

Kilowatter

The voice of the KW Amateur Radio Club

November 2005

Since 1922

Kitchener-Waterloo Amateur Radio Club

133 Weber St. N. Suite #3-138

Waterloo, Ontario

N2J 3G9

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MONDAY'S MEETING

Date: Monday November 7th 2005
Time: 7:30pm
Place: RCAF Wing 404 Club. End of Dutton Dr. Waterloo. Off Weber St. N
Topic: Quartz Crystal Oscillators how they work in radios by Gord Hayward

UPCOMING EVENTS

York Region Hamfest York Region Amateur Radio Club Saturday, October 29, 2005, Markham ON	Advanced Qualification Course Peel Amateur Radio Club March 4, 2006, Mississauga ON
Niagara Peninsula Amateur Radio Club Saturday February 4, 2006, St. Catharines ON	
IARC Eleventh Annual Flea Market Iroquois Amateur Radio Club Saturday April 1, 2006, Iroquois ON	Burlington Amateur Radio Club Saturday, February 25, 2006, Burlington ON
Central Ontario Hamfest & Fleamarket Guelph ARC & Kitchener Waterloo ARC Saturday, June 10, 2006, Fergus ON	Annual K.W.A.R.C. Field Day Doon Pioneer Village June 24th – 25th

KWARC Directors 2005-2006

President	Gord Hayward	VE3EOS	744-7205
Vice President	Bob Pelling	VE3XNB	885-9995
Past President	Ben Sasiela	VE3ST	748-0445
Treasurer	Al Macdonald	VA3TET	741-0281
Secretary	Charles Cosby	VE3CHJ	650-1209
Director	Tedd Doda	VE3TJD	634-5949
Director	Bill Riddell	VE3WFR	571-9875

The Executive Committee Chairs

Program	vacant		
Technical	Tedd Doda	VE3TJD	634-5949
Packet	Tedd Doda	VE3TJD	634-5949
Database Mgr	Dave Schwartz	VA3DGS	884-3594
Bulletin Editor	Dennis Tabbert	VA3DLT	463-9641
Edu. Co-Ord	Ron Gimbel	VE3DBD	584-2009
Chief Examiner	Vern Stroud	VE3RVS	743-9342
Auto Patch	Ben Sasiela	VE3ST	748-0445
ARES Manager	Larry Gorman	VE3LGN	884-6782
CANWARN Mgr.	Bob Pelling	VE3XNB	885-9995
QSL Manager	Gord Gibson	VE3NQG	893-5148
Inventory	Ben Sasiela	VE3ST	748-0445
Field Day	Bob Pelling	VE3XNB	885-9995
Webmaster	Dennis Tabbert	VA3DLT	463-9641
Bereavement	Marg Cassel	VE3RE	634-5139
Flea Market	Bob Pelling	VE3XNB	885-9995
QCWA Rep	Harold Braun	VE3DWH	884-2388

KWARC Owned Repeaters/Nodes

Mode	Call	Freq.	PL	patch	Location
Voice	VE3KSR	146.970	131.8	Yes	Baden Hill
Voice	VE3RCK	146.865	131.8		Mannheim
Packet	VE3KSR-0	145.010			Baden Hill
Packet	VE3KWQ	145.090			Waterloo
Voice	VE3IXY	224.340	131.8		Mannheim
IRLP	VE3RBM	444.875	131.8		Mannheim
Echolink	VE3SED	53.370	131.8		Baden Hill
Voice	VE3SED	442.200	131.8		Baden Hill
Special Events		147.510			Kitchener

Other Area Repeaters/Nodes

Mode	Call	Freq.	PL	patch	Location
Voice	VE3ERC	444.700	N		Elmira
Voice	VE3KFM	442.000	Y	open	Kitchener
Voice	VE3RND	145.330	Y		Plattsville
Voice	VE3SWR	146.790	N		Cambridge
IRLP	VE3WFM	147.090	N		Waterloo
Voice	VE3WWW	146.835	N		U of W
Voice	VE3RSS	147.030	N	members	Acton
ULR Link	VE3BHR	447.075	Y		Baden Hill
Voice	VE3RKL	443.850	N		Guelph
Voice	VE3ZMG	145.210	N	open	Guelph
Packet	VE3VIQ	145.570			Guelph
TCP/IP	VE3MKY	145.570			Guelph
TCP/IP	VE3UOW	145.570			U of W B
Voice	VE3BAY	442.350	Y		Kitchener



Hello All.

