



GUYWIRE

April 2017

A monthly publication of the RARA Inc. except July and August.

If you wish to receive or be removed from the e-mailing please contact the editor/publisher
at the RARA e-mail address @ ve5rara@gmail.com

NOTE: all e-mail and web addresses are active hyperlinks

GENERAL MEETING

April 12th @ 7:00 p.m.

Regent Place Library - Regina Market Mall - 331 Albert St.

Discussion re: Fox Hunt

Membership Fee for 2017-18 now due

Help the editor

I would particularly like to have
pictures from past club events.

Send to ve5rara@gmail.com

**You can help make the
GUYWIRE
better by providing
content.**

2017-18 RARA Executive

from the March General Meeting

President - Neil Slater - VA5SCA

Secretary - Terry White - VE5TLW

Treasurer - Allan Tidball - VE5LAT

Past President - Harvey Drinkle - VE5AD

Director - Con Berger - VE5CON

Director - Justin Chapman - VA5RED

Director - Summer Hartzfeld - VE5SDH

Director - Lyle Maystruck - VE5EE

Director - Position NOT Filled

2017 PUBLIC SERVICE EVENTS

EVENT	DATE	ORGANIZER
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UPCOMING

RPS 1/2 marathon - April 30 - Terry VE5TLW

MS Super Cities Walk - April 30 - Rick VE5RJR

MS Bike Ride - August 19 - TBA

News from our president

I have received confirmation that RARA will be at booth #17, in Gym B of the Kinesiology Building, U of R, for the Canada-wide Science Fair next month.

We will be looking for several volunteers to help staff the booth over three days. We MUST have people in attendance at all times during the event, and I am hoping to have three people there at any one time. If we can manage five or six volunteers each day, we'll be able to take one-hour shifts, with lots of breaks to wander and see what Canada's young Science Geeks have to show off.

In February of 2016, I asked at a RARA meeting if the club should do anything to celebrate Canada's 150 anniversary. During the discussion, Harvey VE5AD suggested that we approach RAC and ask about special call signs for the year. Accordingly, I emailed RA on behalf of RARA to suggest that Canada's 150th Anniversary would be a great time to offer special call signs to Canadian Amateurs.

Not long after that, RAC announced the CF/CG call signs for most of Canada. I thought at the time that it must have been coincidence, since there COULDN'T have been enough time to act on my email.

Well, I checked with RAC a couple of months ago, and it turns out there HAD been enough time; thus, the Regina Amateur Radio Association is directly responsible for the sesquicentennial call signs available for use this year by all Canadian Amateur radio operators.

I'm very honoured to have been the Amateur who actually sent the suggestion on behalf of the club, but Harvey VE5AD/CG5AD gets most of the credit, since he was the one who made the suggestion to contact RAC.

VA5SCA

Public Service Events

Spring has arrived and so has the Public Service Event Season.

The Regina Police Service Half Marathon is on April 30th.

The start time details are as follows:

- April 30 07:30 AM CST – Race Day – Walker Start
- April 30 08:30 AM CST – Race Day Half and Relay
- April 30 08:35 AM CST – Race Day 5k Start
- April 30 09:00 AM CST – Post Race Food Tent

The timing for the various events (walk, run, relay) is attached.

We should be on location by 07:15.

The course route map is attached.

In addition to the aide stations and the turn arounds (5k & 21k) we should have radio operators located at:

- McDonald St. & Wascana Dr.
- Wascana Dr. & Broad St.
- Broad St. & Lakeshore Dr.
- Jogging path north of the U of R
- Assiniboine Ave. E. & jogging path (2nd path east of cemetery)

I will have the ARES MCV at the Start/Finish Line.

Detailed maps of the Aide Stations and 21k turn around are available by contacting Terry or ve5rara@gmail.com

Please let me know if you have a location preference or contact ve5rara@gmail.com

For your safety please wear a high visibility outer garment.

Terry (VE5TLW)

Interesting Websites

This 5 minute interview on amateur radio relevance in emergency communications should be required viewing by every ham. Tim Ellam, the president of the International Amateur Radio Union is featured. Click on the link below and then on the video.

<http://qrznow.com/iaru-president-touts-amateur-radios-relevance-in-emergency-communication/>

Last Months Puzzler

What is the meaning of the word “Clover” as applied to amateur radio operations?

Answer: It is a PSK transmission system that provides high bandwidth efficiency with full duplex operation which allows for an efficient error correction system.

Puzzler This Month

Which king, who was a licensed ham, once operated portable VE6 while on a visit to Canada?

Answer next month.

Repeater News

The power output on the VE5REC Regina North repeater has been increased to 50 watts. This should bring about a noticeable increase in coverage area.

