



BARC  
Newsletter



Issue # 2008-8  
September 2008

Club call: VE3GCB

Club repeater: VE3RAG  
147.000+

## Barrie Amateur Radio Club Newsletter

### Editorial

The big news right now is the upcoming **Barrie-Orillia Hamfest** next Saturday 6 September 2008 at the Oro Fairgrounds (see the flyer attached to this newsletter). The gates open for vendors and everyone else at 7am. This was an excellent event last year and is expected to be even bigger this year (we will have the use of two buildings plus the outdoor tailgaters area this year) – so don't miss it.

BARC will be starting a Basic Amateur Radio Course soon. This class will be two hours long each Thursday evening from 7pm to 9pm and will run for approximately 17 evenings. Anyone interested in obtaining their Ham Radio license is welcome. If you obtain a mark of 80% or better, you will automatically receive HF privileges from Industry Canada, which will enable you to operate in all modes on the HF Ham Bands in addition to the VHF and UHF bands. If you currently have your Basic Qualification without HF, you can upgrade by taking the club course. See the flyer attached to this newsletter.

We were hoping to start this course on October 2<sup>nd</sup>, but this may have to be moved if we cannot locate a suitable venue. If you are aware of a location where we can hold this course, please contact myself or one of the executive – remember that we are “non-profit” so a cost as close to zero dollars as possible is most desirable.

### Upcoming event reminder

- Don't forget to start thinking about finding that old ham equipment that you want to get rid of at the Barrie-Orillia Hamfest on September 6<sup>th</sup>. How about donating some of it to the club table.
- We are looking for hams to assist in JOTA (Scouts Canada Jamboree on the Air) at the Oro Fairgrounds 18 and 19 October 2008. The Barrie and Orillia Amateur Radio Clubs will be teaming up to entertain 100+ young Scouts (both boys and girls) in the 11 to 14 age group with various Ham Radio or electronics oriented activities.
- We will be looking for instructors to teach one or more chapters of the Basic Amateur Radio Course starting on 2 October 2008.

Editor – Al Duncan VE3RRD  
FP #2030, NAQCC #2669

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Anything in the Barrie Amateur Radio Club Newsletter may be used in other Amateur Radio publication provided credit is given to the author and to the Barrie Amateur Radio Club.

If you have any inquiries, you can contact the club via the following email address:

[HamRadio@barriearc.com](mailto:HamRadio@barriearc.com)

Be sure to visit the Barrie Amateur Radio Club webpage at:

<http://www.barriearc.com/>

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## Next Club Meeting

The next general BARC meeting will be on Tuesday, 9 September 2008. Start time is 7 pm and the location is upstairs in the Zehrs Store community room at the corner of Big Bay Point Rd and Yonge Street.

You do not need to be a club member or a Ham to attend the BARC meetings. Everyone is welcome.

Minutes of all meetings back to November 2004 can be found by clicking on the BARC Minutes of Monthly Meetings link found on the club webpage.

Back issues of this newsletter for 2007, 2008 can also be downloaded from the BARC website.

If you would like to do a presentation or a “show and tell” at one of the BARC meetings, please contact someone on the executive or email the club. Come and show off your latest ham project.

## Other Events

Don't forget the regular Monday evening ARES net at 7:30pm on the VE3LSR (146.850-) repeater (you must transmit a 156.7Hz tone). The latest RAC bulletins are also read over the air. Net control is Dave VE3ILA, EC for Barrie.

### **Morning Breakfast Groups**

Currently there are two “Ham” breakfast gatherings in Barrie – everyone is welcome (talk-in is on VE3LSR 146.850-).

- Every Saturday morning at 8am at “Debb’s Place” restaurant located at 352 Huronia Road near the intersection with Big Bay Point road.
- Most Wednesday mornings at 9am at the Paradise Café restaurant in the Atrium building located at the corner of Cundles Rd. and St. Vincent Street (check on VE3LSR).