After last month, I keep watching the sun and I think we've finally reached the bottom of the sunspot cycle. The pictures show no spots at all and the radiation is really low. Propagation on the shorter wave bands is down and I'll bet 10m rigs are going cheap. That's the way it was when I got my ticket at the bottom of the last cycle. Yup, I'm a relatively new ham.

The season closer flea market at Markham was last week and now we're going into the winter doldrums. In February we'll have cabin fever and eagerly head to the next season opener at Ste. Catherines. This isn't to say everything goes dead. We have antennas to build. I hear they work better if they are put up in really cold weather. I, on the other hand, am going to stay warm with the glow of my tube rigs. There's lots of stuff to build and I hope to get to a few of them.

I looked at Ben's presidents column from last October and read his comments about ham radio in hurricane season. This year has been much worse and its not over

yet. Tropical storm Beta is happening as I write this. Although we don't get tropical storms here, we do get ice storms. The local hams are part of the region's plans for emergency communication so keep your batteries charged.

On the club front, we haven't yet found a volunteer to co-ordinate the meeting presentations. The executive have been coming up with ideas and at the coming meeting I'll be talking about crystals. These are the mainstay of our frequency control but at the University I'm using them as bio-sensors. I think you'll find the connection between biology and ham radio interesting.

We do need more program ideas. What would you like to hear about? I think one person can't generate all of the ideas and this might have scared some away from the job. We need a person to co-ordinate the ideas so we are still looking for a volunteer. If you can have your arm twisted, see one of the executive.

Cheers, 73 es cul de
Gord, VE3EOS,
Pres., KWARC.

Amateur of the Year Selection

Greeting to all club members.

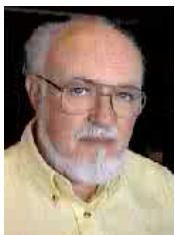


As your past president, one of my responsibilities is to chair the issuance of awards recognizing achievements of individuals within the club that have contributed to amateur radio and the betterment of the Kitchener Waterloo Amateur

Radio Club during the past year. This award is called "The Amateur of the Year" award, and all members through the submittal of secret ballots make this selection. At the November general meeting, I will be handing out ballot forms to all present and will call for entries of nominations for this recognition. Please take some time prior KWARC

to the meeting and select one name that you will recommend which you will be able to enter on the ballot during this night's selection. A brief reason as to your selection will also be required. Returned ballots will be tabulated and the award will be presented at a later date. I encourage as many members as possible to attend the November meeting. This is where your voice is heard and your chance to input your recommendation.

Ben Sasiela VE3ST
Past Pres



The following will be useful information for any of our Field Day people, or those with laptops running Win 95.

Just a brief tip for those readers who have old laptops running Windows 95 and who don't want to spend the money to upgrade it - or perhaps it is so old (like mine) that it won't upgrade beyond Windows 95. The process will permit Windows 95 to work with some programs written for Windows 98: like the Field Day Logger we've been experimenting with. This requires a download and in most cases a self-install.

You can download it from Microsoft using this link:

<http://www.microsoft.com/downloads/details.aspx?familyid=d7a4de78-81a9-4db7-beb6-84ff99342172&displaylang=en>

Pretty long link, but I typed carefully and everything went very smoothly.

