



# The Maritime Contester

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Volume 1, Number 1

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## First Issue of the Maritime Contester

Welcome to the first issue of The Maritime Contester. The purpose of this newsletter is to provide Maritime Contest Club (MCC) members with information related to contesting. It will also provide a platform for members to write articles on contesting, be it projects or strategies. The intent is to have the newsletter published every two months and the focus will be on quality and not quantity.

This is your newsletter, so the editor needs your input. What would you like to see in The Maritime Contester? We also need articles and columnists. MCC has a lot of expertise in its membership, so why not volunteer to write a column on a topic of interest. Articles are always welcome and encouraged.

I joined MCC because I was interested in contesting and was looking for ways to increase my knowledge. I can honestly say that I've managed to do that since becoming a member of MCC. We all complain about the Yahoo Forum, but it does allow members to quickly exchange information relating to contesting. The newsletter will focus on more detailed articles related to contesting. As long as it pertains to contesting, we'd love to publish your article. So get your thinking cap on and start writing. As editor, my wish is to have a backlog of articles to choose from when going to press.

JP LeBlanc, VE9BK  
Editor

## President's Column



First of all, I want to once again thank the outgoing MCC executive for the outstanding job they have done during their time in office. They have not only provided countless hours of their valuable time, but managed to make MCC a well respected and highly regarded contesting entity. The contesting community holds us in high regard and for that we thank you.

As the newly elected President of MCC, I support the suggestion made by Scott, VE1OP that a club newsletter be created. That being said, The Maritime Contester will only be as good as the articles contained in the publication. So let's support your editor with fresh thought provoking articles on contesting.

If MCC is going to continue to be successful, we need to attract new members. Having been an amateur for some 30 years now, I realize that this is easier said than done. We need to go that extra mile to get new members.

## Join US

Join MCC

*Become a member of  
MCC*

## Contact Us

medals2@gmail.com

Since we're a contest club, it only stands to reason that new members are looking to increase their knowledge of contesting. This can be easily accomplished through the sharing of information, be it through the Yahoo Group or the Newsletter. When you look at it, we're all a source of knowledge and we see this time and time again on the Yahoo Group. When someone has a hardware/software problem with equipment or logging program, solutions are quickly provided by members. I'd like to encourage members to make an extra effort and to provide members with information on problems they have encountered and managed to solve without the help of other members, as this information can be very useful to others. How many times have you read a comment/article and said "I wasn't aware I could do that!" or "This is something I should incorporate in my contest station!"

We also need to immediately and extensively advertise the Maritime QSO Party (MQP). If MQP is to survive, we need to increase participation at both the Maritime and outside Maritime levels. I've said it before and will say it again: a big selling point for MQP is the LARGE NUMBER OF PLAQUES being offered. As a multi category participant, I can assure you that very few QSO Parties offer a Multi Category plaque for out of State participants. The key to our success is going to be our ability to encourage as many maritime stations to get on the air and participate in MQP. No contester is going to enter MQP if there are no Maritime stations to work.

I'd like to encourage all MCC members to become more active during 2014. I realize that some of us are still working, have families and other obligations, but it's nice to take a break, relax and give a few contacts once in a while.

JP LeBlanc, VE9BK

President

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## A Novel Perspective to Amateur Radio Contesting

By JP LeBlanc, VE9BK

My main area of interest in contesting is strategy. This is probably related to my military background where planning is a constant. As a result, I'm always looking for articles on this topic and I must admit that there isn't much out there. This is probably due to the fact that most serious contesters are reluctant to give out their strategy so as to not give competitors an advantage.

I recently found an article by Sylvan, VE5ZX on contesting which I found very interesting and informative. My intention is to briefly summarize a few of Sylvan's observations and include a link to the full article at the end of this article. The article does contain a lot of mathematical information which Sylvan uses to draw his conclusions.

1. "The number of multipliers worked in a contest decreases as the number of contacts increases. In other words the relationship between the number of contacts and the number of multipliers worked is not proportional". – As a contester, it's extremely important to find, for each contest, the right proportion of multipliers vs contacts in order to maximize our score.
2. "Once a contest begins some things are under a contestant's control

(e.g. operating time, band, transmitter frequency, and antenna direction) while other things are completely determined by natural processes (e.g. propagation conditions) and the contest system as a whole (e.g. number of contestants on each band). Once the contest begins there is relatively little a contestant can do to change his setup, skills, and location. In fact, the potential maximum number of contacts and multipliers a contestant can work is determined by the contest system and not by the contestant. The contestant can only strive to work as many of the potential contacts and multipliers as possible on each band". – This is so true.