User reports would be appreciated. Contact VE5EE or ve5rara@gmail.com

Converting Hertz to Cycles-Per-Second

Scientific progress can be measured in the accuracy of measurements of different units. For many years ARRL held a hotly contested event called the Frequency Measuring Test (FMT). The ARRL recently revived it for old time's sake starting in November 2002. The results in the old FMTs were reported in QST in cycles per second, with some contestants getting very close to the actual frequency.

A scientific development in the early 1970s was the conversion from vacuum tubes (valves) to solid state for almost all electronic equipment. Coincidentally the scientific community in the United States of America started to migrate to the international standards for naming of the various electrical units, such as Volts, Ohms and Siemens while moving from vacuum tubes to solid-state equipment. An important consideration was what to do with the naming of the unit for frequency. Traditionally the unit was expressed in cycles per second, for example kilocycles for a 1000 cycles, megacycle for a 1,000,000 cycles and so forth. Well a problem occurred with the old vacuum tube equipment, which was clearly designed and labeled as using kilocycles, megacycles and even kilomegacycles ($KMc = 1000$ megacycles).

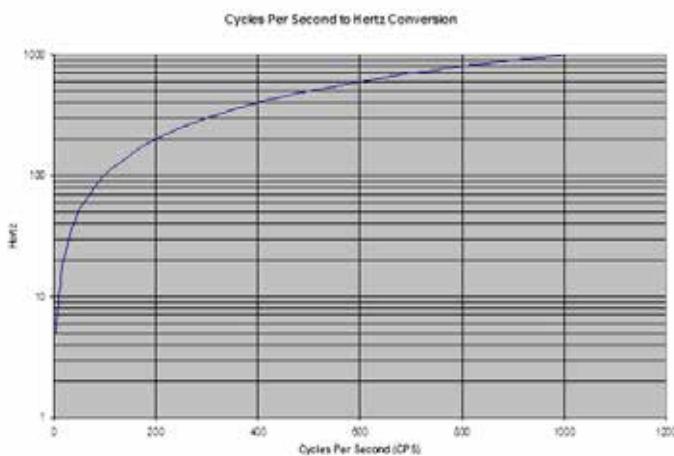
The problem really raised its ugly head when electronic equipment began to use a hybrid of solid state and vacuum tubes. A good example is that old warhorse, the Kenwood TS820S and

similar equipment. Clearly the solid-state section used the new international units expressed in Hertz (KHz, MHz etc.). However the final amplifier used 6146 vacuum tubes. Did the 6146s run on Cycles Per second or would they work on Hertz just as well as they had for the previous 35 years? Remember the beam power tetrode like the 6146 were developed in the mid-thirties.

Perhaps it was possible to build a Hertz to Cycles per Second converter interface. If you look carefully at the schematic diagram of a TS-820, you might find it. However to help you understand the complexity of the device, here a chart that will simplify matters for you. Look up the value on either the X-Axis for cycles per second or the Y-Axis for Hertz and trace where the line crosses the desired point. Then move over to the opposite Axis and there you will have your converted value. Multiply the scales by a factor of ten as required. It works either way. Thanks to W6GZC Bob Moore SK for the suggestion.

Good Luck!

73 - Jim N6TP



History of the Car Radio

Seems like cars have always had radios, but they didn't.

Here's the story

One evening, in 1929, Two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy, Illinois, to watch the sunset.

It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car. Lear and Wavering liked the idea. Both men had tinkered with radios (Lear served as a radio operator in The U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car.

But it wasn't easy: automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running.

One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago .

There they met Paul Galvin, owner of Galvin Manufacturing Corporation. He made a product called a "battery eliminator", a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity, more radio manufacturers made AC-powered radios.

Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business.

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker.

Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard.

Good idea, but it didn't work –
Half an hour after the installation, The banker's Packard caught on fire. (They didn't get the loan.)

Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention.

Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that Passing conventioneers could hear it.
That idea worked -- He got enough orders to put the radio into production.

WHAT'S IN A NAME
That first production model was called the 5T71.

Galvin decided he needed to come up with something a little catchier. In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names - Radiola, Columbiola, and Victrola were three of the biggest.

Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it The Motorola.

But even with the name change, the radio still had problems: When Motorola went on sale in 1930, it cost about \$110 not installed, at a time when you could buy a brand-new car for \$650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about \$3,000 today.)

In 1930, it took two men several days to put in a car radio -- The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the roof had to be cut open to install the antenna.

These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them.

The installation manual had eight complete diagrams and 28 pages of instructions. Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression –

Galvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory.

In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich tire company to sell and install them in its chain of tire stores.

By then the price of the radio, with installation included, had dropped to \$55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.)

