Q R M

September 2003

Quinte Amateur Radio Club Inc. Newsletter

PO Box 23039 BELLEVILLE Ontario K8P 5J3

NOTICE OF MEETING:

DATE / TIME: **Sept 17, 2003 @7:30PM**

LOCATION: Loyalist College (Pioneer Building)

PLEASE NOTE CHANGE OF ROOM TO P-2

PROGRAM: Dave Ward speaking about the GPS system.

Club Repeater: VE3QAR 146.985 MHz.
2 meter net: Tuesday 7:30 PM on VE3TJU 146.730
QARC HomePage http://www.qarc.on.ca
QARC HomePage http://www.qarc.on.ca/ provided free of charge by:
Lakeshore Internet Services, 199 Front St, Suite 113
Belleville K8N 5H5 (613) 962-9299
Monthly Meetings: 3rd Wednesday 7:30 PM Loyalist College
(Pioneer Bldg.) Room P-17
Hams 'n Eggs: SATURDAYS 8:00 AM Quinte Restaurant 135 Cannifton Road
Foxhunt: Sunday @ 2PM. Check in on VE3QAR for details.

RADIO AMATEURS OF CANADA ADDRESS:
Radio Amateurs of Canada Administrative Office 720 Belfast Road, Suite 217
Ottawa, Ontario K1G 0Z5
Phone: (613) 244-4367 **Fax:** (613) 244-4369.
E-mail: rachq@rac.ca

QARC EXECUTIVE

PRESIDENT: Peter Hodgson VA3PKH 962-1386 (E-mail: phodgson@kos.ca)
VICE-PRESIDENT: Bill Milligan VA3WOW (E-mail va3wow@rac.ca)
SECRETARY: Mike Papper VE3VMP 969-1744 (nancy@lks.net)
TREASURER: Don Dalrymple VE3DQN 968-9242 (E-mail: ve3dqn@rac.ca)
PAST PRESIDENT: Dave Ackerman VE3UGT 962-3991(E-mail:ve3ugt@rac.ca)

June 2003 Minutes

Our June meeting was held at the CFB Trenton Aircraft Museum. There was no business meeting and no minutes recorded.

Radio Shack HTX202 and HTX404

Internal Battery Replacement.

Brian VE3GRA

These older 2-meter and 440 handy talkies are very rugged, perform well and have excellent front ends on their receivers. They can often be found at ham flea markets for a very reasonable price. However, these rigs, introduced in the early 1990's use an internal alkaline battery to maintain the memories. This battery has a life expectancy of less than 10 years, so many of these rigs will now be exhibiting the problems of an internal battery failure. Namely, an "ERL" error message when turning on and loss of any stored memory and configurations. This error can be reset by holding down the Function and "D" key while turning the rig on, but this will have to be done each time the rig is turned off for more than a couple of hours. And all memory is also lost if the "ERL" message is ever displayed.

The good news is that replacing the battery in these old Radio Shack rigs is pretty straightforward. Unscrew the five screws holding the back (the 5th one is under the belt hook). Be VERY CAREFUL not to strip the heads of these small Philips screws. I use a jeweler's screwdriver clamped in a small vise grip to provide additional hand purchase to keep a strong downward pressure when turning the screws. If you are buying a used rig, check these screw heads. If they are stripped, I don't know how one would ever get the back off these rigs. With the back off, the battery is very visible on the front side beside the speaker. It is about the size of a nickel and usually has a bright yellow plastic border. Gently pry the battery loose from it's double sided tape mounting. The battery leads are spot welded directly onto the battery. There is no clip mounting. (I guess Radio Shack figured once the battery died, just throw away the rig??). Using needle nose pliers, pry these leads off the battery by rotating the flat tab by wrapping around the nose of the pliers. This will leave you with a substantial length of tab/lead that can be used to attach to the new battery. The battery is a standard 3v Energizer #2032. Wal-Mart carries them and they are under $5.00.

To install the new battery one could solder the leads directly to the battery (be sure to put the negative (rounded) side down) but I was concerned about what the heat would do to the battery. Instead I just simply replaced the battery as it was with the negative lead between the battery and the double sided mounting tape. Then using a couple of small pieces of good quality duct tape, I taped the positive lead directly to the battery and over onto the inside of the case. (Yes, Red Green is my inspiration when it comes to most fix-it projects.) This worked well as duct tape will not stretch and has a strong adhesive. It also insulates the battery case. And when the rig is re-assembled the other parts will also tend to keep everything in place.

Double check to be sure you have good connection by measuring that you have 3 volts from the ground plane on the rig to the positive lead of the battery. Then button up the rig and it should be good for another 10 years!

Kawanis Colour Cribbage Ride.