3. "One factor that a contestant has some control over before a contest begins is the effective radiated power (ERP) on each band. The ERP on a band can be maximized through the use of a linear amplifier, a high gain antenna and a low loss feed system". – We as testers need to spend more time on this aspect of contesting, since it's the one thing we have control over. So make your signal count!
4. "Low power contestants have to determine how much time to spend in CQ mode and how much to spend in search and pounce (S&P) mode. If too much time is spent in CQ mode then some multipliers may be missed. On the other hand, if too much time is spent in S&P mode then the contact rate will be lower". – Again, it's all about finding the right proportion/ratio of contacts vs multipliers.
5. "The process of optimizing a contest score involves continuously making decisions about when to change bands, frequencies, antenna direction, modes, take rest breaks and so on. In fact, an optimum strategy is a dynamic strategy that strives to maximize the number of contacts and multipliers worked on each band based on experience, planning and knowledge of the current propagation conditions". - At VE9ML, I make a "Game Plan" which takes into account all of the above factors. We also have Ham Cap propagation software running so we can keep tabs on propagation in real time. One of the key aspects we spend a lot of time on is "When to change bands", as this is very critical. Switching too soon or too late does have major consequences. We are also very flexible and most often our "Game Plan" goes out the window as we adapt to the changing band conditions.

For some of the more experienced MCC testers, the information provided is probably already known. For others, it is hoped that this information will increase your knowledge of contesting and allow you to increase your station's performance and score.

The complete 16 page article by Dr. Sylvan Katz, VE5ZX can be found [here](#).

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# Beverage Antennas

By JP LeBlanc, VE9BK

As we all know, a beverage antenna can greatly assist in the reception of weak signals on the lower bands. When we decided to build some beverage antennas at VE9ML, I looked at various references, such as the ARRL Antenna book, Low Band DXing by ON4UN and the internet.

My goal was to determine the longest beverage antennas that could be constructed at VE9ML. It also became evident in my research, that the length of a beverage antenna also has an impact on beam width, so I decided to keep track of this valuable information in order to ensure that our beverage antennas would cover our target areas, for example Europe.

The purpose of this article is to provide readers with a summary of information I found relating to:

1. Length of beverage antennas; and
2. Coverage area or beam width of various beverage antenna lengths.

As I quickly found out, most "experts" have come up with what they consider is the best length for a beverage based on a number of factors. So there is a wide range of length for beverage antennas.

Consider the information being provided as "raw data" that can be used to determine beverage length, as it pertains to your real estate situation, and the beam width that will be covered by that particular length of wire. I have noted, in the various tables below, the source of the information. According to W3LPL:

1. A simple Beverage antenna using 580 foot will work **well** on 80 and **not so well** on 160.
2. Phased 585 foot Beverages, with 270 foot spacing, makes a fabulous 160M receiving antenna. Also a pair of 880 foot Beverages with 270 foot spacing is excellent on 160M
3. Phased 295 or 440 foot Beverages with 135 foot spacing makes a good 80M receiving antenna.
4. Phased 150 or 225 foot Beverages with 70 foot spacing makes a good 40M receiving antenna.
5. **Compromise for 80/160M:** A pair of 580 foot Beverages spaced 200 feet apart.

In the following tables, the beam width of each length is indicated. For example, a 585 ft beverage on 160M will have a beam width of 110 degrees, while on 80M, the same length will give a beam width of 50 degrees.

