



# New Ham's: This one's for YOU"

## Antennas

by Bill Rumball (VA3OL)



### Antennas

**F**or the beginner the high frequency antenna is always the hardest part of any station. The reason is simply that you spend a great deal of money on the transceiver; you see it everyday, touch it, play with it but the antenna isn't visible. It is at the other end. And the antenna requires hands on work to get it up and running. So I will try to cover a few of the more affordable types of antennas for the new ham.

If you want the executive summary of this article: buy wire, buy a tuner; make it as long and high as you can; have fun.

### Antenna Types:

#### Tower and Beam:

The holy grail of antennas is and will remain: a tower - a big one and a beam - a big one. But with the prices of the beam, tower, rotor, cable, digging a hole, installing the base and erecting the antenna this set up is beyond the means of many of us. So I won't even dis-

cuss the merits of this setup other than to say... I wish I had one.

#### Vertical antennas:

These come in a few flavours. Homebrew or commercial; and single or multiband.

Single band verticals are very easy to construct and I won't bore you with the formula or how to do it. If you are even casually interested in antennas then you **HAVE** to buy an antenna book! Frankly it doesn't matter what issue, or the date of publication or the flavour of the antenna book that you buy. Antenna laws have not changed in 100 years. For

P.O. Box 1402 Kingston K7L 5C6

<http://www.king.igs.net/~karc/>

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### **Inside this issue:**

"New Ham's, This one's for YOU!"	1
2005 Club Executive, Committees & Treasurer's Report	2
Upcoming Events	4
KARC Flea Market & Picnic	5
Agenda June 1, 2005	6
Slow CW Net???? Who's game?	6

### **Special points of interest:**

- *New Ham's this One's for You* by Bill Rumball
- *Events*
- *Treasurer's Report*
- *KARC Fleamarket & Club Picnic*
- **Deadline for July Submissions**  
*June 24, 2005*

## Executive 2005

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**President: VE3RPF Rob Parker**

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**Secretary: VA3OL Bill Rumball**

**Treasurer: VE3SH Ferd Schijns**

**Past President: VE3VJF Roy Clarke**  
[ve3vjf@rac.ca](mailto:ve3vjf@rac.ca)

### 2005 Committee Chairs

#### Swap Net Manager:

VE3KFS Les Lindstrom  
634-4247  
[ve3kfs@rac.ca](mailto:ve3kfs@rac.ca)

**(Please call Les** if you have any items for sale or wanted)

#### Two Metre Net Manager:

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#### Newsletter Editor:

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VE3JCQ John Wood 549-8915  
[ve3jcq@rac.ca](mailto:ve3jcq@rac.ca)

## Treasurer's Report– Ferd Schijns (VE3SH)

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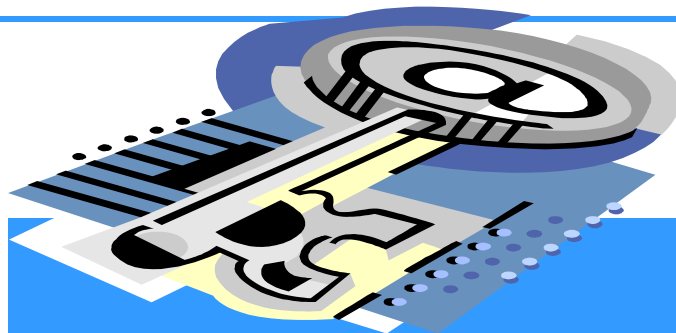
### Financial report for May/05

#### Karc Treasurer's Report

Balance as May 4/05	\$4026.26
Membership	60.00
IRLP	10.00
Donation 50/50 Draw	12.50
Club 50/50 Draw	12.50
Balance 31/05	<u>\$4121.26</u>

**This Includes the Repeater Fund**

**Ferd (VE3SH)**



### ***Silent Key***

**VE3IVX** Stewart H. Watts (Stew), died 14 May 2005, age 90. A well-liked long-time K.A.R.C. member.

from  
Bernard VE3NB

the new ham ANY ARRL handbook is an asset. My first handbook is dated 1976. It is as relevant today as it was in 1976 when it comes to antenna theory. Cost? Older ARRL publications still can be found at the various fleamarkets for 15 or 20 dollars. If you see one buy it, don't wait to long because these items do sell quickly.

