Q R M

March 2004

Quinte Amateur Radio Club Inc. Newsletter

PO Box 23039 BELLEVILLE Ontario K8P 5J3

NOTICE OF MEETING:

DATE / TIME: **March 17, 2004 @7:30PM**

LOCATION: Loyalist College (Pioneer Building) Room P-2

PROGRAM: Dave Lawrence VA3ORP will be speaking on 'Ground Wave Propagation'. We will also be inviting Dave to dinner at 5:30 PM at the Quinte Restaurant. As seating is limited, please RSVP to Peter Hodgson VA3PKH if you would like to attend the dinner.

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

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: va3pkh@rac.ca)
VICE-PRESIDENT: Bill Milligan VA3WOW (E-mail va3wow@rac.ca)
SECRETARY: Mike Papper VE3VMP 969-1744 (ve3vmp@sympatico.ca.)
TREASURER: Don Dalrymple VE3DQN 968-9242 (E-mail: ve3dqn@rac.ca)
PAST PRESIDENT: Dave Ackerman VE3UGT 962-3991(E-mail:ve3ugt@rac.ca)

Silent Key – Dick Travers VE3MFJ

It is with deep sadness that we announce that Dick Travers, VE3MFJ, became a Silent Key this past weekend. Dick was a Director of the Prince Edward Radio Club and a Lifetime Member. He was a pioneer in Ham Radio who began operating in the Spark Gap era. He was a dedicated CW operator and remained active until his passing. Dick was a fine gentleman who embodied the true spirit of the amateur radio fraternity. Dick will be missed by all of us.

There is no funeral planned for Dick. A gathering to celebrate his life will organized for a later date.

PERC extends its deepest sympathies to Dick's wife Joanne and to his family.

73, Ian VE3IEM, Al VE3LAW, Peter, VE3KWM

Ever had that "blown out" feeling?

Keith Harvey VA3KRV

I was asked to put some notes together about the new tire pressure monitoring system I demonstrated at the QARC meeting on February 18th, so here they are.

I mentioned that the PressurePro monitoring system is a new RF based solution for the challenge of keeping tabs on tire performance. Operating a truck, car or RV at highway speeds in high ambient temperatures or on rough highway surfaces might cause loss of air or tire damage (have you driven I-75 south of Detroit, or I-81 recently?). I have had only one tire blowout on my Class A motor home on I-75 in rush hour, and I don't ever want to go through that experience again. Additionally, it really would be very re-assuring to keep track of the tire condition on the towed vehicle, because most of the time you can't see or feel the tires until the blue smoke starts to show! I have actually seen RV's dragging vehicles on the highway with soft tires or even with a flat tire and the driver only knows when some kind soul tells him with much horn blowing and arm waving.

About four years ago the market for relatively low cost solutions to this challenge became much more interesting when State and Federal lawmakers began the process of mandating that such systems had to be employed on commercial and heavy vehicles in the very near future. Systems do exist that require the tires to be dismounted, transmitters installed on the wheels, receivers in the wheel wells and a wired display panel in the cockpit. The disadvantage here is that the system is nailed on to the vehicle.
Additionally, when the sensor battery quits you have to dismount the tire and replace the sensor.

The PressurePro solution is transportable from vehicle to vehicle and the readout display can be moved from the “tow” vehicle to the “towed” vehicle when the two are split, as happens frequently when snowbirds drag their RV to the sun for the winter and then use the car or truck for daily chores while the RV is parked.

Operating on 433.920 MHz FM (Part 15) the wheel pressure sensors are simply screwed on to the valve stem of the wheel(s) you want to monitor. The receiver/ monitor is plugged in to the 12VDC cigar lighter and the small display panel velcro’d in a convenient location. That’s all there is to the physical installation.

This picture shows the receiver / monitor and one sensor compared to a Canadian nickel coin.

The tire sensors have a unique six character serial number in their chip set, along with the firmware to sense pressure, sense motion and transmit data as needed. To assign a sensor to a wheel is a simple task. The receiver is switched to program mode, the wheel location selected via the Up-Down keys, the sensor screwed on to the valve stem, and then a short wait while the sensor sends “I’m here” to the receiver where the “set” pressure point is recorded along with the sensor ID. This process is repeated until all wheels are equipped, then you switch to operate mode from program mode and “go RV’ing”.

At any time you can interrogate tire pressures by selecting the wheel(s) you want to look at and the latest pressure is displayed in PSI or KPA, your cho ice. If a tire starts to lose air the system will alert you via a flashing light at the failing location and an audible alarm, along with the current pressure. Pull over at the first opportunity and save yourself some grief.

