



Hamilton Amateur Radio Club,
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Est. 1932 Inc. 1956
<http://www.hamiltonarc.ca/>

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The Hamilton Amateur

The Hamilton Amateur Radio Club Newsletter ~ 83 Years of Amateur Radio 1932-2015

The Next Meeting

The next meeting takes place on Wednesday January 21st at 7:00 P.M. in the Cafeteria of Westdale Secondary School (Main West at Longwood). Visitors are welcome.

The topic for the meeting will be HF Digital Modes and will feature live demonstrations of the digital modes. Come with your questions and see how digital modes can be done on your radio.

events of last year are recorded along with photos — two pages of material. We had a lot of activities going on and many people involved. Congratulations to the organizers and volunteers. I am not listing the events because they are on the web site and most were reported in THA during the year. But do visit the web site and have a look for yourself.

Tuners, Every Type

Members of RAC receive the bi-monthly magazine *The Canadian Amateur*. I mention this because in the July-August issue on page 11 and the September-October issue page 13, retired professor David Conn VE3KL, published the best pair of articles on antenna tuners that I have ever seen. Methodically and clearly David examines each possible configuration of tuner elements and explains what job they do. For each configuration David has constructed a QRP tuner and has measured the tuner's response and organized the numbers in a table. If you want to understand tuners, look at these articles. The work is definitive and presented in plain simple language.

If you didn't have a subscription to TCA, I can only suggest that you borrow the issues from a friend and read how each

News About Town

by Mardy Eedson,
VE3QEE



Happy New Year. Here it is 2015 thus a new title bar on THA (The Hamilton Amateur) to celebrate 83 years of continuous operation of the Hamilton Amateur Radio Club.

Minutes

There are no minutes in this issue because we finished the year with a party in December and did not hold a business meeting.

What Happened Last Year

Getting ready to write this column I looked at the web site hamiltonarc.ca where all of the

Club meetings – 3rd Wednesday each month – 7:00 pm (except July and August) in the cafeteria of Westdale Secondary School, 700 Main Street West, Hamilton. Wheelchair accessible. Parking in the back. Use the rear entrance closest to Longwood Road. Visitors welcome. Complimentary refreshments.

configuration works. I promise you will get a clearer understanding of tuners for the effort.

Incidentally, in the October-November issue of TCA on page 14, David Conn wraps up his monthly column, *Antennas and Transmission Lines*, after 11 years of publication, that's a total of 66 articles on the topic. I, for one, have learned a lot from reading his explanations. I hope he will be back again with some insights about a new topic of relevance. Thank you David for sharing your expert knowledge over the years. It has been articles like your own that have made TCA a classy and valuable publication.

Recent Happenings

Events that have taken place since the Christmas Party include the Canada Winter Contest, the January Breakfast meeting and the installation of Mesh Nodes at the repeater site. All of these are reported in this month's THA.

Wanted

TIPS. We are constantly looking for hams with expertise to share their knowledge with our membership. Most of our tips for speakers, from within the club or beyond, come from you the members. If you are talking to a fellow ham and find out they have something to share, tip off the executive. We can take it from there.

REPAIR PERSON. Old Heathkit transceivers appear from time to time. These units have been assembled by hams from kits and the original manuals are accessible. Does anyone know of a person in our area who works on these transceivers and can restore them to operational

condition? This note comes in response to a specific inquiry from one of our members.

ARTICLES. Newsletter articles submitted by members are always welcome. We are looking for stories about your adventures on the air, technical articles that would be of interest to other club members, your reaction to things in general (remembering Bernie's Dis & Dat column), or a report on an activity in which you have participated. We also welcome stories from the past that you may have come upon in your reading. About 400 to 500 words is an ideal length but articles longer or shorter are fine depending on the topic. Please send copy to ve3qee@hamiltonarc.ca.

VA3CWM OPERATORS. Back in 2002 an agreement was made with the Canadian Warplane Heritage Museum to create a radio room housing amateur radio equipment and suitable antennas. Since that time the room has been staffed by qualified amateurs. However we are actually understaffed. The room operates only 2 days a week, leaving an opportunity for others to come out and use the equipment. To qualify you need to be a member of the Canadian Warplane Heritage museum (\$113 per year for seniors) and hold a valid licence. You will also need to train on the station equipment and procedures to become part of the team of volunteers that keep the museum operating. Two of our HARC members recently have joined the team. Congratulations to Andrew Best, VE3RIA, and Enrico Fala, VA3ENF, on becoming Canadian

Warplane Heritage Museum members, and radio room op's.

Local Ham Volunteers for International Assignment.