There are so many antenna web sites out there that a book on antennas might be considered redundant. **BUT**, you can't hold a website in your hand and flip back and forth as you compare the requirements and performance. ( If you are a new ham check with an OT [old timer], he probably has an old issue that he would loan you for your education. ( I have a few that I am willing to loan out. ) All it takes is a tree and a wire of 8 to 66 feet, depending on the tree height, your ability to get the wire up that high and the band that you want. What discussion of verticals would be complete without a discussion of radials?

For a vertical to work correctly you need a ground return, an RF ground. This means that you have to layout 4 or more radials; the more the better. These wires that will act as an RF ground. Many antennas claim that don't need a ground (radials): well maybe... I think the jury is out on this one. But for our purposes you will need at least 4 wires of similar length to your driven element. One **WARNING!** Current and voltage on any antenna can be lethal. Ground mounted verticals need special attention because they are within easy reach of pets and children. Please remember to take this into consideration when you plan your next installation.

Now, let me tell you that I use 'hamsticks' (a type of mobile antenna) which are quite small in terms of wave lengths but can be tuned within a specific band. I normally use them in a park, with the antenna mounted on the hood of my van. Since I am stationary I also add 4 16 foot wires to act as an RF ground. Does it work? Yes, I have made many enjoyable contacts with it running less than 10 watts. These antennas are difficult to tune unless you have an antenna analyzer. But you can also use them on motel, condo or other antenna restricted areas. There are a few more options when you decide to use a mobile antenna for portable use. At a picnic table you can make a clamp to mount the antenna right on the picnic table or you can modify an old camera tripod to use as a vertical antenna base. The camera tripod works nicely because you are able to have the radials slope down equally in all directions and you can place it anywhere that your coax will reach.

### **Publishing Schedule of the KARC Newsletter:**

June Edition of KARC need by May 17 (early due to vacation)

**July & August I will create a Newsletter if any articles and interest let me know at [vazkdh@rac.ca](mailto:vazkdh@rac.ca)**

September Edition of KARC need by August 26

October Edition of KARC need by September 23

November Edition of KARC need by October 21

### **Dipoles:** aka center feed wire antennas

These are the best! One the cost is minimal, with two you can work the world. Three the neighbors probably don't know you are a ham. The trick is to decide if you want to go homebrew or commercial. And then do you want to use an antenna tuner ...The G5RV is probably the standard by which all multi band dipoles are measured. For a hundred bucks or so you can buy a commercial version of the antenna and it works quite well. An antenna tuner is recommended; especially if you want to get onto the WARC bands.

If you can get the G5RV up 35 feet or so (check out the trees in your back yard) and have enough space to run about 50 feet horizontally in two directions then this might be your solution.

A dipole fed with open line feeder (with an antenna tuner - that has a balanced feed line balun in it.) will perform very well on the frequency to which it is cut and you have the added advantage that it can operate on all bands in one way or another. When my G5RV came down during the winter I simply put up a 88 foot CFZ (Center Fed Zepp). All this antenna needs is 88 feet of wire and enough feeder line to reach the rig. I normally use it with my auto tuner fed though an external 4:1 balun. And it will tune from 80 meters right through to 10 meters. The higher the band, the better it performs. There are a few times when I would like to get on 160 meters. What I do is tie the two feed lines together and operate it as a top loaded vertical. A **VERTICAL!** BUT you need an RF counter poise! Well I solved that problem. When I had my deck built on the back of my house I installed 100 feet of wire between the boards, zig zagged back and forth across the deck hidden between the boards.. Is this a good RF ground. I have no idea.... But it is better than none. I also have a DC ground in the shack and when I am experimenting with vertical antennas I add temporary radials under the antenna.