One nice feature is the ability to check current pressures before a trip, and before the wheels start rolling. Ordinarily it takes a couple of rotations of the wheel to “wake up” the sensor, but a small magnet held close to it will cause it to send out the current reading.

As a “beta” tester of one of the first 100 units to be shipped last week, I was naturally very curious about the possibility of RF issues in a ham radio equipped vehicle, and RF interference issues that might occur from the sensors as they “talked” to the receiver. I exchanged communication with the manufacturer about the technology involved and was a little concerned when I noticed that the frequency chosen for the sensors was right in the middle of the 70cm band in the region the Band Plan calls for digital control of repeaters and similar applications. We are all familiar with car alarms being fired off by a 15 watt UHF 70cm mobile using FM mode, repeater high output or the QRM from surveillance and security systems operating under Part 15.

I set up a series of tests with the PressurePro receiver on the bench. I used a Yaesu VX5R and a KDK FM7033. The KDK was linked to a Timewave PK12 TNC in an APRS-Packet configuration to generate FM Digital traffic. The digital signals were initially generated at 5 watts to a simple ¼ wave vertical about two feet from the tire monitor. I burst off some traffic and watched the monitor. Didn’t blink. I then went up to 15 watts, same result. I connected the 45 watt linear, moved the antenna about four feet away and tried again. No problem. These conditions will fairly closely match the environment in the RV, where the dual band VHF-UHF antenna is on the roof at the left front, and the tire monitor will be at the drivers location. The RV body is fiberglass on a wood – steel frame so there is very little shielding. I’m pretty much convinced that although I might be swamping the front end of the tire monitor it certainly does not cause it to get nervous, and although I might mask any tire signals during a QSO I can always ask for tire info after the QSO to see if I missed anything.

When I get around to installing an ATAS120 antenna on the rear of the motor home for the FT897 rig I’m sure that the added distance from the antenna will more than compensate for the much higher RF output the FT897 can generate.

The VX5R was employed to listen to what the sensors were transmitting when they were installed on the tires and reporting initially to the monitor. The data burst was so short that I wasn’t really sure I heard anything, so I backed the squelch all the way off and tried on the next wheel. I still didn’t hear anything other than a quick burst. Once I had all wheels equipped and registered I went for a drive. I could check tire pressures as the temperature rose and see the climb from cold pressure to running pressure. To double check I pulled over, unscrewed one sensor and got an immediate “00” display on the associated wheel along with an alarm. Replacing the sensor reset the alarm and restored the pressure reading after about 15 seconds. In all the time I was driving I had the VX5R “listening” right next to the monitor antenna. I didn’t really hear anything other than very short bursts, so while I don’t know what the milli-watt output is of the sensors, I’m pretty impressed with the receiver and it’s ability to hear signals from a sensor running around in circles on a wheel at 80 KMh on a country road covered in snow.

So, from an RF perspective I’m very certain that whatever I do in the cabin with my mobile ham gear isn’t going to hurt the monitor, and whatever it generates as it keeps me safe isn’t going to interfere with my QSO’s while on the road.

On the night of the meeting I drove County Road 30 and 401 instead of my usual back road trip. This was to see if any wheel balance issues arose after the 2/3 ounce sensors where installed. I did have some shake I hadn't experienced before, so I had the wheels rebalanced at CTC here in Campbellford the next day. My friendly tire tech wasn't so sure that the 2/3 ounce had made any difference, but the accumulated road sand and ice might have, so he cleaned up the wheels and as he said "got them to within a tenth of an ounce". We will see the results next trip on the 401. The system did create a stir in the shop though, and I answered many questions and did a number of demonstrations!

Now, as with any Beta test run, some gremlins creep in. After I had the wheels balanced I pulled the motor home out from the side of the house to install the other six sensors, set up the tow configuration and drive around the block to see if all works as it should. In the process of getting ready to install I toggled the **<F-B>** key on the monitor to set up the "tow" vehicle. This key is designed to allow you to select which vehicle you want to monitor: tow, towed or both. The monitor promptly rolled over and died, emitting no beeps, sighs or blinks. Checking with the supplier I was advised that five of the original "Beta" test units shipped had either arrived dead, or died soon after.

I checked all the usual fuse and supply situations, and all was OK.