We'll tell you more about the Logger after some more experiments, but from my point of view it is so clear and simple to use, it permits on screen revision of entry errors (you know, after you've made the entry as the logger and the operator says "No, no, no! Not W8ABC!! it was W8ADC"), and even provides a map of where your contacts are from, plus instant duplication notification. On top of all those features, and this part is most important, the log made from your band contacts can be transferred by .adif files and diskette to another logging program so that all of the club's Field Day contacts can be compiled into one main log.

In any case, it didn't work on my old laptop before I downloaded the Microsoft fix and it did afterward, so you should be able to use other programs written for Windows 98 on your old machine.

73 Bill VE3ETK

CQ,CQ,CQ -All Hams

Simulated Emergency Training exercise (**SET**)

Every year at the end of October Radio Amateurs Canada encourages individuals and clubs to practice working with other jurisdictions via a radio net.

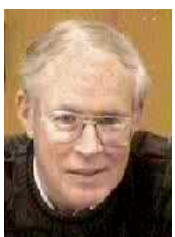
This year the Toronto EMO (Emergency Measures) group is sponsoring a check in net for all Ontario HF operators. I recently sent out a notice to all those with HF capabilities who signed up for the KWARC ARES team. If you were missed, or have not yet signed up, consider checking in.

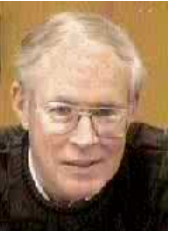
The Provincial Emergency Operations Center Amateur Radio Station VE3EMO and the Toronto Emergency Operations Center Amateur Radio Station VA3EOT will both be activated on Sunday October 30th from 10:00hrs to 13:00hrs.

Both stations will be engaged in the sending and receiving of simulated emergency test messages with any Amateur Radio Station anywhere, on HF/6 Mtr FM and VHF / UHF.

On HF, the activity will be centered on 7.055 Mhz., the frequency of the Trans Provincial Net (TPN) with 3.755 (Ontars Net) as the backup frequency.

Larry VE3LGN





Management lessons learned from the Peterborough flood

In June of 2004 Peterborough Ontario experienced a major “unannounced” flood that cause major devastation and disruptions throughout the city. This was a first for Ontario in recent history. The many agencies, Provincial as well as municipally mandated were not fully prepared. The aftermath of ongoing endless paperwork documentation and analysis of management decisions resulted into what might arguably be called a “roadshow”. A team of individuals involved in the management of various aspect (Social Services and Fire service), have been actively pursued by many municipal governments through Ontario. We were fortunate to attend the local presentation on Fri September 23,2005. Their 2 1/2 hour presentation “2004-Peterborough Flood - Lessons Learned “ is a highly informative quick paced event which pulled no punches in analysing how well they did ... and how well they didn't do.

This was one of the more refreshing presentations that I have attended. The 3 presenters, two ladies and the deputy Fire Chief were extremely candid, never attempted to justify or downplay problems in management, and they managed to intersperse the program with amusing real life anecdotes. The power point presentation was extremely well edited, and never drifted away from the critical issues.

Key points relevant to Amateur Radio operators.

Foremost—The Social Services groups (Red Cross, Salvation Army, St Johns Ambulance, etc need the most assistance with communications. They rely on limited phone availability and limited personnel. Moving people from a problem area to Evac sites requires extra people to deal with message handling between the departure and arrival points. Amateur Radio is Ideally suited to this need.

Communications becomes more and more critical as families become more dispersed, and people want to contact their family members and associates.

Telephone systems, cell phones, municipal communication systems all suffer one or several of the following problems.

Hardwired systems become damaged/overloaded. Wireless systems overload, OR the cell towers lose power to function. Virtually everyone has a “flip phone” so why would they want to go elsewhere?

Municipal systems are not interagency friendly. They also suffer from limited frequency access for multiple independent contacts.

There is an expanding variety of wireless commercial communication systems, BUT they all have an Achilles heel. This only become apparent in a crisis. (One of the reasons many people buy into the wireless systems!)