**Barrie-Orillia Hamfest** – 6 September 2008 at the Oro Fair Grounds

**Jamboree on the Air (JOTA)** – 18 & 19 October 2008 with Scouts Canada at the Oro Fair Grounds

**Basic Amateur Radio Course** – Starts on Thursday, 2 October 2008

**BARC Elections** – 11 November 2008

**Annual Christmas Dinner** – December 2008

*If you can help out with any of the above events, please contact the club executive.*

## Bob Morton VE3BFM's "Bobbipole" A Portable HF Antenna Solution

By Al Duncan VE3RRD

This dipole antenna consists of two OPEK HVT-400B mobile verticals mounted "Buddipole" fashion to an aluminum center bracket and connected to the 50 ohm coax via a 1:1 balun. The center mount can be clamped to either a metallic or non-metallic mast.



The OPEK HVT-400 covers the 6, 10, 15, 20, 40 and 80M bands by moving the supplied jumper to different plugs (taps) along the length of the antenna coil. The HVT-400 antenna connector is a PL-259.



Here, the center mounting bracket designed by Bob Morton VE3BFM is clamped to a one foot piece of 1-3/16" painted hardwood dowel which fits into the end of the top mast section – a pipe clamp keeps it from sliding all the way in. Construction of the center bracket-balun assembly is very sturdy and can accept masts up to 1-1/2 inch, all connectors are SO-239.



The overall tip-to-tip length of the "Bobbipole" dipole is 11 ft 2-1/2 in.



The frequency coverage chart supplied by the manufacturer is for when the antenna is used as a vertical mobile whip, and I noticed that the measurements I was obtaining from the dipole configuration differed.

The following measurements were taken with an MFJ-269 antenna analyzer, the bandwidth given is for a VSWR of 3:1 (most any built-in auto tuner can match a 3:1 or worse). Your results may be different since nearby objects such as wires or a car or even the ground conductivity could change the antenna response when mounted this low (the 16 foot antenna height qualifies as NVIS on the lower frequency bands).

<b>Band</b>	<b>Center freq.</b>	<b>3:1 VSWR bandwidth</b>	<b>Jumper</b>
6m	55.760	54.890 to 57.830 MHz	P1 to P6
10m	28.000	26.910 to 29.060	P1 to P5
15m	21.450	20.780 to 22.145	P1 to P4
20m	14.205	13.980 to 14.410	P1 to P3
40m	7.130	7.071 to 7.170	P1 to P2
80m	3.538	3.521 to 3.555	no jumper used

The 80m coverage was OK for CW but too low for the SSB portion of the band. I found that jumpering P2 to P3 (the 40m portion of the coil) raised the center frequency. So here is what I ended up with on 75/80M:

<b>Band</b>	<b>Center freq.</b>	<b>3:1 VSWR bandwidth</b>	<b>Jumper</b>
80m	3.538	3.521 to 3.555	no jumper
75m	3.720	3.699 to 3.736	P2 to P3
75m	3.770	3.749 to 3.787	P2 to P4
75m	3.785	3.767 to 3.804	P2 to P5
75m	3.795	3.778 to 3.816	P2 to P6

Bob also carries the plugs needed to make up your own jumpers, so I made up a pair that were shorter. Mine ended up at 325mm tip-to-tip while the jumpers supplied with the antenna are 435mm tip-to-tip (you can't go too much shorter than 325mm or they won't reach between P1 and P2).

Using the short jumper from P1 to P2 for 40m, raised the center frequency slightly.

<b>Band</b>	<b>Center freq.</b>	<b>3:1 VSWR bandwidth</b>	<b>Jumper</b>
40m	7.120	7.071 to 7.170	long jumper P1 to P2
40m	7.128	7.089 to 7.186	short jumper P1 to P2

By making up different jumper lengths, you can experiment with combinations that will work on other bands/frequencies. In the following examples, the long jumper is the one that came with the antenna (435mm) and the short jumper is the one that I made (325mm).

With the long jumper into P1 and P3, and the short jumper into P4 and P6 I was able to get usable coverage of the 17m band with a VSWR of 2.0:1 at 18.168 MHz rising to a 3.2:1 at 18.068 MHz.

This same jumper configuration also gave usable results over the entire 6m band with a VSWR of 3.5:1 at 54.0 MHz rising to 3.6:1 at 50.0 MHz.