In the "Alpha" tests no monitor had ever quit, so this is a new thing. Mine is currently at the mercy of Canada Post and the USPS on its way to the factory to be replaced by an updated version, and to permit the design team to look at "why".

When I get a new monitor I will go ahead with my installation. I will then be able to confirm the sensor transmit distance capability (spec. says up to one hundred feet LOS), whether there is any attenuation of sensor output due to being behind stainless steel wheel covers and report RF performance from the perspective of "hamming in the RV".

Community Policing 'Pitter-Patter' Run – Sunday March 28

QARC has been asked to provide communications for this event again this year. There two stages to this event – 5k and 10k. It starts at Loyalist College, and heads north on Wallbridge Rd, east on west Moira to Avonlough Rd, and south to Dundas St and then turns around and bsck on the same route to the college. (The 5k turn around is at Susanna Moodie School.) We need people at all the corners, turn around points, and water stations. If you can help out, please contact Ron Chapman VE3IVC at 966-2910 or ve3ivc@rac.ca. The organisers of this event have been promoting it more this year, and have changed the date so it wouldn't conflict with other events of this type. A larger turnout of runners is expected .

Quinte Amateur Radio Club – A Short History

The following is a short summary of the early years of the Quinte Amateur Radio Club. It was most likely written in the early 1970's as a summary for the QARC's 25th Anniversary in 1972. If anyone recognises the article as their own, or can shed some further light on it, please contact Tim Pekkonen 969-8012 or: ve3uo@rac.ca so we can give credit where credit is due!

****

The Belleville Amateur Radio Club had its inception in 1946 when a group of enthusiastic amateurs decided that such an organization was needed and would do much to encourage others to join the fraternity who had obtained so much satisfaction from their hobby. It is true however, that, previous to World War 1, radio hams were active in Belleville. These included such old timers as Bill Connor VE3CV (la ter VE3AFN) Ken Henderson VE3BY, Harold Woodley VE3BZ, and the late Morley Stark VE3BO. Two-way communication over twenty five miles was considered quite an achievement in those days!

One of the very first police radio systems came into being in Belleville in 1934 and in fact, in the whole of Canada and excited nation wide comment. This was the brainchild of Sgt. Arthur Booth (Father of Howard Booth VE3BEE). In those days the police radio antenna was attached to the City Hall (known facetiously as 'City Ha ul') and the only transmitter in the set up was located in the police station. Operation was somewhere at the upper end of the present broadcast band and secrecy of communication was not the strongest point!

Activity in the club took a big step forward with the coming to Belleville in late 1949 of the Northern Electric Company who had extended their operations from the parent headquarters in Montreal. This move brought much technical knowledge and experience to the club and meetings with an attendance of 75 were quite common.

Like most amateur radio clubs we had our 'ups and downs'. Accommodation became a problem but we had always managed to find something suitable. Since 1956 we have held our meetings at the Kiwanis center but there was a time when private homes had to be pressed into service.

'Field Day' has always been an important facet of club's activities since 1947. Appreciated cooperation was received from the Air Force Amateur Radio section and it was a matter of sincere regret when this section was disbanded in 1951. Later the R.C.E.M.E. assisted us with generator equipped vehicles and this generous action enabled us to carry on until we acquired our own gasoline driven unit in 1954. Various members of the club who are expert mechanics and electricians in private life have maintained this unit in top condition. Also appreciated in our Field Day activities has been the help received from the Boy Scouts Association who have loaned tents and provided personnel who performed valiant service such as runners, etc.

The Belleville and District Amateur Radio Club operated under the call of VE3BSQ. This call was allotted, at our request, by the Department of Transport in 1956 and was in memory of a valued member of the club, Harold Enright VE3BSQ, who passed away November 27, 1955. Previous to this, our call was VE3BSD.

In 1960 the members voted to change the name of the club to 'Belleville and District Amateur Radio Club'. This was deemed fitting due to the fact those Amateurs from Picton, Campbellford, Trenton, Stirling, Tweed, Wellington, etc, participated in our deliberations and formed part of our regular membership.

Our Club, like so many others, makes no claim to fame for any outstanding achievement but plugs along, holding code classes, participating in community projects, Field Days, providing assistance to would-be hams and in helping to solve the ever recurring problems of fellow hams. After all, ham radio is not only a worth while hobby but could be of inestimable value in times of national emergency. Members of this club have always shown themselves able and willing to participate in exercises, traffic nets, and in providing help to those who wish to enjoy this mode of expression whether it is two or six meter activity, operation on the other bands by CW, phone, SSB or RTTY.

