

THE VOICE OF AMATEUR RADIO IN MISSISSAUGA

COMMUNICATOR



VE3MIS/VE3RCX Vol 11.12 December, 2008

From the Gavel...



It's now December, we've already had our first bit of snow, and Christmas is now around the corner. The meeting night on December 11th will be our annual Christmas Pot Luck

Dinner. This is your chance to impress everyone with your culinary and baking skills. Murray VE3JMY, our House Manager will be supplying the china, cutlery and drinks. Non-alcoholic of course! Feel free to bring the wife and kids. This is our last get together of the year. The second meeting of the month is cancelled as it falls on Christmas day. So, please come out and join in the festivities.

While December is a busy month for Christmas shoppers, it is also a busy month for contesters. A better alternative to wading through busy malls and long line-ups would be to fight your way through crowded band conditions and pileups. The ARRL 160m CW contest starts on December 5th. While this is a night time contest, there will be lots of activity. The following week is the ARRL 10m mixed phone/cw contest. The evening of December 26 starts the 24 hour RAC Winter phone/cw contest. Surely this beats lounging around in your favourite chair sleeping off a big turkey dinner.

Contesting won't be the only club activity. Thomas VA3TMB has ambitious plans to

build and install a 6m repeater at the club station prior to Christmas. This project includes building a duplexer from scratch using heliax cable in lieu of conventional cans. The controller for the repeater has arrived and the crystals for the repeater are on the way. If you are interested, give Thomas a shout before it's too late.

At the same time, Jeff VA3WXM and Tom VE3TWG are negotiating with the Assistant Deputy Fire Chief of Mississauga to have the 6m repeater located to the Erindale fire station at Creditview and Burhamthorpe Rd. The tower at this location is no longer in use. A repeater here would resolve coverage problems we have in the west end of the city. If this proves successful, we may consider moving the existing UHF/VHF repeaters to this location.

So, that's it for yet another year. Time flies when you're having fun! Happy Holidays and hope to see you and your family at the dinner.

P.S. If you're that last minute shopper looking for the perfect stocking-stuffer, the club is selling the Collins Linear amplifier for \$700. I'll help you sneak it into the house.

73 and Merry Christmas Rick Brown VE3IMG

This Month

- 2. Commentary
- 3. Club Calendar
- 4. WebSDR
- 5. Portable Tower
- 5. The Roving Reporter
- 7 A "Real" Ham's Test
- 8. For Sale
- 9. RAC Application Form

Sunday Brunch

Sunday brunches are held on the first Sunday of each month. Time is 9:30AM at Shopsy's, 6986 Financial Drive Unit 5 Mississauga (at the corner of Mississauga Rd and Derry Rd). All are welcome to come out and have an opportunity to chat in an informal setting.

Club Nets

2 Metre Tuesday Night Phone Net Join in on the chatter starting at 8:30PM every Tuesday on the club repeater. Hosted by various net controllers. 145.430MHz Tone 103.5 Minus (-) offset. Contact our VHF Net Manager, Lorne (VE3CXT), if interested in becoming a net controller.

75 Metre Sunday Night Net Starts at 8:30PM every Sunday. Hosted by various net controllers. Contact our HF Net Manager, Michael (VE3TKI), if interested in becoming a net controller.

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Commentary



There was a time when radios were built with electronic and electrical components. Not any more it seems. Software and logic have slowly replaced the method processing signals hardware and analog circuits.

Welcome to the era of Software Defined Radios. A PC + Sound Card + a basic RF front end can make a fine radio today. The University of Twente in The Netherlands not only built such a radio but went one step further and put it on the web for all to use. Pretty mind boggling stuff. Read about it in this issue. More importantly, log on to the site and try it out too.

In this issue there is also a "for sale" column. I encourage you to use this newsletter to advertise things you wish to sell. Send me the details and the rest will be taken care of. The same goes for "Letters to the Editor". Express your opinions and send me your comments to publish in future issues.

This month's ARES article is about building a Portable Tower. Any ARES activity can benefit from this but it will be good for other occasions like the field day to. The KISS principle is true here. That reminds me of the 2m quad antenna I built for the Field Day 2008. It cost me all of \$12.65 to build. With a gain of 12 dBi, I could easily work stations in the US with that simple antenna.

If your turn has not come yet, our Roving Reporter will soon catch up with you. Think about interesting stories you would like to share with the members of the club. We are keen to hear learn about you and your hobby.

The Newsletter Team wishes you Happy Holidays!

