We could work the

world almost at will with very simple gear and antennas. I understand that 6 metres was open world wide a lot of the time also but I did not have 6 metre gear. My next base station rig was a Heathkit APACHE transmitter which I built up. There seemed to be enough parts to start up my own radio store. My receiver was a National NC270.

In 1959 I built a 3 element Cubical Quad for 10 metres which was a real DX catcher. A few years later I built an 80 metre mobile AM station with a 6L6 final tube and a transistor receiver converter which worked with the standard AM car radio. The antenna was a home brewed whip with a wood coil form. This station was great fun at the local ham fests around the province.

In 1960 I decided to get my 2nd Class commercial radio operator ticket and go to work up north with the DOT. I had contacted several fellows who were in the north and it sounded like it would be interesting work and it certainly was. To get my commercial license I went to the Moose Jaw Technical High School which offered this course. The exams were taken at the DOT office in Regina and it took three days to write them all. Two of the stations I worked at were Resolute Bay, NWT in the high arctic and Coral Harbour located on Southampton Island at the top of Hudson Bay, NWT. There was an excellent amateur radio station at Resolute Bay located in its own little radio shack, with all Collins S Line equipment and a large tri band beam. From that far north we had very good coverage to all of Canada, the US and northern Europe. It took very little beam rotation to swing from eastern Canada to the west coast.

After a few years of this kind of work I came back to the family farm and have been active in Amateur Radio ever since. I have always enjoyed working CW and still do most of my HF hamming on this mode. When I first started amateur radio I used a straight key and now I use electronic keys with memories and all the bells and whistles or a CW keyboard which sends perfect Morse. Back in 1967 at Resolute Bay I built a Heathkit electronic keyer and it was hit on the commercial circuits. The code that came out was easier to copy than the usual bug sending that was common on these circuits. As far as I know this was one of the first electronic keyers to be used on commercial circuits in the arctic.

One thing that is very different now is the size of the amateur rigs. The Heath Apache transmitter weighed about 95 pounds and the receiver was around 25 pounds. One of my present rigs is the Yaesu FT-817 QRP rig which covers all bands from 160 metres to 70 cm and weighs in at about 2 or 3 pounds.

All in all I have enjoyed my time as a ham and a commercial radio operator and have many life long friends as a result.

Jerry/VE5DC

Thank you Jerry for another interesting article. Till next time

73 de VE5CEM

Joe Musgrave

Ballooning Anyone??

The winters in Saskatchewan can be a bit long so we often look for something to take our minds off of it. Late in the fall of 2007 while warming ourselves in a local coffee shop, Gus (VE5SPI) brought up the idea of launching a high altitude balloon. We discussed some of the things we could do and what each of us would like to accomplish. We agreed that we would at least want to fly an APRS tracker as well as take pictures during the flight. We also discussed the possibility of some type of voice repeater but it soon became obvious that we should keep our first flight relatively simple. At this point all we really knew was that our project would involve a balloon, hopefully going high. We knew then that we had a few things to learn. Our hope was that we could introduce new aspects of amateur radio to local members as well as promote existing areas such as APRS and fox hunting and have a heck of a good time doing it. An idea was born.

Early on we decided that no idea would be too crazy for consideration. The only limitations would be size and weight. Our entire payload had to fit in an 8 inch cube. We also set a target of 500 grams each for our individual payloads. Based on this, we decided that that each of us would be responsible for the design and assembly of our own payloads. We were also having trouble coming up with a suitable name and acronym for our project so we decided to give ourselves official sounding titles instead as you will see below.

Over the next few weeks we immersed ourselves in the information on the various ballooning web sites. We knew we would want to use APRS as a method of tracking and we also wanted to bring back pictures from the edge of space. Another local ham, Bob (VE5RGM) had often mentioned the idea of flying balloons and kites. Bob was instrumental in getting the local ATV repeater on the air in 1998 so it was only natural that he would introduce

the idea of flying an ATV transmitter. Bob set to work designing an ATV payload. His home ATV transmitter was too large and heavy for a balloon so he purchased a smaller one from another local ham. By now, it was obvious that Bob had become our **ATV Payload Specialist**.