There are so many commercial alternatives available. (And the Municipal agencies, such as Police all use commercially provided systems) that Amateur Radio is below the horizon even in Emergency situations. This in spite of the fact that many Municipal Emergency manuals have Amateur Radio listed somewhere in them.

Police and Fire services as paramilitary units are hierarchical and moreover, rarely if ever would consider communicating “out of band”. Which in any case is physically impossible.

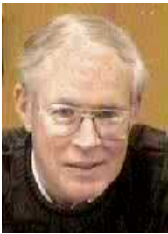
A major understanding that became apparent in the Lessons Learned from the Peterboro Flood is that there is no way you plan for every emergency. The only way that you can get a complete understanding of a situation is to actually have it happen (unfortunately).

The best comes out in many people as they have to pull together to solve the next problem. An open flexible mind is critical. The best person to deal with a particular situation is not necessarily the one with the highest credentials.

A final tidbit. Whether you are part of the solution or part of the problem (a victim) Make absolutely sure that your organization keeps records of what you did, when you did it and what you spent. Eventually you will need to "Settle up" whether from a government agency or your insurance adjuster. With out a paper trail the nightmare will go on almost indefinitely. Over 60 local agency and government representatives listened very carefully!

It is unlikely that our Region will experience future serious flooding, but the lessons passed along were certainly relevant to any form of local emergency that might affect a large number of our citizens.

Larry VE3LGN



The clubs Emergency Services group was represented again at the quarterly meeting of the Regional Social Services Emergency Planning committee on September 28 on this occasion by Bob VE3XNB and me.

As regular attendees, we are becoming recognized as useful participants. At this meeting the topic of reliable communications was finally raised by the St. John's Ambulance manager. Until now communications has been a minor topic –as every agency has landlines, cell phones and a few now have Blackberries. As well, the Regional Police and Municipal Fire Depts have their own radio systems.

Despite this dearth of facilities the issue raised was the need for a common protocol and easy interconnectability of all agencies.

This was the opportune moment to inform the group that Amateur Radio could provide this type of service.

Consequently, a special meeting is in the works to specifically address the communications issue. We have been given a special request to be sure to attend. More information to follow.

Beware of Spammers using fake RAC e-mail addresses

More and more spammers are using RAC addresses as fake headers on the garbage they are distributing. As usual, these messages do not originate from the RAC server.

Please be ignore addresses like john@rac.ca or server@rac.ca, or service@rac.ca ... these addresses are FAKE !

(Thanks to VE3PU with help from VE3LL).



The last meeting of the KWARC for 2005 will be on December 5th at the RCAF community center 404 wing on Dutton Drive, and as in the past years we plan this meeting as a year-end social event. A time to socialize; chat about ham radio, and enjoying an evening of friendship, food, good times and entertainment. This year we are very fortunate to have some entertainment for our members. The Waterloo Region Teachers Choir will be joining us for an evening filled with classic Christmas songs. You may have remembered the wonderful performance that they provided to KWARC some three years ago, and they have consented to come back and perform for us once again. The choir has grown to some 75 members, and entertains extensively within the region to community groups of all ages. Led by choir director Tammy McMath, they're repertoire includes spiritual, traditional, and Christmas melodies, classic and modern songs.

This is one meeting that everyone needs to attend, with his or her friends and family. Everyone is welcome to our final social event of this year. Lets make this the biggest turn out of club members ever. Reserve this evening in your calendar and plan to attend.

Each year, the Kitchener Waterloo Amateur Radio Club also gathers non-perishable food items for the local food bank. Last year, your generosity provided over one hundred pounds of food donations in a time to help those less fortunate in our community. Please be generous and bring what ever you can carry to once again show those that are in need, that amateur radio member's care. Our goal this year is to double our clubs contribution and help those that most need our assistance. So give generously please. A Food donation table will be provided at the meeting for your contributions.

