



GUYWIRE

June 2018

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

June 13th @ 7:00 p.m.

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

Field Day Plans

RARA Executive

2018 - 2019

President - Neil Slater - VA5SCA
Treasurer - Mark Humphreys VA5LNX
Secretary - TBA
Past President - Harvey Drinkle - VE5AD
Director - Justin Chapman - VA5RED
Director - Summer Hartzfeld - VE5SDH
Director - Lyle Maystruck - VE5EE
Director - Allan Tidball - VE5LAT
Director - Terry White - VE5TLW

2018 - 19 Public Service Events

<u>EVENT</u>	<u>DATE</u>	<u>ORGANIZER</u>
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UPCOMING

MS Bike Tour Avonlea - Aug. 18 - Richard VE5RJR

COMPLETED

RPS Half-marathon - April 29-Terry VE5TLW
MS Super Cities Walk - April 29 - Richard VE5RJR

**Please pay your
2018-19
Membership Fee
to treasurer
Mark (VE5LNX)**

Upcoming Events

Field Day June 23/24

May Puzzler

The government department that governs amateur radio was formerly called Industry Canada. What is their current name?

Answer: Innovation, Science and Economic Development Canada

June Puzzler

What is a backwave?

Answer next month



Upcoming Hamfests and Fleamarkets June to November 2018

Hamfests and Fleamarkets season is well underway and we are pleased to help you promote your events:

- on the RAC website at the RAC's Events Database: just click on "Submit New Event" and complete the form
- in the pages of The Canadian Amateur magazine by sending them to the Editor at tcamag@yahoo.ca

The following events are featured on the RAC Events Database as of May 31, but please check the site frequently as new events are added and/or updated.

<https://wp.rac.ca/upcoming-hamfests-and-fleamarkets/>

Interesting Websites

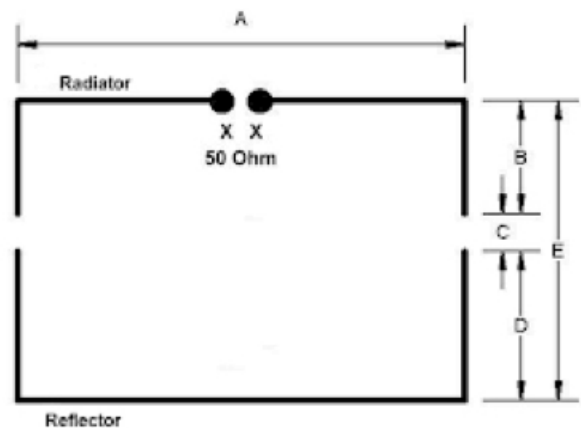
The following link calculates the dimensions for Moxon Antennas:

<http://www.moxonantennaproject.com/design.htm>

A Moxon Antenna is a two-element parasitic array antenna. It is named after Les Moxon (G6XN). The design is rectangular, with approximately half the rectangle being the driven element and the other half being the reflector. It is electrically equivalent to a two element Yagi Antenna with bent elements and without directors.

Because of the folded ends, the element lengths are approximately 70% of the equivalent dipole length. The two element design gives some directivity with a null towards the rear of the antenna yielding good front-to-back ratio.

The Moxon antenna is popular because it is easy to fabricate.



Terry (VE5TLW)

For A Little Nostalgia

click on the following link for the 1942 edition of the RCA Transmitting Tube Manual:

www.nj7p.org/Manuals/PDFs/Tubes/RCA-gfat-1942.pdf

Antenna Project

Since the weather is nice, it's time to think of antennas; and we've come up with a way to help new and not-so-new hams build an antenna or two. If you would like to build an antenna but don't have the space, or maybe the soldering skills, or just don't know where to start (all three describe me), read on!

We're going to offer a workshop or two, sometime in summer or early fall, where you will build your choice of a VHF/UHF J-pole, a dipole (your choice of bands), and/or a G5RV-style multi-band antenna.

Harvey VE5AD has the plans for J-poles made from aluminium rod, and will source the materials needed. Harvey and Lyle VE5EE will find the materials for the dipoles and G5RVs. But they'll need to know which antenna you'd like to make.