A message to the club from member Gordon Murray VE3JSJ

First of all, a very Happy New Year to all HARC Members and the Executive.

In February 2015, I will be travelling to Honduras as a volunteer radio operator with

HARC 2014-2015 Executive

President

Roger Pimm VE3UFZ
ve3ufz@hamiltonarc.ca

Past President

Mike Krebs
va3wxs@hamiltonarc.ca

First Vice President

Paul Fleck VE3HTF
ve3htf@hamiltonarc.ca

Second Vice President

Mardy Eedson VE3QEE
ve3qee@hamiltonarc.ca

Secretary

Jim Sawadski VE3JS
ve3js@hamiltonarc.ca

Treasurer

David Bruton VE3DWJ
ve3dwj@hamiltonarc.ca

Director

Ron Pereira VE3RTJ
ve3rtj@hamiltonarc.ca

International Health Services (<http://www.ihsmn.org>). While in Honduras I will be providing radio and email services (PACTOR) for members of the medical teams who are located in regions where the communications infrastructure (e.g. landlines and cellular services) do not exist. There will be 8-10 Clinical Teams in various locations, each team with a Radio Operator such as myself. Over 100 volunteers, mainly from the USA are participating in this activity

I am not asking for tangible support - all that I require has been provided - but I thought the HARC Members might be interested in these activities.

I leave for Honduras on Feb 11, and return March 4th.

Gordon E Murray VE3JSJ

We wish Gordon a successful and interesting adventure. The executive have invited Gordon to talk with the club in March after his return and we look forward to hearing about his experiences at that time.

Thank you Gordon for sharing this information..



Gordon Murray, VE3JSJ at the HARC Hamfest Oct. 2009

Club Breakfast in the New Year, January 3, 2015

A report and photos by Rick, VE3BK

There was a great turnout with 17 people showing up for the first Club Breakfast of 2016. The actual breakfast featured good food as usual at the West End Diner. This time Paul had a new twist to the breakfast draw, this time it was the person who had the first birthday of the year. I thought I had a good chance as my birthday is the 21st of January.....nope, John VE3DVV had his on the 17th. Someone else (not sure who it was) also had their birthday on the 17th, so now it was down to the time on the 17th. John pointed out that in Holland, they are 6 hours ahead so he was the automatic winner.

It was a great breakfast. I took some pictures you can see on the Club Website at <http://hamiltonarc.ca> under photos. Hope to see you at the next breakfast. 73 Rick VE3BK



John VE3DVV and Rick VE3BK



Donna, Jim VE3JS, John, Gary VE3TTC



Ahmet VA3TUR, Dave VE3DWWJ, Scott VE3QU Ron VE3DF



Paul, VE3HTF and Carol



Roger, VE3UFZ, Ron VE3ZX (VE3RTJ), Greg VE3YGG, Carol Fleck, Victor VE3VVH Ginette VA3SEW

Advanced Amateur Radio Course Starting This Month

An announcement from the HARC executive.

Start Date: Tuesday January 27, 19:00 – 21:00 (7-9pm)

Location: Room 124, Westdale Secondary School, 700 Main Street West, Hamilton, On.

Duration: To be determined. (expected 12-14 weeks)

Cost: \$120.00

Includes the current year membership privileges to The Hamilton Amateur Radio Club, Text book, with access to the Student Success Pages (additional study materials) and In-class instruction.

If you already have the textbook the cost of instruction and membership privileges is \$70.00

*Complimentary membership privileges only apply to candidates not already members as an incentive to increase membership involvement in the club. There is no reduction in the cost of the course if you are already a member of the club.

For further information or clarification, address the education coordinator Mardy Eedson [ve3qee@hamiltonarc.ca]

With an advanced certificate you are permitted to use more transmitting power - up to 1 kilowatt, design and build transmitting equipment, sponsor a "club" station, operate a remote transmitter, be accorded "advanced" privileges while operating in foreign countries.

Morse Code RAC Proficiency Certificates

This information was transcribed from the RAC web site. You can get to it from the RAC Home Page by following the pathway:
 [About Amateur Radio] click
 [Regulatory Info] click
 [Examinations] click
 [Morse] click

"Industry Canada has discontinued the requirement for the 12 WPM Morse code qualification and now accepts the 5 WPM Morse code qualification for operating privileges on all HF Bands. This leaves a conspicuous gap in the encouragement of Morse code proficiency at higher speeds for the many amateur radio operations in CW mode on HF and VHF/UHF/SHF bands.