Thomas VA3TMB

Executive Directors

President: 1st Vice President: 2nd Vice President Treasurer Secretary Past President

Rick Brown VE3IMG Asim Zaidi VE3XAP William Bressette VE3WPJ Scott Gregory VA3NMI Dan Goodier VE3NI Dave Harford VA3DFH

Club Managers

Membership Manager Education Manager House / Visitor Host Manager Newsletter Editor Researcher Net Managers HF Net VHF Net: Repeater Manager Assistant Club Station Manager Assistant Assistant Assistant Assistant Field Day Manager 1 Field Day Manager 2 Assistant - Documentation Assistant - Logging Assistant - Refreshments Assistant - Press and Publications FSV Manager Assistant Programs Manager Assistant Webmaster Manager (Source Code and DB) Assistant Assistant Legal Consultant Public Information & Media Relations Manager Photography Assistant Education Basic Theory Courses Advanced Theory Courses Advanced Theory Courses Advanced Theory Courses CW Courses CW Courses

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Auditors Coordinator

Basil Burgess VE3JEB

Public Service

ARES Emergency Coordinator Past Coordinator & AEC Assistant EC - 1st Day Assistant EC - 2nd Day Assistant EC - 3rd Day Assistant EC - 1st Night Assistant EC - 2nd Night Assistant EC - 3rd Night CANWARN Manager Special Events / Walks Manager

Dan Goodier VE3NI Sean Conlin VA3MED Michael Brickell VE3TKI John Duffy VE3DRZ Bob Boyer VE3XBB Sean Conlin VA3MED Dave Harford VA3DFH Lorne Jackson VE3CXT Peter Mosher VA3PKM Bob Boyer VE3XBB

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CLUB CALENDAR FOR 2008 - 2009

December, 2008

04 Thu Exec Meeting

05 Fri ARRL 160 Meter Contest

06 Sat NEWS

07 Sun Sunday Brunch - Shopsy's

07 Sun HF - 75/80 Meter Net

08 Mon Basic Class 12

09 Tue VHF/UHF - 2 Meter Net

11 Thu Club Meeting - Potluck dinner

12 Fri ARRL 10 meter Contest

14 Sun HF - 75/80 Meter Net

15 Mon Basic Class 13

16 Tue VHF/UHF - 2 Meter Net

18 Thu Radio Night at Club Station

21 Sun HF - 75/80 Meter Net

23 Tue VHF/UHF - 2 Meter Net

25 Thu Christmas - NO Club Meeting

26 Fri RAC Canada Winter Contest

28 Sun HF - 75/80 Meter Net

30 Tue VHF/UHF - 2 Meter Net

January, 2009

01 Thu Exec Meeting

04 Sun Sunday Brunch - Shopsy's

05 Mon Advanced Class 1

08 Thu Club Meeting

10 Sat North American QSO Party

12 Mon Advanced Class 2

15 Thu Radio Night at Club Station

17 Sat North American OSO Party

19 Mon Advanced Class 3

22 Thu Club Meeting

23 Fri CO WW 160-Meter Contest

26 Mon Advanced Class 4

29 Thu ARES Meeting

Provisional Schedule Below...

February, 2009

01 Sun Sunday Brunch - Shopsy's

02 Mon Advanced Class 5

05 Thu Exec Meeting

09 Mon Advanced Class 6

12 Thu Club Meeting

19 Thu Radio Night at Club Station

23 Mon Advanced Class 7

26 Thu Club Meeting

March, 2009

01 Sun Sunday Brunch - Shopsy's

02 Mon Advanced Class 8

05 Thu Exec Meeting

09 Mon Advanced Class 9

12 Thu Club Meeting

16 Mon Advanced Class 10

19 Thu Radio Night at Club Station

23 Mon Advanced Exam

26 Thu Club Meeting

29 Sun Ham-Ex 2009

April, 2009

02 Thu Exec Meeting

05 Sun Sunday Brunch - Shopsy's

09 Thu Club Meeting - Church not available

16 Thu Radio Night at Club Station

23 Thu Club Meeting

30 Thu ARES Meeting

May, 2009

03 Sun Sunday Brunch - Shopsy's

07 Thu Exec Meeting

14 Thu Club Meeting

21 Thu Radio Night at Club Station

28 Thu Club Meeting

June, 2009

04 Thu Exec Meeting

07 Sun Sunday Brunch - Shopsy's

11 Thu Club Meeting

18 Thu Radio Night at Club Station

25 Thu Club Meeting - Pot Luck Dinner

NOTES

- Meetings start 7:30PM at St. Thomas A Becket Church Hall, 3535 South Common Court unless otherwise noted.
- Brunch is at 9:30AM unless otherwise noted.
- Classes are from 7:00PM 9:00PM at Meals On Wheels at 2445 Dunwin Drive

Visit our website: http://www.marc.on.ca for any updates of the calendar.

