

VE3BK



The Hamilton Amateur

The Hamilton Amateur Radio Club Newsletter - 78 Years of Amateur Radio 1932 - 2010

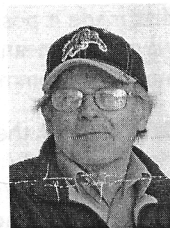
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President's Remarks

by David Bruton,
VE3DWJ



Welcome to the February news letter. For those who missed January meeting, the executive mentioned that the insurance premium for this year has jumped dramatically. The premium could be much lower if we had more members joining Radio Amateurs of Canada. One suggestion to cover the increase in future years would be to raise our annual membership dues. The dues have been the same for many years. This suggestion is currently under study by the executive.

As winter comes to a close for another year many members are busy going to hamfests. Hamilton was well represented at the St. Catharines fleamarket this past weekend. I hope they are looking for ideas and parts to build a project for our Homebrew Night in May (only three meetings away). Please contact Casey VE3CVP at ve3cvp@hamiltonarc.ca if you have any questions. We are hoping to have a good turnout and a lot of entries for this year's homebrew night.

I notice that the ARRL Field Day package has been posted to the ARRL web site. The package can be downloaded as a 44 page PDF. It gives the new rules and information pages for the 2011 Field Day exercise. Field day comes around on June 25 to 26

this year. Preparations for our Club's participation should be underway shortly.

Don't forget to check in to the VE3NCF weekly net on Sunday evening at 7:30 P.M.

Hope to see everyone on Wednesday 16th coming up shortly. Until then we'll be listening for you on the air.

The Early History of Radio Communications and the Men and Devices that Made it Possible.

Written by Henry B. Davis.

This article first appeared in Popular Electronics Magazine, May 1967. Our thanks to Mr. Larry Steckler, President Poptronix Inc. for kindly granting permission to use this article in THA.



Thanks also to Sherry VE3DCU, who originally found the article and obtained permission for us to use it.

While most history books date the birth of radio from Marconi's invention of wireless, that is only a half-truth. Like many scientific discoveries, the radio phenomenon

Club meetings - 3rd Wednesday each month - 7:30 pm (except July and August) at Hamilton District Christian High School, 92 Glancaster Road, Ancaster, L9G 3K9, corner of Rymal Road (Hwy. #53) and Glancaster Road. Parking on location. Complimentary refreshments.

was known as a "paper theory" many years before its actual existence was proven.

As early as 1845, Michael Faraday observed that the characteristics of light and electricity were basically similar. It was this observation that spurred James Clerk Maxwell to dig deeper into the phenomenon.

In his paper "On a Dynamical Theory Of The Electromagnetic Field", written in 1864, Maxwell noted that a change in a magnetic field could bring about a change in an electrical field, and vice versa. This led to his conclusion that electromagnetic energy could be propagated into space from a wire conductor, and that the energy traveled at the speed of light. He failed, however, to present physical proof of his theory.

In the years that followed, a great deal of scientific thought was given to Maxwell's theory. But it was in 1887 before Heinrich Hertz, a German physicist, demonstrated a device which proved that the Maxwell theory was correct.

To generate electromagnetic energy (radio waves), Hertz used a spark transmitter, operating around 4 meters (75 MHz). His receiver consisted of a length of wire with a small metal ball at each end; the wire was bent to form a ring or loop with a small gap between the metal balls. When the transmitter switch was thrown, the spark generated electromagnetic energy and this energy was induced into the wire (receiver), causing a spark to jump the gap between the receiver metal balls. Thus, a spark produced by the transmitter induced a spark in the receiver. No physical contact between the transmitter and the receiver existed.

Although the distance between the two units was limited to a few feet; it was soon learned that this range could be increased to about 50 feet by simply by limiting the size of the "receiver" wire to the wavelength of the oscillators frequency and carefully adjusting the gap between the two balls at the wire's end.