### ***THE ORIGINAL ANTENNA:***

It is called a random wire, a long wire, or just a wire. But where should I put it? Anywhere! I have made many 500 mile contacts with a wire strung around my upper bedroom ceiling. I didn't expect DX, but it is possible. My daughter's old bedroom is about 10 by 10. On the second floor. I thought I would try an antenna there one day. Don't ask why. I just did it. The antenna was just strung around the ceiling in the room and running 5 watts I worked a guy in NJ who was on his lunch break running a hundred watts in his mobile unit. A few staples will hold the antenna at the ceiling and when you remove them no one will know but if you are fussy well a dab of drywall compound fills the holes nicely. For a counterpoise I simply have three wires laid out on the floor of the room. (33, 24 and 16 feet; one for each band.)

But what wire should I use? Almost 30 years ago I bought a spool of wire. This spool has provided me with many temporary antennas. The spool was 5000 feet of number 20 wire, plastic coated. I used this wire in several 'cloths line' reels that

# Upcoming Events

**June 1, KARC Regular Meeting 7:00 p.m. Smitty's Back Room**

**June 20, 2005 Kingston ARES meeting 7:00 p.m Kingston West Fire Department**

This is a Summer 6-Meter digital Rally, is coming up in June. Those interested in learning more, take a look at the Web Site below.

<http://www.ykc.com/wa5ufh/Misc/EasyDOSContest.htm>

From-VA3/VE3HGO Eldon  
**July 9, 2005 Sky is the Limit**

## **Break for the Summer**

Every **Tuesday** at 7:00 p.m. ARES Net on VE3KBR

The Kingston A.R.E.S. group weekly net is on Tuesdays at 1900 hrs on VE3KBR repeater. There is also an informal Simplex Net on Wednesdays at 1900 - 1930 hrs on 146.475 MHz. This is open to all Amateurs to test coverage and antennas. Call VE3NB controller.

Every **Wednesday** at 7:30 p.m. KARC Net VE3KBR

Every **Saturday** Breakfast at Smitty's  
Starts at 8:00 a.m. but come early and chat

**KARC** Web page designed and maintained by:  
VA3KGB, Chip

<http://www.king.igs.net/~karc/>



[continued from page 3]

I bought at Canadian Tire. They make great portable antennas. For home use; look at using something like stranded copper wire of approximately 14 gauge. This will stand up to our snow and winds and likely survive the winter.

There is a companion article running in the newsletter written by Alfred Lorona, w6wqc. Al says a lot of things about antennas much better than I could ever say them. So I will let his article finish off on antennas.

And I would like to thank Al, W6WQC for his permission to reprint his article.

## **KARC Flea Market**

The Kingston Amateur Radio Club will again hold its flea market on **Saturday September 17th**. It will be at Drill Hall "A", at CFB Kingston. Doors will open to vendors at 0730 and to the public at 0900. Talk in will be on 146.34 / 146.94.

Admission \$ 3.00 Tables are \$ 10.00 for the public (with one admission included) and \$ 20.00 for commercial vendors ( or free with suitable door prize.)

The Canadian Forces Communication Museum will be open for those attending to visit. Tables may be arranged by contacting ve3tmt, Max, at mdonoghue@sympatico.ca or ve3go, Ron, at [ve3go@sympatico.ca](mailto:ve3go@sympatico.ca) Vendors, commercial vendors, 50/50 Draw, Canteen and more!

According to the calendar of events in Ontario and Quebec, this does not compete with any other flea market that weekend.

Ron Walsh, VE3GO

## **KARC Summer Picnic**

***KARC Summer Picnic to be held on  
July 24, 2005 at Chip & Marilyn's  
place on Yarker Road***

***Bring a dish be it salad, dessert or  
munchies.***

***See you there!!***

MINUTES OF THE MEETING OF THE KINGSTON AMATEUR RADIO CLUB  
HELD ON May 4, 2005 At SMITTY'S RESTAURANT, PRINCESS ST.