Announcing: The Third Annual "Tour of the County" Hidden Transmitter Hunt Saturday, May 8, 2004

The QARC and PERC will be hold a Tour of the County Hidden Transmitter Hunt again this year on Saturday **May 8th, 2004**. The format will be similar to previous years, three transmitters hidden anywhere within the boundaries of Prince Edward County and the hunters have 3 hours to find as many transmitters as possible. There will be a post hunt get together to swap tall tales, excuses, and horror stories. For more information check out the QARC web page at http://www.qarc.on.ca/countyfox.html .

For more information contact Dave Ward, VE3BIP at 966-9982 or: ve3bip@rac.ca

Belleville Youth Swim Team First Annual Beast Kids Triathlon

We have been asked to provide communication for the Belleville Youth Swim Team First Annual Beast Kids Triathlon on **Sunday June 6**. It will run from 9:00 am to 1:00 pm with swimming at Sir James Whitney, a bike ride from Palmer north to Moira west to Avonlough and back and a run on the school grounds. We would be needed for the bike portion. If you can help out please contact Peter Hodgson VA3PKH 962-1386 or va3pkh@rac.ca . They have never done this before and are suggesting a radio link between the finish and the turnaround. I think we will probably need someone at Bridge & Palmer, Palmer and Moira etc. More details as they become available

DX Atlas – New Add-on

Our friend Alex, VE3NEA has been at it again with another great add-on for DxAtlas. http://www.dxatlas.com .

For those fellow QARC's that use DxAtlas and IonoProbe be sure to check out Alex's latest and I think his greatest achievement yet - HamCap - an HF propagation prediction tool.

HamCap can be used as a software interface between VOACAP and DxAtlas or as a stand-alone programme to project HF propagation on all bands using separate bands. As a bonus if you are using IonoProb the solar data is updated automatically making for real-time updates.

The HamCap programme is FREE!

Go for it, Eric - VE3GSI

This Month's QARC Meeting – March 17

Dave Lawrence VA3ORP, RAC Assistant Director from Kingston, will be speaking on "Ground Wave Propagation". This is a mode that has much to recommend it but it is so poorly understood that few use it to its best advantage. It has the potential to be extremely useful for ARES work, especially beyond 15 km or for situation where a 2 M repeater is not available. The meeting will be at our usual meeting location, Loyalist College Pioneer building, room P2 at 7:30 PM.

We will also be meeting Dave for dinner at the Quinte Restaurant, 135 Cannifton Rd, at 5:30 PM. As seating is limited, please contact President Peter VA3PKH if you will be attending – 962-1386 or va3pkh@rac.ca .

Repeater Council Spring Meeting – Sat April 17

The Spring 2004 meeting of the St Lawrence Valley Repeater Council will be held at the Communications Museum in Kingston Ontario at 10:00 AM. There will be a tour of the museum in the afternoon. More information and links to the museum can be found at http://www.slvrc.org/

April Open House / Auction

The third annual joint PERC/QARC Auction and Open House will be held this year on Wednesday, **April 21** in Room P2 in the Pioneer Building, Loyalist College.

We need your donations so start digging in those dark corners of your shack for goodies! Any and all items welcome from rigs to parts to cables to 'what-have-you'. Please contact Dave VE3UGT 962-3991 ve3ugt@rac.ca or Peter VE3KWM 476-9000 peterlower@sympatico.ca and we'll arrange pick-up, etc.

Note: As this auction is designed to raise money for our clubs, we encourage outright donations to the cause. Consignments are accepted with 15% of the proceeds going to the clubs. Unmet reserves will be charged five (5) dollars.

MS Super Cities Walk – Sunday May 30

Ron Chapman VE3IVC is also looking for help for the **Multiple Sclerosis Super Cities Walk** on Sunday May 30. This is the event held in the east end of the city which starts and finishes at Moira Secondary School. Contact Ron at 966-2910 or ve3ivc@rac.ca .

The website for the Belleville walk is:
http://www.supercitieswalk.com/ontario/scwalk_belleville.htm

Your Article Can Go Here !

As you can see there is a bit of space left at the end of the newsletter, so there is always room for your articles and ham related stories. Local news and articles always make the bulletin a bit more 'local'. Submit your articles to the Editor Dave Ackerman at ve3ugt@rac.ca .

(This space below is intentionally left blank so Mike VE3VMP can have some 'doodling' space. If you don't know what I am talking about, come to the Saturday Morning Breakfast to see Mike in action ! ! ! !)