Hertz's demonstration encouraged new interest in electrical waves - which came to be called "Hertzian" waves. Attempts to conduct radio waves through earth and water were carried out. Then experiments were made with large coils of wire to try to find a method of transmitting and receiving electromagnetic radiation by induction alone. But it was the introduction of the first sensitive radio wave detector - the coherer - that made it possible to use radio waves of a means of demonstrating intelligent communications.

Back in 1850, the French scientist, Pierre Guitard, had discovered that dust particles in the air "cohered", or collected together when electrified. Later in 1879, David E Hughes, an American electrician and the inventor of the carbon microphone, while investigating the resistance properties of loose carbon granules, discovered that the granules cohered, going from a high resistance to a low resistance state, when a current was passed through them.

Dr. Edouard Branley, another French physicist, built the first coherer. His coherer consisted of a glass tube partially filled with iron filings and plugged with corks through which wire electrodes had been forced through. In operation, the iron filings cohered when a strong radio signal was impressed across the electrodes. Branley did not use instrument for the reception of radio waves, but he did find that the coherer had to be tapped manually to "decohere" the filings in order to return the unit to a high resistance condition.

A British physicist, Sir Oliver Lodge, was the first to use the coherer in place of Hertz's wire loop, for the detection and pen recording of Morse code signals. Because the coherer had to be decohered after detecting each pulse of electromagnetic energy, it was suitable only for a Morse code type of communication set up. Sir Oliver, understanding this to be the case, used a "trembler" to decohere the iron filings.

HARC 2009-2010 Executive

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Director

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In 1895, when the Russian physicist Aleksandr Stepanovitch Popov, employed the armature of an electric bell to decohere the iron filings. Now practical transmissions of pulses at a reasonable rate of speed became possible. The bell did away with the need for necessarily slow manual decohering. But an even more significant achievement attributed to Popov is the fact that he was the first person to consider using an antenna with the coherer circuit. The addition of the receiving antenna increased the radio range to more than 900 feet.

At this point, Marconi enters the picture. Sir William Crookes, in the

British publication Fortnightly Review, predicted that in 1892 that wireless (radio) telegraphy would replace all other means of rapid communications. It is likely that this prediction inspire Marconi to make the dream come true.

Marconi took the crude coherer Branley had designed and made improvements on it. He replaced the corks with silver plugs. And by using a mixture of silver and nickel filings in place of iron filings and evacuating the air from the tube, Marconi succeeded in producing a device many more times sensitive than the original coherer.

With his own improved version of the coherer, the Popov method of de-cohering, and a receiving antenna, Marconi attained results that can be described as only slightly less than spectacular. Signals from two to nine miles were observed almost immediately, and by early 1901 that figure had increased to 200 miles. About the same time, at the suggestion of Sir Oliver Lodge, Marconi incorporated an "oscillation transformer" in his radio system which permitted the system to be tuned to a given resonant frequency.

Marconi's crowning achievement, however, came about when, on December 12th, 1902, he succeeded in proving that radio waves could be intercepted around the curvature of the earth. On that day, he received a signal transmitted from England - some 2000 miles from where he waited on the coast of Newfoundland, Canada.

It is not really clear when radio was actually born. But it certainly was not in existence before Hertz demonstrated his apparatus, and just as certainly it came about not later than Sir Oliver Lodge's demonstration. Both of these events took place prior to Marconi's historic adventure into the new technology.

The achievements of these early pioneers were monumental considering the fact that most of the work was accomplished before the advent of the electronic amplifier. Just

how incredible these achievements were can be fully realized only by building and using a coherer yourself.

Minutes of the HARC Meeting 19 January 2011



Submitted by
Secretary Jim
Sawadski, VE3EEZ

I. Call to order

Dave Bruton VE3DWJ called to order the regular meeting of the HARC at 19:37 on Jan 19 2011 at The Hamilton District Christian High School 92 Glancaster Road Ancaster.

David welcomed back members for the 2011 session of HARC. David reminded all members that the Sunday night net is in operation on Sunday evenings at 7:30pm on the local repeater, and that members are encouraged to check in.