Please email VE5RARA to indicate your interest in building an antenna or two, and which antenna(s) you would like to create. You'll need to pay for materials, of course, but Harvey and Lyle will try to keep the costs as low as they can. The deadline to reply is June 22; that's the day before Field Day.

Once the number of antenna-makers is known and building materials received, the dates will be announced.

Remember,

**email ve5rara@gmail.com before June 22.
Or do it now so you don't forget.**

Thanks
Neil (VA5SCA)

New Satellite will carry HF

China's Amateur Radio Satellite organization, CAMSAT, has released some details of three new Amateur Radio satellites that could be launched as early as September. Two of the satellites, CAS-5A and CAS-6, will carry transponders and one of them will have HF capability.

CAS-5A is a 6U CubeSat. It will have an HF/HF (21/29 MHz) mode linear transponder; an HF/UHF (21/435 MHz) mode linear transponder; an HF CW telemetry beacon; VHF/UHF mode linear transponder; a VHF/UHF mode FM transponder; a UHF CW telemetry beacon, and UHF AX.25 4,000/9,600-baud GMSK Telemetry. Transponders will have 30 kHz passbands, except for the H/U unit, which will be 15 kHz.

The tiny CAS-5B, weighing 1/2 kilogram, will be deployed from CAS-5A in orbit. It will carry a UHF CW beacon on an Amateur Radio frequency. It will be placed into a 539 × 533 kilometer, 97.5° orbit.

CAS-5A/B will launch from the Jiuquan Satellite Launch Center.

CAS-6, a 50-kilogram microsat, will include a VHF CW telemetry beacon; a U/V mode 20 kHz linear transponder, and AX.25 4,800-baud GMSK telemetry downlink. It will also carry an atmospheric wind detector and other systems that will operate on non-Amateur frequencies. A launch at sea is planned for CAS-6 from the China Academy of Launch Vehicle Technology. The microsat will be placed into a 579 × 579 kilometre, 45° orbit.

CAMSAT has applied to the International Amateur Radio Union (IARU) to coordinate frequencies for all three spacecraft.

Thanks to AMSAT News Service via AMSAT-UK

How To Trim A Dipole Antenna Once

Dipole antennae are very easy to make. However, to trim it to the exact length for resonance can be a very frustrating experience by trial and error. Due to various factors such as antenna height, nearby structures, ground effects, etc. the formula for the length of a half wave dipole, $\text{Length} = 468 / \text{Frequency}$, is often inaccurate. There is a way, with the use of an antenna analyzer, a dipole antenna can be made to resonate at the desired frequency, trimming only once.

The first step is to use the standard frequency. As an example, for a centre frequency of 14.2 MHz, the length calculates to 32.96 feet or approximately 16.5 feet per side of the half wave dipole. Now add about 6 inches per side (total length 33 feet + 1 = 34 feet) and raise the antenna to its desired location.

The next step is to connect the antenna analyzer to the bottom end of the transmission line in your shack. Tune the antenna analyzer to find the point of lowest VSWR (14.4 MHz). Now we solve for the "real" constant in the above formula by multiplying the total length we initially used (34 feet) times the resonant frequency 14.4 MHz (Constant = Frequency X Length). Plugging the numbers into the formula we get $34 \times 14.4 = 489.6$.

Now, by replacing 468 in the formula with the "real" constant of 489.6, we have $\text{Length} = 489.6 / 14.2$. We now end up with 34.48 feet (17.25 feet per side). Since 6 inches was added on each leg of the dipole, we just have to trim 3 inches from each side of the dipole. The antenna analyzer should now show the resonant frequency of 14.2 MHz when the antenna is raised again.

Help the GUYWIRE

The Guywire depends on submissions of articles and pictures sent in by members for most of its content.

If you have a story, pictures or a favorite website, send it in.

If you have a technical question we will endeavor to provide an answer or put you in touch with someone who may help.

We would particularly like to have pictures from current and past club events.

Contact the editor or publisher at:

ve5rara@gmail.com

STARS Tour May 30, 2018