## Ideal Beverage Antenna Lengths – W3LPL

| Band | 180 Degrees | 110 Degrees | 80 Degrees | 50 Degrees |
|------|-------------|-------------|------------|------------|
| 160M | 290 Feet    | 585 Feet    | 880 Feet   | 1160 Feet  |
| 80M  | 150 Feet    | 295 Feet    | 440 Feet   | 580 Feet   |
| 40M  | 75 Feet     | 150 Feet    | 225 Feet   | 295 Feet   |

### Ideal Beverage Antenna Lengths – DX Engineering

| <b>Band</b> | <b>180 Degrees</b> | <b>110 Degrees</b> | <b>80 Degrees</b> | <b>50 Degrees</b> |
|-------------|--------------------|--------------------|-------------------|-------------------|
| 160M        | 480 Feet           | 600 Feet           | 720 Feet          |                   |
| 80M         | 240 Feet           | 360 Feet           | 480 Feet          | 600 / 720 Feet    |
| 40M         |                    |                    | 240 Feet          | 360 Feet          |

The following tables were designed to give an overall view of the coverage area from the VE9ML location. These results should be close enough for any MCC station in the Maritimes.

#### Beverage Beamwidth Coverage

##### **180 Degrees**

|     | <b>Center Bearing</b> |     | <b>Coverage</b>   |
|-----|-----------------------|-----|-------------------|
| 330 | <b>60</b>             | 150 | EU / AF / Asia    |
| 330 | <b>240</b>            | 150 | NA / VK / ZL / JA |

##### **110 Degrees**

|     | <b>Center Bearing</b> |     | <b>Coverage</b> |
|-----|-----------------------|-----|-----------------|
| 5   | <b>60</b>             | 115 | EU / AF         |
| 125 | <b>180</b>            | 235 | SA / CA / Carib |
| 185 | <b>240</b>            | 295 | NA / VK / ZL    |
| 35  | <b>340</b>            | 285 | JA / Asia / VK  |

##### **80 Degrees**

|     | <b>Center Bearing</b> |     | <b>Coverage</b>         |
|-----|-----------------------|-----|-------------------------|
| 20  | <b>60</b>             | 100 | EU / AF                 |
| 140 | <b>180</b>            | 220 | SA / Carib              |
| 210 | <b>240</b>            | 280 | KH6 / US / CA / VK / ZL |
| 290 | <b>330</b>            | 10  | JA / VK / KH7           |

##### **50 Degrees**

|     | <b>Center Bearing</b> |     | <b>Coverage</b>    |
|-----|-----------------------|-----|--------------------|
| 25  | <b>55</b>             | 80  | EU                 |
| 70  | <b>95</b>             | 120 | AF                 |
| 145 | <b>170</b>            | 195 | SA / Carib         |
| 195 | <b>220</b>            | 245 | Carib / CA / W4    |
| 245 | <b>270</b>            | 295 | US / ZL / VK / KH6 |
| 295 | <b>320</b>            | 345 | JA / VK / KH7 / VE |

The following data pertains specifically to 160M. Again we can see the variance in beverage length suggested by various sources.

**W8WWV - The Benchmark Beverage**

| <b>Suggested Beverage Lengths (160 meters - 1.83)</b> |              |              |
|---|--------------|--------------|
| <b>W1WCR</b>  | <b>ON4UN</b> | <b>W8WWV</b> |
| 290'  | 286'         | 335'         |
| 581'  | 563'         | 710'         |
| 887'  | 853'         | 990'         |
| 1183'   | 1122'        | 1225'        |
| -----   | 1378'        | 1515'        |
| -----   | -----        | 1765'        |

Best take off angle for DX is 10 to 30 Degrees (21 best) which equates to an 850 ft plus beverage.

**Deepest Null Lengths**

|                       |                |
|-----------------------|----------------|
| <b>Best</b>           | 1200 - 1250 ft |
| <b>2<sup>nd</sup></b> | 930 - 1050 ft  |
| <b>3<sup>rd</sup></b> | 650 - 770 ft   |
| <b>4<sup>th</sup></b> | 270 - 400 ft   |

**Beamwidth**

|               |             |
|---------------|-------------|
| <b>250 Ft</b> | 215 Degrees |
| <b>350 Ft</b> | 140 Degrees |
| <b>450 Ft</b> | 110 Degrees |
| <b>600 Ft</b> | 90 Degrees  |
| <b>720 Ft</b> | 80 Degrees  |

**Beverage RDF (1.83 Mhz)**

|                    |         |
|--------------------|---------|
| <b>250 Ft</b>      | 8.3 dB  |
| <b>350 Ft</b>      | 9 dB    |
| <b>450 Ft</b>      | 10 dB   |
| <b>600 Ft</b>      | 10.5 dB |
| <b>720 Ft</b>      | 11 dB   |
| <b>720 (x2) Ft</b> | 14 dB   |

I hope that the information provided in this article will be useful to MCC members in determining the best beverage length for their location which will also provide the best coverage. If nothing else, the data can be used as a quick reference guide and hopefully save MCC members a lot of time.