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WebSDR on 20m, 40m and 80m http://websdr.ewi.utwente.nl:8901

On this page you can listen to and control a short-wave receiver located at the amateur radio club ETGD at the University of Twente. In contrast to other web-controlled receivers, this receiver can be tuned by multiple users simultaneously, thanks to the use of Software-Defined Radio.

Introduction

On the main page you can listen and control a short-wave receiver. In contrast to other web-controlled receivers (such as those from http://www.dxtuners.com), this receiver can be tuned by multiple users simultaneously, thanks to the use of Software-Defined Radio technology.

One goal of (and the original motivation for) developing this software is future use at the Dwingeloo Radio Telescope.



 $\label{eq:Figure a-the building in which the system is located} Use$

Tuning is done either by clicking or dragging with the mouse on the waterfall display, by typing a frequency into the text box, or by using the up/down buttons. The bandwidth can be changed by clicking the appropriate buttons, and by "dragging" the edges of the yellow passband indication.

Hardware

The present system consists of the following hardware:

- A W3DZZ trap-dipole for the 80 and 40 meter amateur radio bands, on top of the 40 m high "Hogekamp" building of the University of Twente.
- Simple bandpass filters for the 80 m, 40 m and 20 m bands.
- A quadrature mixer in which the signals are mixed with about 7080.7 kHz. This mixer is a Quadrature Sampling Detector or "Tayloe mixer", the well-known circuit with a four-position CMOS switch, which is also used in many amateur radio SDR front-ends such as the SDR-1000 and the SoftRock.

- Similar mixers operating at 3600 kHz and 14161 kHz.
- A PC with soundcards to receive and process the signals coming out of the quadrature mixers. The PC is an old Pentium-III at 1 GHz, running Linux and the WebSDR server software (written by PA3FWM).

The circuit in the foreground contains the quadrature mixers for 40m and 80m, and preselection filters; the PC is in the background. The PC has several more sound cards, so we intend to add more bands to the system by building more mixers.

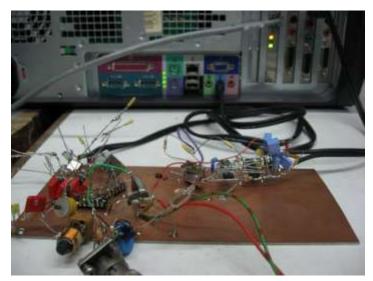


Figure b - the hardware

Software

The system consists of the following software:

- The WebSDR server software running on the server PC. This software on the one hand does the digital signal processing to produce the audio data streams and the waterfall pictures, and on the other hand is a simple web server to offer this data and some static files to the users.
- A small Java applet running in the user's web browser, to send the audio data received from the server to the user's sound card.
- Another Java applet running in the user's web browser, which fetches the data for the waterfall display from the server and displays it.
- Some Javascript code on the web page, to "glue" things together.

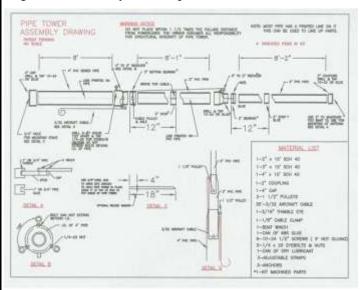
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Portable Tower

By David M. Sheaffer, KC8MAY, http://www.arrl.org/news/features/2005/01/06/1

The idea for this tower started after a Field Day and I had encountered problems of getting an antenna up without having trees or other immovable objects that are always in the way. I wanted a light-weight tower that would be easy to transport and erect. Ideally, it should also be inexpensive and built out of readily-available building materials.

For my first attempt, I used sewer pipe and tried to assemble it in such a way that it would telescope by air or the exhaust of a vehicle. However, the available pipe was not of a tight enough tolerance as to be able to get the orings to seal in every random piece.