Our club munchies table will again be available near the fireplace where you are asked to contribute with some home baked Christmas treats to share with others as well as the members of the choir. We have asked them to stay, and get to know us after their performance. Some items such as napkins, plastic cups, paper plates, would also be welcomed, so if you have extra items at home, please bring them for the munchies table. Christmas Punch Bowl and liquid refreshments would also be a welcome treat. The club will be providing free coffee during the evening. Regional rules prohibit alcoholic beverages, but a nice large fruit punch bowl would go well in quenching the thirst of members and choir performers.

This is one meeting we urge you not to miss. Tuesday December 5th 2005 at the 404 wing of the RCAF community Hall on Dutton Dr in Waterloo. The evening will start at 7.00pm and our choir performance is anticipated to start around 8.00pm.

Ben Sasiela
VE3ST
Past Pres.
KWARC

Approximately 20,000 Basic-Only Canadian amateurs gain access to HF bands

Industry Canada reports that since the new regulations were implemented on July 30, 2005, 19,995 Canadian amateurs who held a Basic Only certificate before April 2, 2002 have been granted access to the HF bands.

There remain 2450 amateur operators in Canada that do not possess HF privileges. This does not imply that they have not met the 80% pass mark but that as of today, Industry Canada has had no requests from these individuals for HF privileges.

Industry Canada has also recognized that it will have to find a method of noting the Basic + Honours Qualification on the Amateur Certificate and Call Sign (ACCS) data base that is displayed on the RAC web site. It is understood that Industry Canada is planning to revise the ACCS, but that will take some time to realize. As an interim measure, the names of holders of only the Basic Qualification who were certified before 2 April, 2002, have been grandfathered as Basic + Honours and their names now have been annotated with a (+) sign on the data base to show this. Those amateurs holding only the Basic Qualification who were certified after 1 April, 2002, should now contact the Accredited Examiner (AE) who tested them. The marks should be available as RIC-1 requires Accredited Examiners to retain the examination results for three years. If your AE has your mark, and if it is 80% or greater, then ask him to fax the information to the Amateur Radio Service Centre at (613) 991-5575 or fax the information yourself if he provides you with a copy.

Under the new rules, holders of the Basic Qualification may now assemble, install and operate commercially available transmitter kits of professional design. Basic holders have always been able to build, install and operate receivers and station accessories; only designing and building or modifying transmitters was prohibited. This is a positive step to expand the practical skills of amateurs.



Kitchener – Waterloo Amateur Radio Club, Inc.

General Club Meeting Minutes

October 3, 2005

Gord Hayward VE3EOS called to order the regular meeting of the Kitchen – Waterloo Amateur Radio Club, Inc. at 7:35 PM on October 3, 2005 in the 404 Wing Club, Dutton Drive, Waterloo, Ontario. There were 41 Members and guests in attendance.

With new batteries breathing new life into the portable microphone, it was passed around for introductions.

Bill VE3ETK along with Gord VE3NQG gave a presentation called "Digital Fun on HF". Bill discussed different protocols like Radio Teletype (RTTY) PSK-31 and Slow Scan Television (SSTV). He showed how to use different software to interface your radio with your computer. Several software packages were discussed and demonstrated including WinWarbler and, DanPSK. A note mentioned was that when using this sort of software, you should remove audio compression and ALC when transmitting in these digital modes. Gord then showed us a 30 year old Atlas Transciever he picked up at a flea market. He played a few QSO's that were recorded earlier of digital modes that were recorded earlier to give you a taste of worst case scenarios to show the ability of this software to pull signals out of the noise. He showed us some QSL cards from various locations and discussed contesting and Dxing such as IOTA's.

Gord then presented Paul Cormier VE3BMI with an award for his first HF contact at Field day last spring.

Bill then Discussed the advantages and disadvantages of using EQSL for cards as opposed to direct mailing or using the bureau.

Larry VE3LGN discussed the club's involvement with ARES and asked for volunteers to sign up. He passed around applications and talked about what Emergency Services is and can do for the community when disaster strikes. How they can contribute in such things from poker runs o disaster relief.