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# RTTY Contesting

By JP LeBlanc, VE9BK



We are seeing an increase in MCC members participating in RTTY contests. As a result, I thought I'd make members aware of a new kind of "Skimmer" type spotting system for RTTY known as RCKskimmer.

Walter, DL4RCK, has developed RCKskimmer, a digital skimmer software package for RTTY, PSK, and MFSK. A RTTY skimming network based on this software is approaching maturity in both Europe and the Eastern USA and during major contests a number of receivers come on line from around the globe.

To distinguish a "CQ" call from an answering "DE" call, the software must follow certain rules. You can increase the chances that the computer will recognize your call by making some subtle formatting changes in your CQ macro. Fundamentally, the computer is looking for "CQ" followed by your call followed by a space (" "). So the cardinal rule for writing your CQ macro is:

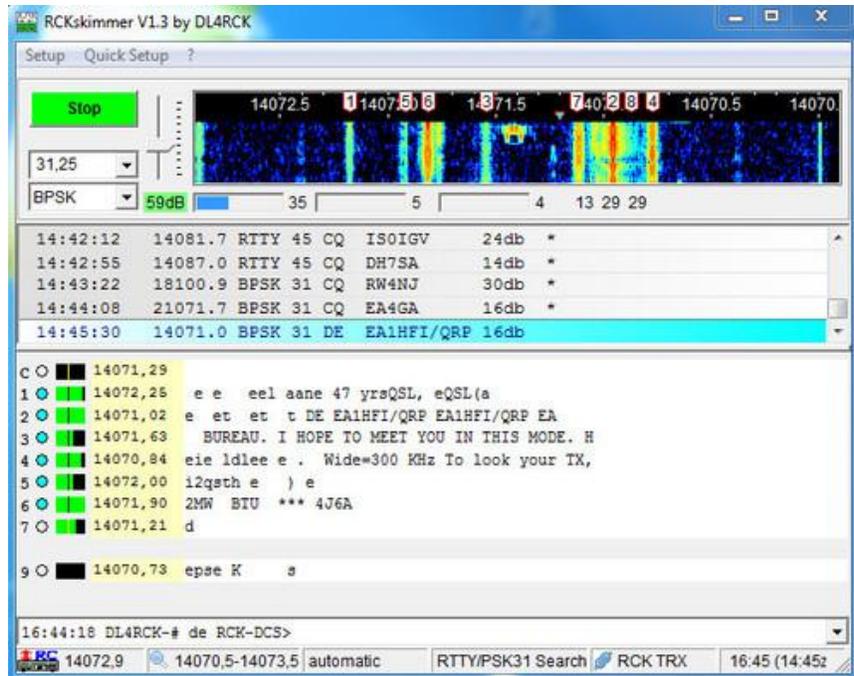
**MAKE CERTAIN A SPACE (" ") FOLLOWS THE LETTERS "CQ" AND YOUR CALL LETTERS EACH TIME YOUR CALL IS SENT.**

For example, efficient CQ transmissions might be:

```
"CQ VE9BK VE9BK " (note the space at the end of the lines)
"CQ DE VE9BK VE9BK "
```

During a contest weekend additional transmission formats are detected. Usually the skimmer receiver operator has turned on the option to recognize the words "QRZ " and "TEST " as well as "CQ " as long as these words are followed by a space. During contest periods these key words can be at the end of a line as well as before your call letters. Examples of contesting transmissions that would be detected would be

```
"QRZ VE9BK "
"CQ TEST VE9BK VE9BK QRZ "
"XYZ" TU VE9BK CQ " (again, note the necessary space at the ends of the
line)
```



As RCKskimmer improves over time, it will certainly have a major impact on RTTY contesting, just like CWskimmer has had on CW contesting. While still in the early stages of development, this new tool has the capability of greatly increasing your RTTY contesting scores. Serious RTTY contesters should keep an eye on this new capability and incorporate it in their contesting strategy if they are to remain competitive.

References: [WZ7I Website](#) and [RCKskimmer Website](#)

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# Your article here!