Doug Monk Picton, Ontario
dmonk@kos.net

An estimated 150 bicyclists will be off around Prince Edward County on Saturday, October 4th and the Quinte and Prince Edward radio clubs will be providing the communication network. This is the Kawanis Colour Cribbage Ride.

Organized by the Kawanis, the bicyle tour is a fundraiser for needy children. The cyclists leave from the Crystal Palace in Picton starting at 9:00 am and travel three routes around the south part of Prince Edward County. They collect tokens at the checkpoints, and exchange the tokens for playing cards. The best cribbage hands are eligible for prizes. There are bags of county produce for every cyclist and a lunch afterwards back at the Crystal Palace.

There are three routes, 100 km, 50 km and 25km, and nine check points. The clubs have been asked to provide radio operators at each check point, another at the Crystal Palace, and a couple of mobile units. There are still positions to fill. If you are interested, please contact Doug Monk VE3ZDG on VE3TJU 146.730 on Tuesday evenings or by email at dmonk@kos.net.

Equipment Request

This is a copy of an e-mail sent to my address listed on the QARC websight.

Dear Mr. Dave and Quinte Amateur Radio Club!

I am a Ukranian Ham UU5JK and a chief of our school Club station UU4JWF. We have been to meet your QARC site in"DX Zone" and read whole info about your wonderful Club.

Our station is already some years, sponsored by Young Seamen"s Club and located in middle school. Our city of Yalta is situated on the southern coast of peninsula Crimea on the Black Sea.We send you our QSL-card with our landscape, where you"d see our city.

We think it isn"t touristical city, but it is to live here difficult enough... We are studing the children to Morse code, phone QSO's and even digital mode contacts. We work in many Contests and have now about 34 awards and plaquets. But we have two 'home made' tranceivers for 160, 80, 40 meters and they don't work good enough and don't add 20, 15 and 10 meters, although we have good roof for DX's antennas, the children cannot use easy those ones.

We"d ask you, the members of QARC, maybe you can find for us any old cheap tranceiver to donate to our Club, very simple, but with all HF bands and stabil in the work ?

It"d be big joy for children who suffered with those tranceivers some years in contests and non-stabil frequency. Could somebody to say "yes" in this beautiful country?
Thank you very much!

73! Boris, radio amateur since 1962, the teacher and chief of UU4JWF.

The Morse Code Decision

Some factors worth considering

By Ken Pulfer VE3PU

VP International Affairs Radio Amateurs of Canada

Following the revisions to the international radio regulations at the recent World Radio Conference, it now seems almost inevitable that most countries will decide to drop Morse code testing for access to the HF bands. Some of the reasons why attitudes are changing are explained in the background section below.

What should we do in Canada? The decision to change our examination requirements in Canada is for the government regulator Industry Canada to make. To help Industry Canada decide, we are each being asked to express our views on the retention or discontinuation of Morse code as a proficiency requirement for HF operation in Canada. We are a sovereign country, and can decide whatever we want in terms of qualifications of our Radio Amateurs, but we do have to live in the world amateur radio community, and we ignore the actions of other countries at our peril. Opinions on the subject can be quite emotional, so before we jump to a quick decision, let's look at some of the possible consequences of changing the testing requirements here in Canada.

And, let's not forget that we are talking about regulations, not an operating mode. Amateurs around the world will continue to use cw on HF for many years to come, regardless of what the testing requirements are.

Background

The purpose of the International Telecommunications Union Radio Regulations is to deal with the potential problem of spectrum users in one country interfering with users in another country. Such international interference can take place in three important situations.

The first is when a low orbit satellite that covers the globe, or a geo-stationary satellite whose antenna pattern covers many countries, interferes with, or is subject to unintentional interference from, one or more ground stations in countries other than the country of origin. Clearly there is a need for coordination of frequencies and power levels to prevent this from happening. Each country therefore becomes responsible for implementing the international regulations for satellites or ground stations originating in its territory.

The second situatio n occurs at HF frequencies, where long-range propagation is possible, and transmitters in one country can interfere with receivers in another. Once again, the ITU regulations impose on the local regulatory authority the responsibility of putting domestic regulations into effect to prevent interference in either of these two situations.

(A third situation, where line of sight interference takes place in proximity to the border between adjacent countries is normally covered by bilateral agreements, and is not subject to ITU regulations.)

The original purpose of the international regulation requiring Morse code for amateur operators, was to ensure that a radio amateur would understand instructions given in Morse code by government shore stations, and therefore avoid interference with marine shipping. (In the beginning transmissions were by spark, which was inherently

broadband, so effectively all stations were on the same wavelength. Later, and for some time, there were no clearly defined worldwide frequency allocations at HF for amateurs). Nowadays, the ability to read and send Morse code has little or no relevance to the likelihood of causing international interference, nor does it make a significant contribution to the training of commercial or military radio operators, as most other services have already discontinued the use of Morse code. Therefore the member countries in the ITU have just voted to drop Morse code proficiency as an international treaty requirement for amateurs operating in the HF bands.