In the meantime, Galvin continued to develop new uses for car radios. In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts.

In 1940 he developed the first handheld two-way radio -- The Handy-Talkie -- for the U. S. Army.

A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II.

In 1947 they came out with the first television for under \$200.

In 1956 the company introduced the world's first pager; in 1969 came the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon.

In 1973 it invented the world's first handheld cellular phone.

Today Motorola is one of the largest cell phone manufacturers in the world.

And it all started with the car radio.

WHATEVER HAPPENED TO the two men who installed the first radio in Paul Galvin's car?

Elmer Wavering and William Lear, ended up taking very different paths in life.

Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention lead to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players? Lear invented that !!! But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet. (Not bad for a guy who dropped out of school after the eighth grade.)



Image via Motorola

New DX Entity Announced Micro Pohnie

The newest DX entity is the Republic of the Micro Pohnie Islands. The call signs assigned to this island republic are: 1APR1 - 30APR30.

This small island chain is located in the South Pacific in the area of the Caroline Islands. Situated between the Yap and Hall islands, Micro Pohnie is made up of one large main land, with ten smaller islands that help protect the eastern side of the main land from foul weather. Only two of the smaller islands (Uphar Sidbnd, and Lowher Sidbnd) are inhabited, leaving the other 8 for camping by tourists. On the north west side of the main land the Sonofa Beach area is world famous for the white sand beaches and gentle south Pacific breezes that make visiting there a memory that will last a life time.

Tourists can visit the islands year round and the majority of visitors arrive via the FSK International Airport.

Ferry service is available to reach all the islands and runs mainly between Dypole Cove and Port Tune.

When there, make sure you check out the Double Sidband Lakes area, where the fresh water is cold and invigorating. Amateur Radio is welcome and licensing can be arranged through the MPCC offices located in the main kiosk of the FSK International Airport, ask for the amateur radio liaison, Loof Lirpa.

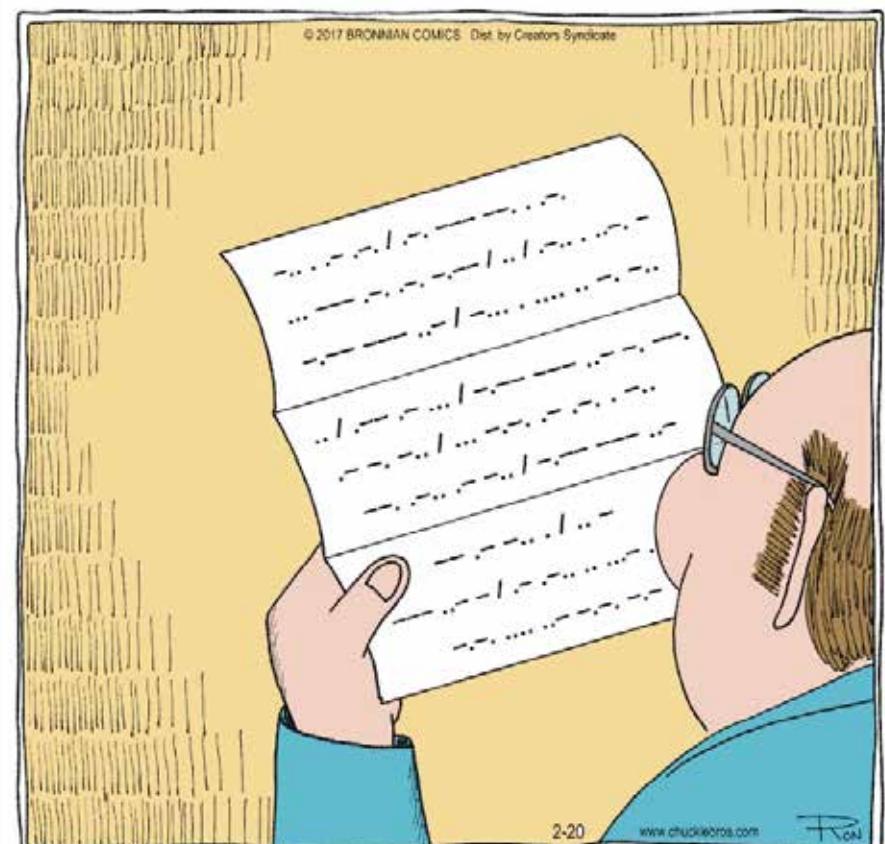
The currency is the Quesl which is about equal to 50 cents US.

Most major airlines have routine flights in and out of Micro Pohnie.

NOTE: See Map on next page for outline of the Micro Phonie Islands



**Chuckle Bros by Brian
and Ron Boychuk**



Roger received a letter of apology from an old army buddy. It was written in remorse code.