II. Sign In

Attendance was conducted by the circulation of the members sign in sheet. No visitors recorded

b) Approval of minutes

The minutes of the November General meeting where approved as printed in The Hamilton Amateur. Motion to accept by Joe VE3OCD and seconded by Rick VE3BK. Carried.

III. Speaker

No speaker was available for the January Meeting

IV. Health & Welfare

Mary VE3OGQ reported that a get well card was sent to Dan (VA3DJ's) father Joe Martinak .

V. Membership

Sherry VE3DCU reported paid memberships at 65 with 55 primary

HARC 2010-2011 Chairs

Awards Chairman
Casey VanBroekhoven VE3CVP
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Web Master
Anita Thomas VA3ANI,
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Emsley Mitchell VE3JAI / VA3QI
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members. Renewal notices were sent to those members whose memberships had expired and the monthly newsletter mailings have been discontinued by Mardy VE3QEE.

Sherry had suggested that for the convenience of timely response mail be directed to her instead of the HARC mailing address in the future. Fred VE3GCP pointed out that more confusion develops as committee members change duties. It was decided by the majority that the mail be sent to the regular HARC mailbox and information forwarded to those responsible parties as in the past.

Sherry explained that information regarding members RAC status was being collected for insurance purposes so that the club could calculate the insurance dues.

VI. Contest

Rick VE3BK once again called on all members to get creative in the design of a new QSL card for 2011. Rick reminded the members that the executives will be selecting the winner of the QSL card design at the executive meeting being held Jan 26 2011. On display were several cards being submitted by Rick, Tom VA3TVW and Kevin VE3HNG

Rick once again drew attention to the contest calendar for a list of events available to the Ham operators as with the previous meeting.

A few to mention were the following:

Jan 28-30 2011 CW CQWW 160, Feb 25 2011 160m SSB 48 hr contest, and an interesting one on Feb 13 2011 The North American Sprint SSB 4 hr contest where once a contact is made the person having control of the said frequency must leave it to the person he had just made contact with and jump to find another occupied frequency.

Rick announced that some members of the VE3DC contest group were mentioned in the TCA magazine as taking part in the 160m SSB CQWW

2010 as 1st place Multi Op Ontario, 1st place in Canada, 1st place 3rd Area, and 9th place North America. Operators were, VA3DJ, VE3ATX, VE3BK, VE3BAU, VE3DCU, VE3EEZ, VE3GCP, VE3RYI, VE3WBT

VII. Repeater

As reported by John VE3DV. The 2 meter station had some issues over the transition into the new year. A couple of fuses were blown on the internal power supply and is now running on an external supply. As such there is no auto switching in case of a power failure or emergency power failure generated outside of the shack. It cannot be monitored as there is no feedback. The original unit is approx 20 years old. Some of the cavity filters have been removed because they are no longer needed since the pager station no longer operates from the same address.

The 440 station is being worked on and is expected to be up and running within a couple of months, when John VE3DV can arrange with Mark to get together.

John VE3FDK questioned the limited use of the repeater and mentioned the fact that the club members aren't using it. The general consensus from the members was that repeaters in most clubs are idle and people are using other modes of communication. The club has a repeater, it is used and should be maintained.

VIII. Education

Mardy VE3QEE has 3 possibly 4 interested parties in taking the Basic Course. A facility is being sought at this time. A community centre is the preferred location so that there is exposure to the general public. Mardy is continuing his search and considering the options available.

IX. Refreshment Break – 20:34 – 20:52

X. New Business

Insurance

Important Points

Executive Meetings

HARC Executive committee meets each month, except July and August. Members are invited to attend. The meetings are on the Wednesday following the club General Meeting each month. Ask an executive member for the location.

VE3NCF 146.760 - & 444.075 + using tone 131.8

HARC operates VE3NCF repeater, located atop the Niagara Escarpment. It's open for use by all Amateurs. Special features are a privilege of membership.