On the second attempt, I decided to once again use the sewer pipe as it is lightweight and readily available at most building supply stores. However, this time I decided that I would construct a crank-up telescope. I started with a 4-inch schedule 40 plastic pipe with a 3-inch pipe fitted inside of it. For the third section, I fitted a 2-inch pipe inside of the 3-inch pipe. A bit of machine work was required, so I decided that I would make available a kit of these parts and an assemble drawing. Therefore, anyone wishing to build this tower would only need a hammer, drill & bits, screwdriver, adjustable wrench and 2 taps (a #10-24 and a ½ inch-20).

Cutting the pipe to length and gluing together the bearing end and sliding it on to the 3-inch pipe starts the assembly. Next, glue the bearing end and slide it on to the 2-inch pipe. Once the glue has dried lay out the pieces and place the 3/16 cable through the pulleys and the end caps as shown in the photograph. In the fourth step, the insides are sprayed with a dry lubricant so that they will slide together easier. Then, slide all tubes inside each other making sure that the

cable does not get tangled and is straight through all caps and pulleys. When all is lined up, place glue on the caps and tap them together. If desired, the assembly can be screwed together rather than glued.



A boat winch may be used to raise and lower the telescope. This can be mounted with U-bolts. Note: do not over tighten the bolts or you will crush the pipe. This completes the tower.



The finished tower weighs 34 pounds. When collapsed, it is 8 feet, 8 inches and it will telescope to 23 feet. The plastic pipe will handle a whip antenna, buddy poles as a dipole or a small center balanced structure such as a short inverted V. It could also be of value to ARES groups, for emergency

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use by Fire Departments and Police Departments. It could be used by farmers for auxiliary light out in the fields or other areas. Remember, this is a light tower and may find uses by many other groups or individuals for various reasons.

There are several options for mounting an antenna at the top of the tower. A coupling with a 2-inch to 1-inch bushing and a stub 1-inch pipe (10-12 inches in length) may be used with 1½-inch U-bolts.

To erect the tower I use a piece of 5/8 inch rod driven into the ground with about 4 inches left out of the ground for the tower to set upon so as not to allow the bottom to kick out. I attach three guy wires 120 degrees apart at the top of the first section to stakes driven 10 to 12 feet out from the tower. It could also be erected on a 2-inch square into the hitch of a car with a strap placed from the pipe to the luggage rack.

The Roving Reporter

The Roving Reporter recently interviewed Mike Butler VA3MDB.Read the article and you will realize that Mike has more hobbies than you have fingers in your hands. Despite being an armature photographer, astronomer, handy-man, tv buff and more, mike finds time to do radio. With an attic choc-full of antennas, it is easy to know where his priorities lie!

RR: How did you become interested in amateur radio?

VA3MDB: I remember listening on a friends SW radio to John Glenn's Mercury capsule orbital space flight in 1962, when I was 10, and thinking that it was neat. I had an uncle who was a ham and visited his station in Cornwall

once. I was a short wave listener and also had a scanner for many years. remember being at my brother's cottage about 10 years ago, and listening to my scanner, and thinking I want to do more than just listen. When I got back to Mississauga I looked on the web and found that Mississauga club was just around the corner, two blocks awav.

from where I lived. So I took the MARC course in 1997 and got my callsign in January 1998. Tony Allsop VE3FTA was the instructor. I got my cw in Feburary 2000.

RR: What do you have as a station?

VA3MDB: My first ham radio was an Atlas 210X transceiver, which turned out not to be so great as it drifted on transmit, even though it was a solid state design. I eventually traded it for a Radio Shack 10m ssb transceiver. I worked 87 countries on 25 watts with it in a year, back when sunspots existed. I had a Kenwood TS570S for a while, and then I got my current hf radio, a Yaesu FT1000MP MK V Field, which I am very pleased with. I

also have a Yaesu FT897 which I use for 6m and 2m. I have an LDG autotuner for the FT897, and an external DSP unit. I have just bought an ICOM 91AD handheld, the one with DStar capability.

I am restricted for antennas as I live in a townhouse. All of

them are in my attic. I have an Alpha Delta DXEE (10m through 40m), an 80m Isotron (which does not work very well), a loop antenna for 2m ssb, and a homemade dipole for 6 meters. I have one of the club 2m/70cm J poles, and also a discone scanner antenna. So my attic is somewhat crowded!

I use Logger32 for logging, and I am trying to integrate it with HamRadio Deluxe, so that I can use the computer to control the station as well as



having the electronic log.

I would like to get an antenna switch so that I can connect both HF radios to my LDG tuner and antennas more easily.

RR: What areas of amateur radio interest you?