Business

Field Day 2006 – Gord talked about field day and encouraged more members to come out next season even if for a few hours to either partake or just to come see what it is all about.

Peter VA3PTB talked about holding his class for students at Monsenier Doyle High School and had 3 students pass their exams. One even received a mark high enough to allow them HF privledges. This year he has 7 students enrolled in the program

Harold VE3DWH told us that the Semi-Annual Meeting of the QCWA is on October 15 at the Plainsman and the guest speaker is Gary Hammond.

Tedd VE3TJD mentioned the equipment is in good shape but he needs some large capacity gel cells.

AI VA3TET said the bank and account is in good shape.

Gord reminded the executive of the meeting Tuesday night at Ratz-Bechtel.

The 50/50 draw was held at the end of the evening and Gord Hayward VE3EOS won the draw.

Adjournment

It was moved that the meeting be adjourned by Mary VE3MWE and seconded by Drew VE3AOR and was adjourned at 9:15 by Gord VE3EOS.

Minutes submitted by: Charles Cosby VE3CHJ

Kitchener – Waterloo Amateur Radio Club, Inc

Executive Meeting Minutes October 4 2005

1. Call to order

Gord Hayward called to order the regular meeting of the **Kitchen – Waterloo Amateur Radio Club, Inc.** at **7:35 PM** on **October 4, 2005** in **Ratz-Bechtel Funeral Chapel Ltd.** 621 King St W. Kitchener, ON **Ontario**.

2. Roll call

Charles Cosby VE3 CHJ conducted a roll call. The following were present:

Gord Hayward VE3EOS, Ben Sasiela VE3ST, Tedd Doda VE3TJD, Bob Pelling VE3XNB, Bill Riddell VE3WFR and Larry Gorman, VE3LGN

3. Open issues

- a) Ben discussed the annual awards to be presented by the club. Amateur of the Year will be voted on at the November meeting. The Field Day Award needs to be discussed with Fred VE3OQB and Charles so that the presentations can be done at the December meeting. Presidents Award to be awarded to person who contributed the

greatest amount of time and dedication to the club is to be decided by Ben. The plaques need some lead time to be engraved

- b) December Christmas club gathering. Ben is going to talk to Heather about availability of her choir for our meeting. The choir has grown to 55 to 60 participants. We need to find out ASAP and start advertising their presence at the meeting. Ben asked that we present them with a \$25 gift certificate for their choir as in previous years. Bill made a motion that we increase it to \$50 this year since their membership has grown. Tedd seconded and the vote was unanimous.
- c) JOTA is not being held this season as neither Linda nor Ben have heard from the scouts one way or the other regarding the date and time.