Radio Amateurs of Canada now offers a Certificate of Proficiency in Morse Code, to be administered by the RAC Awards Manager, to recognize voluntary candidate Morse code reception proficiency at speeds of 12, 15, 20, 25, 30, 35, and 40 WPM. A new dated certificate will be issued with each new "qualification" earned. The examination and certificate are also available in the French language. A charge of \$5 is assessed to cover printing, handling and postage costs....."



Sample certificate of proficiency in Morse Code available for each of 12 15 20 25 30 35 or 40 words per minute.

HARC Chairs 2014 – 2015

Health / Welfare
Tom Feeney VE3KTP

Contesting / Property Manager
Rick Danby VE3BK

Membership
Sherry Goeller VE3DCU

Education
Mardy Eedson VE3QEE

Newsletter
Mardy Eedson VE3QEE

Examiner Volunteers
Mike Christmas VE3XMS
Paul Fleck VE3HTF
Roger Pimm VE3UFZ

Repeater Admin. / QSL Manager
Rick Danby VE3BK

Repeater Technician
John Vandenberg VE3DVV

EQSL Manager
(VE3DC & VA3CWM)
Don Grisenthwait VE3DDQ

Field Day Coordinator
Ginette Pereira VA3SEW

Tuesday 2m Check-in Net
Controller
Mike Krebs VA3WXS

Flea market Coordinator
Paul Fleck VE3HTF

Public Relations/Communication
Ron Pereira VE3RTJ

Flea market Vendor Contact
Mardy Eedson VE3QEE

Webmaster
Jim Sawadski VE3EEZ

Safety Code 6

This document is fully titled *Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz* and is published by Health Canada

Students taking the Basic Qualification are asked a question on Safety Code 6 because exposure to radio waves causes heating of body tissue, especially at higher frequencies and increased power levels.

As we all have learned radio frequencies are grouped in bands which are named and given letter designations. A partial list of bands includes:

LF = Low Frequency Band, 30 kHz to 300 kHz

MF = Medium Frequency Band, 300 kHz to 3 MHz.

HF = High Frequency Band, 3 MHz to 30 MHz.

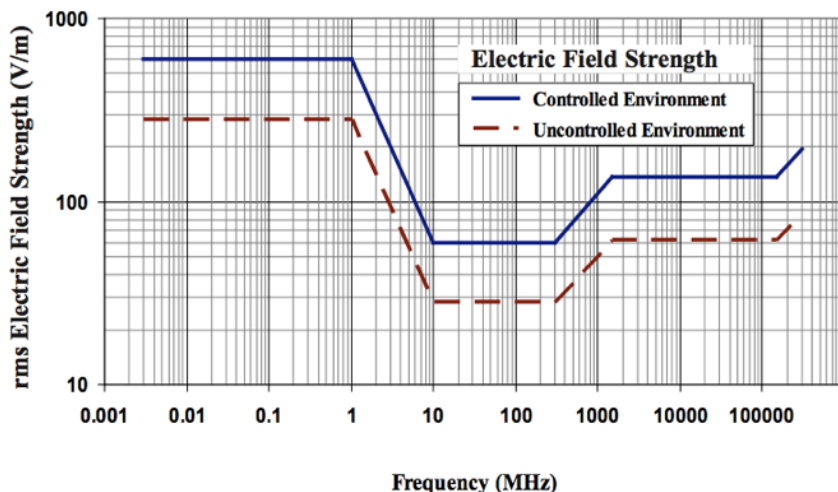
VHF = Very High Frequency Band, 30 MHz to 300 MHz

UHF = Ultra High Frequency Band 300 MHz to 3 GHz.

Graphs published on Page 27 of Safety Code 6 show the Maximum Exposure Limits. There is a dip in the lines where exposure limits need to be more restricted because heating and damaging your tissue is greatest in the frequencies from 3 MHz where the line starts to dip to 3 GHz where the line rises i.e. part of the HF band and all of the VHF and UHF bands. The body organ most easily affected is the eye.

The clear vitreous humour inside your eyeball is similar to egg albumin, a clear protein surrounding the yoke of an egg. We all know the result of putting an egg in the microwave.

The point is, don't allow exposure to strong electromagnetic fields such as you encounter near an antenna especially at VHF and UHF frequencies. Don't hold your handheld transmitter so the antenna is radiating energy next to your eye. Don't aim a



Important Points

Executive Meetings

HARC Executive committee meets each month, except July and August. Members are invited to attend. Time and location of the meetings vary but they are posted on the web site at <hamiltonarc.ca>

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 Friday evening at 7:30 p.m. on VE3NCF (see above) September through June. An informal HF net takes place Mondays at 7:30 PM on 3.693 MHz. All contacts are welcome.