Nets

HARC "check-in net" is held every Tuesday evening at 7:30 p.m. HARC "swap net" follows at 8 p.m. All contacts are welcome.

Examinations

Amateur radio license examinations are conducted the second Wednesday of each month, except July and August. Contact the voluntary examiners to make an appointment. There will be a fee for each examination.

Membership Information

Club membership, including all privileges, is \$25 per person, per year, Sept 1 to Aug 31. Additional membership, for immediate family living in the same home, is \$1 per person. One newsletter sent to each address.

The Hamilton Amateur

The Hamilton Amateur is published ten times each year (not in July or August). Deadline for article submission is the last Saturday of the month for the next month's issue. Preferred format is .txt file. Articles will be checked for spelling and grammar, but the author is responsible for factual content. E-mail submissions to Editor, Mardy Edson, VE3QEE, <ve3qee@hamiltonarc.ca>

A discussion was initiated by Mardy VE3QEE on the RAC affiliation and the cost that will be put forth to the club regarding insurance, in an effort to inform the membership of it's possible affect on the membership dues for the following years. This will be discussed at the next executive meeting to be held Jan 26 2011. An example of a scenario is as follows:

Total number of club members
(include all members) = 75 = a

Number of club members who are
NOT current RAC members = 40 = b

Annual Insurance fee = \$150.00 + (a X \$1) + (b X \$11) = c

OR 150 + (75 * 1) + (40 * 11)
Sub Total = \$665.00

Plus the annual affiliation fee of
\$25.00 665 + 25 = \$690.
= \$25.00

Plus applicable tax * 8% = \$55.20

Aprox total = \$745.20

Insurance is necessary for the club to participate in any event ie. The annual flea market, field day, lighthouse event etc. The club insurance has been paid for 2011. Further discussion is necessary to determine how the club will cover the costs that have tripled in 2011 from previous years.

XI. CERV

Hans VA3HJJ spoke about Community Emergency Response Volunteers CERV. As an executive member Hans announced a possible Amateur Radio Demonstration being planned for Sunday May 1st @ Royal Botanical Gardens . The demonstration will be to further develop Emergency Preparedness Day. Hans will report at a future meeting when more details are available for this event.

XII. Bob Zimmerman

Bob (VE3RKZ or NP4B) is reported to be in Puerto Rico and is contacting hams @ 3pm daily on his 50 watt rig on 14.222mhz. Also look for Bob on the Monday night Check-

ins @ or near 14.155 . Bob is also found on Skype and PSK31 (No Problem 4 Bob)

XIII. Canadian Warplane Heritage Museum

Frank VA3FWL spent some time updating the club on the news of the CWHM requesting HARC members who operate the VEACWM station to become museum members and that as with all volunteers they get a police screening completed. Some discussion ensued with a variety of interpretations to the received letter.

Frank requested that a committee be appointed to discuss this letter with the CWHM as this is felt by some members to be contrary to an initial agreement between the HARC & CWHM past management, which Frank read a load to the HARC members.

Some of the club members countered that times change and that HARC members are no different than many volunteers at the CWHM and that membership requirement is warranted.

Dave Bruton volunteered to meet with Pamela Richards on Jan 20th 2011, to discuss what this meant to the club members and radio operators @ VA3CWM.

Treasures Report

All current treasurer reports will be issued in the latest news letters published monthly. For details consult your newsletter.

Adjournment

Dave Bruton VE3DWJ adjourned the meeting at 21:25.

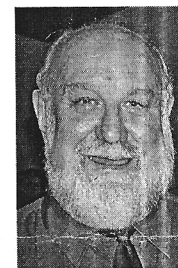
Motion moved by Mardy VE3QEE

Seconded by John VE3DVV

Minutes submitted by: Jim Sawadski VE3EEZ

CQ WW 160 SSB Next Contest

That stands for a CQ Magazine sponsored contest, world-wide in scope, on 160 meters, the gentleman's band, using the single sideband mode exclusively.



Invitation by Rick Danby, VE3BK, Contest Chair.