Over the past 80 years or so, the amateur community has come to regard Morse as a means of filtering candidates, so that only those who were willing to make the effort to learn Morse code were rewarded with the "privilege" of using the HF bands. However, that was not the intent of the regulation, and a much more effective means of ensuring a minimum of international HF interference is to ensure adequate knowledge of radio theory, good operating practices, and long range HF propagation. For this reason, national regulators such as Industry Canada, have little regard for arguments about the need for Morse code testing as a filter for candidates wishing to operate on HF.

So, as an alternative to Morse, why don't we just make the exams harder, or require a more advanced level of knowledge to access the HF bands? We could set a standard such that our HF operators would be the select few who really knew what they were doing on the air!! Sounds pretty good, but before we rush off and make such a policy decision, we should look at the consequences.

Reciprocal Operating Agreements and International Permits

These days, a lot of amateurs travel outside their own countries, and many enjoy operating abroad. To avoid having to qualify for a foreign call sign by passing national examinations, or having to write to foreign governments months in advance to get permission to operate, many countries have signed international agreements giving their radio amateurs reciprocal operating privileges in other countries. By far the most successful of these has been the CEPT agreement, which allows operation in any one of dozens of countries, primarily in Europe, by simply carrying one's certificate and an inexpensive permit. The International Amateur Radio Permit developed by countries in ITU Region 2 (the Americas) has been less successful, and recently a decision has been taken to merge the two agreements.

The basis of reciprocal agreements is that each country accepts a commonly agreed set of standard qualifications for access to operating privileges. If one country sets up different domestic qualification standards, it may exclude itself from such agreements.

If we go our own way with the Morse code issue in Canada, we may be excluded from the CEPT and IARP agreements, and of even more widespread concern, from the Canada / US bilateral agreement.

Canada / USA reciprocal operating agreement

The bilateral reciprocal operating agreement between Canada and the USA which has been in force since 1952. This agreement allows Canadians to operate in the USA, with full HF privileges if they currently have the 5wpm Certificate. NO advance notice is required, and it is not necessary to check in with the regulatory authorities.

We had a difficult situation with the Canada / US reciprocal operating agreement some time ago, when the USA allowed access to the HF bands with 5 wpm Morse, and Canada still required 12 wpm. The reciprocal agreement was in trouble because many US

amateurs with HF privileges in the USA, were, by our rules, not allowed to operate HF in Canada. That could have excluded thousands of US visitors, including many who owned, and paid Canadian taxes on land and vacation properties here, and we, in turn, were in danger of losing our privilege of operating south of the border.

Whatever we decide, it is very important that we take into account what happens in the USA. Unfortunately, it may be some time before the FCC arrives at a decision as to what to do there.

Possible Policy Decisions

1. Retain the Morse code Qualification

Canada could decide to retain Morse code testing for access to the HF bands, and forget about reciprocal operating agreements. This has the advantage of simplicity, but it would certainly make operating outside Canada, or foreign operation in Canada, much more problematic.

2. Replace the Morse Qualification with the Advanced Qualification for those who wish to operate in the HF bands. Since 2001, our Basic Qualification examination covers all the regulatory, operation and propagation topics necessary to avoid international interference, according to the ITU recommendations. Many Canadian amateurs do not realize the major changes that took place in 2001 to enlarge the examinations with many more questions added on regulations and operating. (See RIC-3, RIC-7 and RIC-8)

Our Advanced Qualification examination currently has no questions on regulations or operation. It is a technical examination to enable radio amateurs to safely build and operate home built transmitting equipment that will not cause interference, and to operate transmitters and amplifiers at high power levels. The same applies to the construction, installation and maintenance of repeater stations and those stations using remote control.

The current Canada / US and CEPT agreements provide for two classes of operators, those who can operate on all bands, and those limited to operation above 30 MHz. The distinction is based on the old international requirement for Morse testing. Whether an applicant has passed a Basic or an Advanced exam is not important, since this has nothing to do with international interference. The idea that Canada would now use the Advanced exam as a new barrier to HF operation would not be accepted internationally, and would encounter resistance in Industry Canada as well.

3. Make our Basic Exam More Difficult

Seen from the point of view of government, the Amateur Service, far from being simply a hobby or privilege, is considered to be a benefit to society in a number of ways. It helps in times of natural disaster, it provides a free means of introducing and training young people in science and technology, and it contributes in various ways to advancement in technology. For these reasons, radio amateurs are allowed access to about 10% of the very valuable spectrum used for radio communication.

Most governments therefore do not want to limit the number of amateurs. On the contrary, they want to have the maximum number of amateurs as long as they don't cause interference to others. For this reason, Industry Canada would oppose a proposal to increase the difficulty of the Basic examination.