Examinations

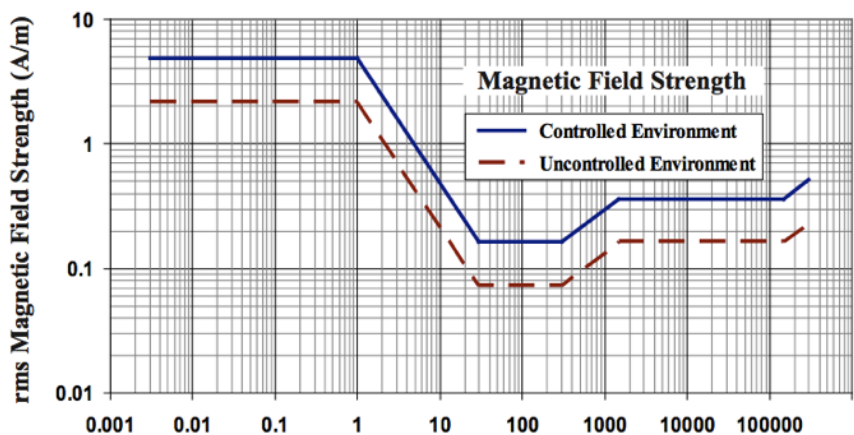
Amateur radio license examinations are conducted by arrangement with our three designated examiners. Refer to the web site at <hamiltonarc.ca> for details.

Membership Information

Club membership, including all privileges, is \$31 per person, per year, Sept 1 to Aug 31. Additional membership, for immediate family living in the same home, is offered. Refer to the web site at <hamiltonarc.ca> for details.

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 Eedson, VE3QEE, <ve3qee@hamiltonarc.ca>.



multi-element beam antenna at a person or a dwelling. Don't walk in front of a microwave cone or beam antenna at a transmitter site, like you see on an apartment roof top. Be careful of exposure to high power such as you produce with a linear amplifier or a high gain antenna. Beware that magnetic loop transmitting antennas produce very strong energy fields.

Safety is the absence of risk. Be safe about exposing yourself to electromagnetic energy.

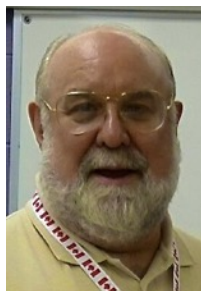
Pro Com Net

An invitation to check in each week.

The Ontario Provincial Communications Network is on the air on 442.625 MHz Thursdays at 8:00 P.M. You are invited to check in. Gary Notto, VE3TTO net control for our area will be pleased to take your check-ins. If you learn to use this net on a routine basis the foundation will be laid for effective communications should there be a future emergency. You will know where to go and who to talk to. Be prepared.

2014 RAC Canada WinterContest

A report by Contest Chair Rick Danby VE3BK



The contest took place at the Contest Site using the club call VE3DC.

Operators in the 24 hour contest were: Ahmet VA3TUR, Rick VE3BK, Sherry VE3DCU, Jim VE3JS, Mardy VE3QEE, Scott VE3QU, Victor VE3VVH

Visitors to the site included: Georgette Welling, Albert Ersser (students) & Victor Van Herk VE3VVH (former student) who operated about 10 contacts.

This was another great Canadian contest, always fun working our own RAC contest. We did well, considering we ran VA3RAC last year, even though our numbers were down slightly, we had a great turnout with some of our students coming to learn about contesting.

I had to fix one footswitch because of the wiring of a Heil adapter, but we had no real problems. The network worked great. Lots of fun and we had a great time.

I was especially happy when I was working mostly the hams south of the border when I was called by France, Spain and Scotland. Makes you pay attention to the call when you are used to hearing VE's and W or K something.

I want to thank everyone that worked us at VE3DC, especially some of the American Hams that were actually in our Canadian

Results of the RAC Canada Winter Contest Dec. 2014

Band	QSOs	Points	Multipliers
160	0	0	0
80	76	636	5
40	334	1496	10
20	358	1638	12
15	111	642	11
10	146	692	5
Total	1025	5104	43
RAC stations	10		

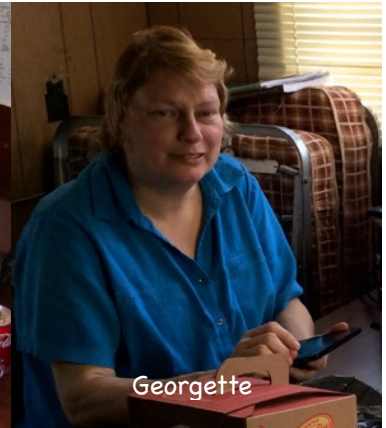
Contest and especially the guys that worked us in the wee hours of the night. Thanks also to our great operators, who make our contesting happen. Hope to see you all down the log, especially for the Canada Day Contest on July 1st, 2015.