Gus began work on a Byonics PocketTracker that he had purchased a couple of years ago but never assembled. Our research showed that the Rand McNally GPS that he already owned should work above 60,000 feet. Gus works for a local electronics distributor so he has easy access to technical information. This would be vital for our research into battery technologies. Gus also took on the task of parachute research. This meant that we had to call him our **Tracking, Power and Recovery Specialist**.

I also wanted to fly APRS but took a different approach. I chose to use an OpenTracker, an old Motorola MX330 radio and a Garmin GPS18. I also took on the task of building our payload capsule, primarily because I already had a large sheet of Styrofoam insulation in my basement that had been purchased for another project that never got off the ground. I also found a source for balloons and ordered 3. A local surplus store had digital cameras on sale just



before Christmas and I just couldn't resist, so I bought two, one for still pictures, and one for video clips. There was no turning back now. I guess this makes me the **Lift, Imaging and Assembly Specialist**. I also made a fluorescent orange slip cover for the payload box, so I'm sometimes referred to as the **Chief Seamstress**, but I don't like to talk about that.

As I mentioned our winters are long but they're often cold too. This would normally be a problem, unless you want to do low temperature testing of your balloon payload. In January, the whole province is like one big cryo-chamber. After roughly assembling my APRS module, two cameras and a battery pack, it was time do some testing. I turned everything on and placed it outside at -20 for a few of hours. It faired very well, but it didn't really tell us what would happen at -40 and below. I would just have to wait ... but not for long. In late January the temperature finally took its usual dive. Outside it was -39 with a wind chill of about -60, a perfect night for a test. I bundled myself, slipped outside and put the payload in the wind swept driveway. I then retreated to the warmth of the house and a steaming cup of tea, where I monitored the temperature and battery voltage via APRS. Three hours later, the payload internal temperature was still above freezing and the battery was going strong. "Good enough for me", I thought.

Meanwhile, my two co-designers were also hard at work. Gus purchased a parachute made from one panel of each of the brightest fluorescent colours he could find. He had also did some research onto battery technologies. As many other balloonists have also found, lithium batteries were the clear winner. Other experienced balloonist had cautioned us against using a single power source for all of our modules. We took this advice to heart, and each of us became responsible for our own power system. Bob chose to use high capacity lithium AA cells. I chose to use lithium CR123A cells. As of this writing, Gus has not chosen which battery he will use, but it's probably safe to bet it will be different than either Bob or I have chosen. Only in ham radio can everyone do everything differently and still all be right.

With our planned launch date of May rapidly approaching we have finalized most parts of our design. We will be flying two independent APRS trackers, an ATV transmitter, one still camera and one video camera. Both APRS trackers will operate on 144.390. VE5AA-12 will be the 300 mW PocketTracker, Rand McNally GPS using a coaxial dipole below the payload. VE5AA-11 will be a 3 watt transmitter, OpenTracker monitoring battery voltage and internal and external temperatures and a Garmin GPS18 using a vertical 1/4 wave ground plane antenna built into the top of the payload. The ATV transmitter will be a 1 watt PC Electronics AM transmitter operating on 439.250 and using an inverted 1/4 wave ground plane antenna built into the bottom of the payload. The cameras are built from Polaroid iZone i310 digital cameras with 1GB SD cards and a custom made controller board. Our next installment will contain technical details on the entire payload and each of our modules.

73, and happy ballooning.
Bruce - VE5BNC

Update on the Balloon: Launched May 17th from Ned Carroll's farm: ½ hour West of Davidson. Seen heading Southeast. There is a good info package on board so if someone finds it there is info inside! Last heard from at Eyebrow 135° +/- 10 ----- Now Missing in Action. So if you find it see picture, please phone **Bruce at 1-306-373-5672**

Deadline for next QSO August 22, 2008. If you will all please send your article to me, I will get the next issue of the QSO out by the end of August. My email address is: ve5aq@sasktel.net . If possible, please send in .doc format, and send pictures as attachments. Thanks so very much, greatly appreciate your help.

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The Fine Print:

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