

Ottawa Amateur Radio Club

Groundwave

P.O. Box 8873, Ottawa, Ontario, Canada, K1G 3J2

September 2017

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In my June newsletter I forgot to thank all the contributors to the Groundwave over the past year and especially Mike Kelly for his entertaining monthly column. I do so now.

OARC Hamfest Sep. 9 (see page 7)

Portable Demo Day Sep. 16 (see page 4)

Membership renewals are due by the end of September. Attached is the new 2017/2018 membership form. Mail it in or bring it to the meeting.

September's speaker is Paul Coverdale, VE3ICV. His topic is "Vector Impedance Antenna Analysers; What they are and what they can be used for, with demos using the SARK-110".

See you at the meeting,

Ian Jeffrey, VE3IGJ
Editor



Check out our Web Page: www.oarc.net

**Next Meeting 7:30 pm, Wednesday, September 13th
in the Colonel By Room at Ottawa City Hall**

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Ottawa Amateur Radio Club

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Articles may be submitted for use in this publication provided that they portray events or activities that promote Amateur Radio. Letters and comments are also welcome. Submissions may be made by mail addressed to the Editor care of the OARC, or by e-mail to "ve3igj@rac.ca". Deadline for submissions occurs three days after the regular monthly meeting of the OARC.

Please support your local radio organisations. They support you!

Club Information

The Ottawa Amateur Radio Club Inc. is an association of Radio Amateurs devoted to the promotion of interest in Amateur Radio communications in the National Capital Area and to the advancement and achievement of club members.

Regular Meetings of the OARC Inc. are held on the second Wednesday of each month (except July and August) in the Colonel By Room which is on the second floor of Ottawa City Hall, formerly Regional Municipality of Ottawa Carleton Headquarters, on Lisgar Street. Meetings commence at approximately 19:30 local. Further details about each meeting are noted elsewhere in this publication.

Executive Meetings of the OARC Inc. are normally held on the first Wednesday of each month at 19:30 local. Contact the President to confirm the date, time and place of the next meeting.

The CAPITAL CITY FM Net meets every Monday (except some holidays) at 20:00 local on the club repeater VE2CRA (146.940-, 100 Hz) to pass traffic and to make announcements of interest to amateurs in the National Capital Region.

The Rubber Boot Net runs week days at 07:30 local on VE3MPC (147.150+, no tone) hosted by Mike, VA3TJP. The Rubber Boot net has been running since the early 1980's and is popular for the early risers and the go to work crowd.

The POT-HOLE Net is a SSB/HF net sponsored by the Ottawa Valley Mobile Radio Club and is conducted every Sunday at 10:00 hours on 3.760 MHz. All amateurs are welcome to check in.

The POT-LID CW Net is an informal slow-speed CW net that meets every Sunday, except during July and August, at 11:00 hours on 3.620 MHz, to promote interest in CW and CW procedures.

The QCWA CHAPTER 70 Net meets every Monday evening at 19:30 local on repeater VE3MPC (147.150+, no tone) You do not have to be a QCWA member to participate.

The Ottawa Valley VHF/UHF SSB Net is sponsored by the West Carleton ARC. Look for it every Tuesday night (except the first Tuesday of the month) around 21:00 local on 144.250, (roll calls after net on 50.150, 432.150, 222.150, and 1296.100.) Horizontal polarization is preferred.

The Phoenix Net meets Tuesday evenings at 20:00 local on VE3MPC (147.150+, no tone).

The regular **OVMRC net** meets Thursday evenings at 20:00 local on VE3TWO (147.300+, 100 Hz) analogue FM.

The Ottawa Amateur Radio Club bulletin "Groundwave" is published and distributed to club members. Publication dates may vary but it is hoped that the bulletin arrives at its destination before the events listed in it have expired. The bulletin is not published for July and August when meetings do not occur. Every effort is made to provide accurate information in the bulletin, however we are all human and mistakes can be made. The OARC accepts no responsibility for any damages that may result from this. The opinions expressed in this bulletin are those of the author.