73 Rick VE3BK

Photos of the RAC Winter Contest



Scott VE3QU



Georgette



Ahmet VA3TUR



Jim VE3JS



Mardy VE3QEE



Sherry VE3DCU

Rick VE3BK



Ahmet, Scott, Sherry and Jim working 4 bands, multi-multi



Victor VE3VVH first time solo in a contest

Portable Operation

Before launching into a first-time full blown dexpedition, spending time and money getting to a remote location and hoping to be heard on the air and back home, try a few warm-up portable operations closer to home and shorter in duration to test out equipment and to experiment with technique on your own. I have done this and learned valuable lessons every time.

Wire antennas versus the Buddy Pole or Buddy Stick and similar portable antennas. I like to be "band agile" i.e. capable of roaming up and down the band in search of contacts. I find that in this department wire antennas are the simplest, cheapest, and most effective in grabbing a contact. I have used both. With my Buddy Pole I found that a lot of time was spent tuning for a limited range of frequencies and then retuning when I wanted to change frequencies. Yes, I did make contacts. But tuning involved taking down the antenna, adjusting the configuration, and putting the antenna back up. With a wire antenna you simply get it up as high as possible and let the antenna tuner do the work.

Packing a wire antenna is easy. It lies flat. To put it up you can toss the ends over a tree or hold them up with a pole. If the feed line can't hang straight down it can be pulled horizontally at right angles to the arms of the antenna. Wire antennas are the easiest type to make also. One of the simplest types I have seen is the zip wire antenna, where two equal length arms of the antenna are made by splitting a random length of zip line. The centre is connected to a length of twin lead or ladder line and the ladder line is connected to an antenna tuner.

It helps to have a small one-piece radio with a tuner. Battery operation is convenient. I have used a car booster type portable sealed 12 volt battery. Since I don't usually go on the air for extended periods, usually just an hour or two the car jumper battery does just fine.

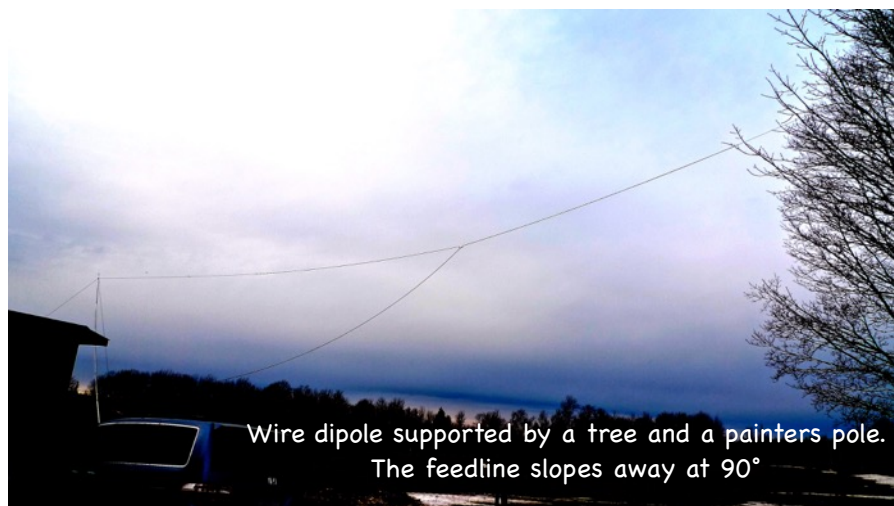
My favourite antennas for portable operation are the home made G5RV and the 1/2 sized G5RV Junior antennas. The full sized G5RV loads from 80,



Small portable 100 watt radio with tuner.

meters to 10 meters while the half-sized G5RV Junior loads from 40 meters to 10 meters. Plans are available on the internet. Other antennas I have tried are the Par EndFedZ antennas [<http://www.lnrprecision.com/endfedz/>] and the HyEnd Fed multi band antenna . [<http://hyendfedantenna.nl/>]. Also, home made mono band 40 and 20 meter wire antennas work.

Homebrew your own with parts available at the next hamfest or ask Greg's advice (VE3YGG) about sourcing parts from CTC or Home Depot!



Wire dipole supported by a tree and a painters pole. The feedline slopes away at 90°