The long jumper into P1 and P5 and the short jumper into P3 and P6 results in a center frequency of 29.303 with a 3:1 VSWR bandwidth of 28.830 to 30.055. This covers the FM portion of the 10m band.

The whip length can be adjusted (to something other than 165.5 cm) which will also change the frequencies covered by the "Bobbipole". There is much room for experimentation with whip length, jumper length and jumper position combinations.

### What's it cost?

Opek dipole package (two Opek HVT-400 antennas & center mount with balun)	\$229.95
4 - four foot fiberglass plug together mast sections (includes stainless steel guy collar)	\$39.95
75 feet RG-8X coax with PL-259 connectors installed	\$39.95
100 feet Dacron cord for guys	\$16.00
Rubberized canvas carry bag	\$6.00
TOTAL	\$331.85

Other items that were picked up at Princess Auto or elsewhere (on sale) and added to the package:

- 12 inch "PowerFist" zippered cloth tool bag (great for containing the center mounting bracket, guys, pegs, antenna jumper cables, instructions etc.)
- 3 snaps to attach to the guy cords – for instantly attaching the guys to the guy collar ring.
- 3 metal spike style 10 inch tent pegs.
- 3 "Nite ize" figure 9 rope tighteners (available at some sporting equipment stores)
- A roll of wide black vinyl electrical tape (to make connectors water resistant, fasten mast sections together etc.)
- A small hammer to drive the tent pegs into hard soil (and to pull them out again).

## How does it compare to the Buddipole?

Well, the Buddipole is designed to break down into a very small, lightweight back-packable package. If this is what you want, then the Buddipole might be better suited to your needs. Bob Morton's package breaks down into a 4 foot long bag and the system is not exactly light weight.

Although the costs of the two antennas are similar, the Buddipole requires the purchase of additional (expensive) coils to cover the 80m band.

A number of ham clubs and ARES groups are purchasing Bob's "Bobbipole" system for use as a "rapid deploy" HF antenna. Although not a high-performance or efficient antenna, it can be quickly erected and put on the air, while the more time consuming job of erecting a G5RV or other more efficient dipole is taking place (assuming there is space available for a large wire antenna).

Most ARES HF communications would be medium to short range and thus probably take place on 40m or 80m. A dipole covering these two bands that is only a little over 11 feet long and is mounted on a single support mast can be very useful.

Bob Morton VE3BFM can be contacted through the Maple Leaf Communications website at: <http://www.mapleleafcom.com/>

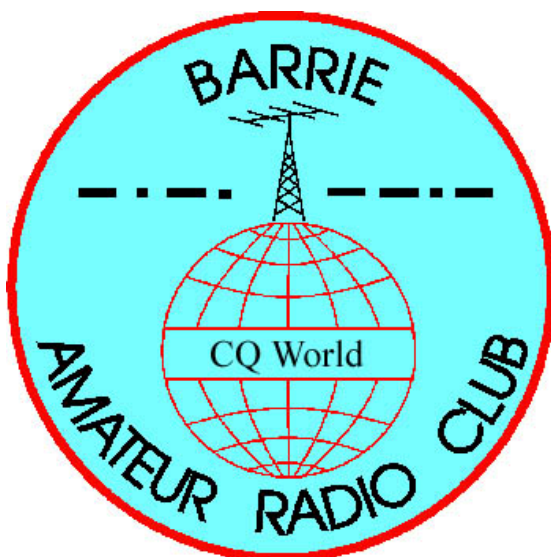


<http://www.on.ec.gc.ca/canwarn/home-e.html>



<http://www.rac.ca/fieldorg/racares.htm>

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## Basic Amateur Radio Course

Starting 2 October 2008

Thursday evenings from 7pm to 9pm

(17 nights total)

Location to be announced

Cost: \$80

Includes:

Classroom instruction with all required materials supplied

Radio Amateurs of Canada Basic Study Guide (\$50 value)

Two CD's Packed with Information on Ham Radio (\$\$)

Barrie Amateur Radio Club Membership for 2009 (\$20 value)

Examination by Industry Canada Accredited Examiner on the last night (\$10 value)

For further information contact:

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Or

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