Voice (VHF) 146.940/146.340 100Hz CTCSS required
 (UHF) 443.300/448.300 100Hz CTCSS required

VE3TVA Amateur Fast Scan Television Repeater
 Currently off the air and looking for a new home.

IRLP Node 2040 146.940/146.340 (VE2CRA/VE3RC)
 (Code 411 for info) (Code 204 for activity)
 (Code 88 for time)

For further information please contact the Repeater Chair.

Note: The IRLP link is not connected to ECHOLINK. Please do not try to connect using the alpha keys on your keypad. It just confuses the operator.

Note: The IRLP link is disabled during the Monday night Capital City FM Net from 20:00 to about 21:45.

VE3TEN

Tuning in the beacon so that it makes sense requires you tune to **28.175** on CW and read the tone that is there. The spaces between the elements are the higher tone. If that doesn't work, tune to **28.175.28** on lower sideband for better results.



Dates to Remember

June Minutes

The June minutes are unavailable at this time.

mk's Word

Mike has provided several **Flea Market Check-lists** for new (and not so new) hams to use when buying used ham gear whether at a flea market or elsewhere.

Based on an article from the October 2013 issue of Key Klix, the publication of the Calgary Amateur Radio Association.

HF Rig (transceiver)

- What vintage is it? Tubes/Hybrid/Solid State
- Is it general coverage or ham bands only?
- Which bands does it cover?
- WARC Bands/160m/6m?
- What is the main purpose?
- What type of display does it have?
- Is it driven by menus or front panel controls?

- Phone
 - Does it come with a microphone?
 - What filtering does it include?
 - Does it have speech processing?
- CW
 - What filtering does it include?
 - Can you add filters?
 - Does it have a built-in keyer?
 - Does it have QSK (full break-in)?

- Is it modern enough for rig control?
- Does it have any digital signal processing (DSP) capability (filters, etc)?
- Does it come with the interface for the PC? Can you buy/attach one?
- Does it contain a built-in antenna tuner?
- How much power does it put out (peak vs key down)?

2017

- Sep. 9 OARC Hamfest
- Sep. 16 Portable Demo Day
- Sep. 30 Membership Renewals Due
- Nov. 1 Joe Norton Award Subm. Due
- Dec. 30 RAC Winter Contest

2017

- Feb. 9-11 Canada Ski Marathon
- Apr. 11 Homebrew Night
- May 18-20 Dayton Hamvention
- Jun. 13 OARC AGM and Elections
- Jun. 23-24 Field Day
- Jul. 1 RAC Canada Day Contest

- Does it run off a separate power supply? Is it capable of mobile (12V) power?
- Is there a second VFO/Receiver?
- Does it provide jack for external IF signal (for panadapter)?

VHF Rig

- Which band(s) does it cover?
- How much power does it put out and does it have different power settings?
- Which mode(s) does it feature?
- Can I program it with my PC?
- What is the battery life (if portable)?
- What are the receiver scan options, if any?

Amplifier

- What vintage is it? Tubes/ Solid State
- How much power is it capable of? (Peak vs key down)
- Which band(s) does it cover?
- Does it run on 110VAC or 220VAC?
- Can you still find replacements for the fi-nals? Cost?
- Does it read band data (automatic band switching to match transceiver)?
- Does it have built-in tuner?
- What is acceptable SWR range before shutting down?

(Continued on page 4)



mk's Word

(Continued from page 3)

Handheld (h) or mobile (m)

Bands

- 2m only
- 2m + 70cm
- Others

Power

- Max power
- Multiple power levels
- Fan or convection cooled (m)
- Battery life (h)
- Does it run on 12V or some lower voltage (h)

Battery accessories (h)

- Charger
- Fast charger
- Spare batteries
- Alkaline battery pack
- Multiple battery charger

Other accessories

- Speaker Microphone(h)
- Headset
- Antenna
- DC power cord

Digital modes

- None
- D Star
- Fusion
- Others
- APRS built in
- GPS built in

Coverage

- Ham band only
- Adjacent spectrum
- FM Broadcast receive
- Air band receive (AM detector)

Portable Station Demonstration

Portable Station Demo 2017 - New Site

Due to continued popular demand the Portable Station Demo is back again this year. However, our traditional sites were no longer available. But not to worry the new location at Walter Baker Park in Kanata is actually very nice. VE3KL and myself checked the noise and it was low. There are a lot of picnic tables around and nearby free parking. Most importantly, there is not a single goose in sight - so no need to fear the dreaded poo-shoe.