Here are some possibilities that will not have international implications, and that could, to some extent, act as a replacement for Morse testing.

1. Increase the pass level on the Basic exam for access to HF. Someone has suggested that an 80% score be required before HF operation would be allowed. Those achieving

only the current pass level of 60% would be allowed to operate only on the bands above 30 MHz.

This seems to satisfy all of the above concerns, although there may be a need for some renegotiation of reciprocal agreements depending upon the decisions taken by other countries. This change would not represent a large increase in administrative overhead for our Accredited Examiners, or for the Industry Canada Radio Inspectors or administrators. Alone, it may not be the best solution for the Amateur Service in the long run.

2. We could expand the Basic question bank to improve those aspects which impact on a candidate's ability to understand and avoid causing interference, (particularly the interference which might be caused by the variety and complexity of new digital and spread spectrum modes coming into use). While this would not make the examination more "difficult", it would result in an examination covering a broader scope. A graduate of this expanded examination should be more prepared to deal with the realities of amateur radio operation, including HF, in the 21st century. By way of explanation, since 1990, the Canadian amateur radio examination curriculum has remained constant. However, the relevance and variety of questions covered in the question banks was increased in 2001, as a result of converting the questions to a structured examination syllabus enabling the automatic computer generation of examinations. (See Industry Canada RIC-3 for details) Either or both of these options could be implemented with positive results for the Amateur Service. Unfortunately neither solution can be applied to improve on-the-air operating practices of those who currently hold certificates. One can only hope that the convenience of computerized testing and the easy availability of study material might encourage many amateurs to voluntarily study and take new tests to re-qualify, with improved on-air operation.

Radio's first voice was Canadian

The Cat's Whisker. Canadian. Vintage Wireless Association. By Mervin C. Fry

Yes, it WAS a Canadian -Reginald Aubrey Fessenden- who was recognized as the 'father' of radio and the first to actually transmit the sound of the human voice without wires. Several years prior to his first broadcast by radio, Reginald Fessenden had perfected a new method of sending Morse code more effectively than Guglimo Marconi. To him goes the credit for successfully transmitting the sound of the human voice, between two 50-foot towers on Cobb Island located in the Potomac river, Washington,D.C., December 1900.

The first radio broadcast ever in the world's history was made by Reginald Fessenden on Christmas Eve 1906 when he beamed a, Christmas Concert' to the astonished crews of the ships of the United Fruit company out in the Atlantic Ocean and the Caribbean Sea. Beamed out from the 400-foot towers of the transmitting shack at Brant Rock Massachusetts on the Atlantic coast, this program commenced exactly at 9 o'clock with 'CQ CQ CQ', meaning 'general call to all stations within range', sent out in dots and dashes. Then over the microphone Reginald himself gave a brief speech as to the program to follow. This was immediately followed by one of the operators switching on the Edison phonograph and a solo voice singing Handel's 'Largo'. The first case of 'mike fright' was registered when Mr. Stein, an assistant, backed away unable to utter a word! However Fessenden grabbed his violin and 'fiddled' through 'O Holy Night', singing as

well as playing. Helen, his wife and his secretary, Miss Bent, endeavored to read parts of the Bible text, 'Glory to God in the highest and on earth piece to men of good will', but, like Mr. Stein, they suffered stage fright. Concluding the program, Fessenden wished the listeners a “Merry Christmas”. The success of this first broadcast was verified by operators, not only from those in the ships of the United Fruit Company but also from vessels all over the south and north Atlantic, amazed at the magic and miracle of this first wireless radio broadcast.

Treasurers Report

MONTH TO DATE

Revenue		Expenses	
Membership Dues	$25.00	Rac Membership	$0.00
Equipment Rental	$25.00		
Coffee	$9.00	Office Supplies	$29.15
Equipment Sales	$15.00	Incorporation	$30.00
50/50 Draw	$0.00	Newsletter printing	$12.48
Donations to QARC	$0.00	Insurance	$0.00
Interest	$0.19	Social Events	$0.00
		Donations	$0.00
Total revenue	$74.19	Total Expenses	$71.63
		Month to Date Income	$2.56

YEAR TO DATE

Revenue		Expenses	
Membership Dues	$1,175.00	Social Events	$21.76
Donations to QARC	$366.75	Post box rental	$77.04
50/50 Draw	$72.50	Office supplies	$255.08
Coffee	$52.40	News letter printing	$122.07
Repeater Move	$0.00	Door Prizes	$0.00
Interest	$2.14	Insurance	$622.08
Equipment Sales	$15.00	Donations	$226.00
Equipment Rental	$25.00	RAC Membership	$0.00
		Hall Rental	$30.00
		Incorporation	$30.00
		Name Tags	$12.08
Total revenue	$1,708.79	Total Expenses	$1,396.11

Year to Date Income	$312.68
Cash on Hand	$4,672.65