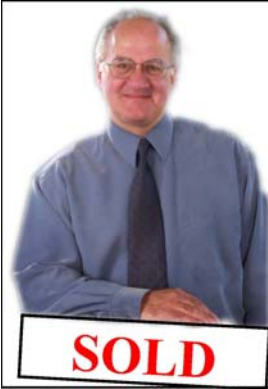
4. New business

- a) Emergency Classes. Bob and Larry met with the region with regards to our clubs participation with getting some of the regional people, in particular the Cambridge Fire Department, to receive Basic training to receive their amateur radio licenses. They asked SWARC for recommendations for equipment, and purchased same but currently it is still in boxes. The region is holding a meeting in the near future to decide the role of amateur radio in their plans for emergency response. Ben suggested that we send a letter to invite them to attend our spring classes
- b) Ben mentioned that Gary Hammond would like to borrow the club's projector to do a presentation to the QCWA with Ben as operator. It was pointed out that a resolution was adopted last year in regards to the projector and it was decided then that it only be lent out for club activities. Bill made a motion to keep this resolution up and not lend it for non-club activities. Tedd seconded it and it was voted in unanimously
- c) Bill mentioned again that the club desperately needs to appoint a Program Director to spearhead getting meeting agendas scheduled. Larry suggested that we come up with some ideas as an executive and then present these ideas to a potential Program Director as opposed to having them do it all alone. Tedd mentioned that we could have other topics besides just ham radio specific such as waste management, R2000 home construction, wind and solar power, etc. Some suggestions were Herb Hildegard aboard South Bound II and Marine HF nets, a screw driver manufacturer in Windsor (sorry didn't remember the name). Bob suggested that we start up a KWARC weekly net on KSR to try and boost meeting attendance and involvement in the club. Tedd agreed to run the net and see how it goes. A suggestion was made to perhaps read interesting articles on the air from the Kilowatter. Tedd suggested we contact Dave Schwartz about doing a presentation on APRS. How it is used to access Weather stations, digipeaters and message sending all done through APRS. Gord suggested that if we cant get a presenter for APRS, then he would do a presentation on his work with blood clots. Charles is to contact Bob VE3IKM about a presentation on solar and wind power. Another suggestion was a company in Cambridge that makes flexible solar panels.
- d) Larry asked the executive to approve his expenses for Charles and himself to attend the seminar put on by the region about the Peterborough flood. Bill put forth a motion, Bob seconded the motion, it was voted on and passed unanimously.

5. Adjournment

Moved by **Tedd Doda VE3TJD**, seconded by **Bill Riddell VE3WFR**, **Gord Hayward VE3EOS** adjourned the meeting at **8:45 PM**.

Minutes submitted by: **Charles Cosby VE3CHJ**



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David Johnson, Sales Representative
Coldwell Banker Peter Benninger Realty
508 Riverbend Drive, Kitchener
742.5800 ext. 2169
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[KWARC Membership Renewal](#)

Please cut out the following renewal form and enclose it with your payment as your renewal date comes due. When you enter the birthday information; just your month and day are needed.

PLEASE MAIL TO: Kitchener-Waterloo Amateur Radio Club 133 Weber Street North, Suite #3-138 Waterloo Ontario N2J 3G9	
First Name	Call:
Address1:	Last Name:
City:	Address2:
Postal Code:	Email Address:
Phone Number: () -	Birthday: ___ Month ___ Day
This is a [] RENEWAL or [] NEW APPLICATION	Kilowatter Preference [] MAIL [] From WEB
<input type="checkbox"/> Full Membership @ \$20.00 <input type="checkbox"/> Family membership adder @ \$5.00 <input type="checkbox"/> Seniors Membership @ \$10.00 <input type="checkbox"/> Student or Challenged individuals @ \$10.00	<input type="checkbox"/> Associate (<i>non voting</i>) @ \$10.00 . I am a member of the _____ Club. <input type="checkbox"/> Printed Kilowatter Newsletter " Mailed " @ \$8.00
Speed Dial number request: _____	
Comments:	
Total Amount Enclosed: \$	Your Cheque Number :



INFORMATION GATEWAY SERVICES

Kitchener-Waterloo Cambridge and Guelph

Information Gateway Services
(Kitchener-Waterloo) Inc.
151 Frobisher Dr., Suite E-118,
Waterloo, Ontario, N2V 2C9

Owner Operator : Don Sinclair VE3ICD

Information Gateway Services (IGS) provides a complete range of Internet services ranging from entry level personal accounts for beginners, right up to the requirements of large commercial organizations.

SPECIAL OFFER TO KWARC MEMBERS

1. No activation fee on standard personal accounts for KWARC members. A **\$25.00** saving
2. \$50 per six months or \$75 per year paid in advance for 5 hours/month --- (extra hours at \$2.00 per hour).
OR \$15month \$150 year for 30 hours/month (*this popular package has just been increased from 20 hrs*)
3. N E W Now get **UNLIMITED FREE** time from midnight until 7am
4. One free KWARC e-mail address urcall@kwarc.org for KWARC members
No coupons or other discounts can be used in conjunction with these special offers to KWARC members ONLY.

For complete details, call Don Sinclair VE3ICD at 884-7200