The next contest occurs on the last weekend of February. It is a 48 hour contest starting Friday Feb.

25th at 5:00 P.M. local time and ending Sunday Feb. 27th at 5:00 P.M. local time. The contest group is planning to use a single station for this contest. Because the contest is a 48 hour contest we will need relief operators. If you could spare the time to take a turn as an operator or as a logger now is the time to let Rick know. The 160 meter band is best during the night-time hours and world-wide contacts are possible. From our isolated location in rural Haldimand County, interference is low and the band should be wide-open. We will be using power so our signal should pull them in like fishing from a barrel. Come out and join the group. Help put VE3DC in the log. We have traditionally done very well in this contest thanks to a number of volunteers who help spread the work over the 48 hour period. So please come out and give us a hand. See the sidebar on page 3 for Rick's contact information, phone or e-mail.

Picture yourself here for the CQ WW 160 SSB contest



New QSL Card Design Selected

The new design for a VE3DC QSL card has been selected. The final design replaces the Anniversary QSL card which we have used since February 2007. The supply of anniversary cards has been exhausted. For a photo of the anniversary card, see THA Volume 74 Issue #6 page 1. The new card uses the same picture as the anniversary card, but the design is simplified by removing the 75th anniversary banner at the top. The new cards are generic so an economically large number of cards can be ordered and the design can be used for a number of years to come.

Here is a picture of the new card, front and back. To get one for yourself, talk to us during a contest and send along one of your own cards. QSL?



RADIO	DATE			UTC	FREQ	RS(T)	MODE
	DAY	MO	YEAR				

43° N 79° W - GRID FN03 ZONE 4 QSL PRE TRK

Thanks to all those who sent in card designs for consideration. The executive had a hard time deciding among the entries. However, in the end, the card with the simple message and familiar graphic won out. The cards will be costing \$89.00 USA for 1000 cards, and should be ready shortly. In a contest we respond by sending out a QSL card for every card received with "pse QSL" checked off. Our thanks to Rick, VE3BK who does a lot of the work answering QSL card requests.

Carry over from	Dec 1 2010		\$	6,176.09
		Withdraws	Deposits	
		\$		
	Office Supplies	\$ 81.93		
		\$		
	Bank Charges	\$ 4.95		
		\$		
	BELL CANADA	\$ 23.86		
	Field Day			
	Hamfest			
	Member ships		\$ 175.00	
	New Letter			
	Petty Cash			
	Property Sale			
	Refreshments			
	Repeater			
	Xmas Party			

TOTAL	\$ 110.74	\$ 175.00	\$ 64.26
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Bank Account	\$ 6,240.35
GIC. Accounts	\$ 3,000.00
	\$
CLOSING BANK BALANCE	<u>\$ 9,240.35</u>
Report done, Jan. 1 / 2011	

All Deposit slips, Back statements and account books have been compared and all monies accounted for.

Treasurer Mark Proctor, VE3RYI

Carry over from	Jan. 1/2011		\$ 6,240.35
		Withdraws	Deposits
		\$	
	Bank Charges	\$ 4.95	
	BELL CANADA	\$ 23.95	
	Field Day		
	GIC. Matured		\$ 3,052.93
	Hamfest		
	Member ships		
	New Letter	\$ 140.92	
	Office Supplies	\$ 66.64	
	Petty Cash		
	PO Box	\$ 152.55	
	Property Sale		
	RAC Inc.	\$ 837.00	
	Refreshments		
	Repeater	\$ 52.96	
	Xmas Party		

TOTAL	<u>\$1,278.97</u>	<u>\$ 3,052.93</u>	<u>\$1,773.96</u>
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Bank Account	\$ 8,014.31
GIC. Accounts	\$
CLOSING BANK BALANCE	<u>\$ 8,014.31</u>
Report done, Feb. 1/2011	

All Deposit slips, Back statements and account books have been compared and all monies accounted for.

Treasurer Mark Proctor, VE3RYI