The meeting opened at 7PM by Rob, VE3RPF

1. All members were introduced. A special welcome to Claude, VE2CCJ who is living on his boat in Kingston.
2. MINUTES of the April Meeting were presented. Moved that the minutes be accepted and seconded by Doug, VE3FFR.....carried
3. TREASURERS REPORT was presented by Ferd, VE3SH. Moved by VE3SH, Ferd that the treasurers report be accepted. Seconded by Steve, VE3KC.... carried
4. OLD BUSINESS

Chip presented a list of options for the Club website hosting. Dataeasy was recommended. Moved by VA3OL that the club move the website at a cost of \$170 plus taxes. Seconded by Mike, VE3PRW..... carried

5: NEW BUSINESS

Smith Falls Flea Market is May 17th.

The position of Vice President has been vacated. Tom, VA3ZE was appointed to fill the balance of the term.

Volunteers are needed for the Sky's the Limit festival. The following members volunteered to assist: Rob, VE3RPF, Steve, VE3KC, John, VE3GST, Chip, VA3KGB, and Herman, XXXX.

The Kingston Flea Market is scheduled for September 17th. Ron, VE3GO will co-ordinate the event. Please see Ron to provide assistance.

Chip, VA3KGB will host the club picnic on July 24th. Terry, VA3TRM moved that \$200 be allocated to the picnic for the food and supplies. Carried.

Terry, VA3TRM reported that the Air Cadets would like to have amateur radio training but due to a lack of dates and further information this was agreed to in principal only.

A discussion ensued about the KARC smartgroups and it was decided to allow for sale items.

Tom, VA3ZE suggested that a standing committee be struck to solicit every club member for the executive positions. This would be in addition to the ability to nominate someone from the floor. Traditionally the President has conducted a survey to elicit candidates for the various positions and Rob, VE3RPF will strike a committee to find an executive for next year.

50/50 Draw – Won by John VE3JCQ, who donated the winnings to the club.

7: REPORTS:

RAC: (No report)

NET MANAGER No report. Bill VE3NFU continues to be net control.

IRLP: No report

KARC NEWSLETTER: No report. Please note that the newsletter is now distributed via the KARC website.

OTHER ITEMS:

ADJOURNMENT: Moved by Les, VE3KFS; Seconded by Doug, VE3FFR ...Carried Bill Rumball, VA3OL  
Secretary KARC

# KARC AGENDA

Meeting Date:  
June 1, 2005



1. Additions and/or deletions
2. Minutes of "Monthly Meeting Errors/Omissions"
3. Treasurer's Report
4. Old Business
5. 50/50 Draw
6. New Business
7. Reports
  - a) RAC
  - b) Net Manager - VE3KFS
  - c) KARC Newsletter – VA3 KDH
  - d) Webpage - VA3KGB
  - e) Any other reports
8. A demonstration of SSTV by VA3ZE and a presentation on QRP radios and operating.
9. Adjournment

..... would anyone like to have a slow CW net. I am willing to be net control beginning in September. This will be similar to the LFN net that I was involved with many years ago.... it was originally called the London Fun Net but the name got changed to the Left Foot Now net! This was not a derogatory comment - just a desire to make the net accessible to everyone who wanted to try it.

So.... I propose to run a Slow Speed net beginning in Sept. if there is enough interest in doing this. By interest I mean ... if one person will meet me on a HF frequency on a regular basic - well then we have a net. ....I am not sure what freq to use.... depends on the interest... Where are you located.....

Contact Bill Rumble VA3OL / VE3KGJ"at [ve3kgj@sympatico.ca](mailto:ve3kgj@sympatico.ca)

*Have a Safe and Happy Summer.....See you in September!!!*