Here are all the details:

Date: Saturday September 16, 2016 (The Saturday after Hamfest.)

Time: set-up 9:00 am; station demonstrations: 10:00 am to noon; tear down: noon to 1 pm

Place: Covered Picnic structure at Walter Baker Park (I am sure you will like it)

[Here is a link to the location](#)

See you there.

Posted by **Portable Station Demo Manager - VE3YTZ** on July 24, 2017



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 po-

tential 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 conventioners 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 uninstalled, 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.)



(Continued from page 5)

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 ceiling 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 pre-set 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.)

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being!

AND it all started with a woman's suggestion!!

From the Elmira Radio Club Newsletter, July, 2017.

Atheism is a non-prophet organization.

OTTAWA (CARP) 21ST ANNUAL HAMFEST

The Ottawa Amateur Radio Club (OARC) is pleased to host the RAC Annual General Meeting as part of its 21st Annual Hamfest, and during the year-long celebration of Canada's 150th Anniversary of Confederation here in the Nation's capital and across Canada.



Date: Saturday, September 9.

Time: The Hamfest will be open to the public from 9 am to noon. Doors will open to Commercial Vendors at 7:30 am and to Private Vendors at 8 am. The RAC Annual General Meeting will be held following the Hamfest (tentative time 1 pm) and more details will be included in the next issue of TCA.

Place: The Hamfest will be held at the Carp Agricultural Fairgrounds in the W. Erskine Johnston Arena at the north end of the fairgrounds, at 3832 Carp Road in Ottawa. We are right next door to the famous Carp Farmers' Market (<http://carpfarmersmarket.ca/>) and just minutes from the Diefenbunker Museum (<http://diefenbunker.ca/>), a four-story, 100,000 square foot underground bunker, built between 1959 and 1961. Come to Ottawa and enjoy your visit as part of Canada's 150th Birthday celebrations!

Cost: \$6 General Admission, \$14/table (plus admission).

Talkin: VE2CRA, 146.940-, 100 Hz CTCSS

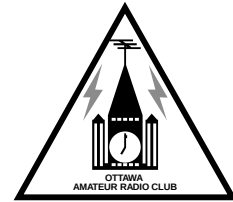
For more information please see our listing in the Coming Events on page 63 or contact Ed, VE3WGO, at fleamarket@oarc.net or visit <http://www.oarc.net/fleamarket>.

2017-2018 OARC Membership/Renewal Form

Ottawa Amateur Radio Club Inc., Box 8873, Ottawa, ON, K1G 3J2

- Single \$25 (\$20 after February 1)
- Family \$30
- Junior \$15 (under 18 years of age)
- New Ham \$0 (licensed in current membership year)

- Emailed Newsletter \$0 Mailed Newsletter \$10



Name	<input type="text"/>	Phone	<input type="text"/>
Callsign(s)	<input type="text"/>	Year Licensed	<input type="text"/>
<input type="checkbox"/> Basic	<input type="checkbox"/> Honours	<input type="checkbox"/> Advanced	<input type="checkbox"/> Morse <input type="checkbox"/> RAC Member
Email Address	<input type="text"/>		

Name	<input type="text"/>	Phone	<input type="text"/>
Callsign(s)	<input type="text"/>	Year Licensed	<input type="text"/>
<input type="checkbox"/> Basic	<input type="checkbox"/> Honours	<input type="checkbox"/> Advanced	<input type="checkbox"/> Morse <input type="checkbox"/> RAC Member
Email Address	<input type="text"/>		

Postal Address

Membership year is September 1 through August 31, inclusive. All members who are in good standing on or before the December General Meeting will be eligible for a free one-time name badge. Members who wish a second or replacement badge may purchase one at the club price (approx. \$7.50 plus tax). Ordered badges will be available in January.

First Name on badge Callsign on badge

First Name on badge Callsign on badge

Notes