VA3MDB: My main interest is dxing on hf and 6 meters. I have my DXCC all band award with 150 confirmed, also the 10m DXCC award, and the VUCC award for 6 meters (100 grid squares confirmed). As well I have the CQ WAC (Worked All Continents) award, which was my first one. Presently I have 201 worked and 194 countries confirmed. I'm just about ready to apply for the DXCC 20m ssb award

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and hope to get the 15m award if we ever get any sunspots again. Also I'm working on WAS and WAZ awards.

I have done some RTTY and some PSK31 stuff. These modes are good for late at night to avoid disturbing my wife by calling CQ! The digital stuff is just casual operating, using the MK V and a VOIP interface. I would like to get a TNC so I could set up APRS at home. I think APRS tracking is an interesting area.

As well at the moment I'm trying to figure out the DStar handheld.

RR: What are your other interests?

VA3MDB: My other interests are computer systems building and upgrading them. Also I enjoy photography using my new Sony Alpha A350 digital camera and its various lenses, and I like astronomy. A would not call my renovating a hobby but a necessity I have done a lot of work in my new place, building banisters on the stairs, laying floors, redoing the kitchen and painting the whole house. My other major interest is developing my home theatre systems. In my rec room I have a 50 inch Toshiba CRT rear view TV along with a 5.1 Sony receiver and a Toshiba HD-A1 HD DVD player. Up in the living room I have a 42 inch Toshiba HD Plasma. Hoping to get a Blue Ray player at Christmas. My favourites are the SciFi and action movies.

A "Real" Ham's Test

1-Aliens from a highly advanced planet visit's earth and you are the first person they encounter. They give you a small, metallic disc that can eliminate all disease, bring world peace, and a stable economy. Do you:

- A Give it to the president of the United States
- B Deliver it to the United Nations
- C Take it apart to see how it works
- 2-As you grow older what quality of your youthful life do you miss the most?
 - A Boundless Energy
 - B 39 Cents per gallon gas
 - C Peak Sunspot Cycles
- 3-When is it OK to hug another male?
 - A When it's your father & you haven't seen him in over a year
 - B When you are performing the Heimlich maneuver
 - C When The homebrew antenna you and your buddy just put up actually works
- 4-In your opinion the ideal pet is:
 - A Cat
 - B Dog
 - C A parrot that can ID for you every 10 minutes without prompting
- 5-One morning your XYL tells you she is not feeling well and asks you to get the 3 children ready for school. You reply:
 - A "We have three kids?"
 - B "Is there anything special they need to take to school?"
 - C "Sorry, I'm Net Control at 0700 for The Old Ragchewers Net"

How to score:

Give yourself 20 points for every time you answered C, 10 points for any other answer

- 100 Points-A Real Ham
- 80 Points-You Have The Potential Of Becoming A Real Ham
- 60 Points-Better Start Reading QST, CQ & The ARRL Handbook
- 50 Points Or Less-No Hope. Better donate your equipment to a school radio club and take up another hobby like yard work, collecting paper clips, or go shopping with the XYL.

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For Sale

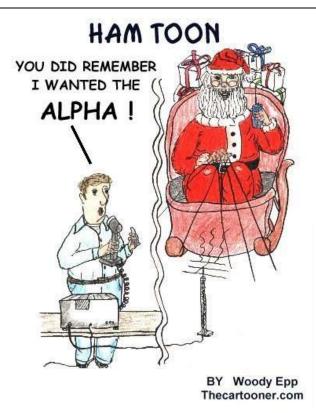
 Yaesu Antenna Tuner/Switcher FC-102 Yaesu Monitor Scope (with spare CRT) YO-100 Yassur Speaker/Phone Petek SP 103P 	\$250.00 \$140.00
 Yaesu Speaker/Phone Patch SP-102P Yaesu World Clock (all zones, Collector Item) 7RW002 	\$75.00 \$75.00
5. Heathkit Electronic Keyer HD-14106. Heathkit Relative Field Strength Meter HD-1426	\$35.00 \$35.00
7. Kenwood Interface IF-232C 8. Kenwood Desk Mic MC-85 9. Lambic Keyer	\$35.00 \$100.00 \$30.00







Call Don Meaker, VE3KHN at 905-624-9839 or email meakerdc@sympatico.ca for further information.



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RAC MEMBERSHIP APPLICAT	TION/SUBSCRIPTION TO TCA lease enter applicable choice		
COMBINATION PACKAGE: 1 year RAC membership; (includes \$	• •	•	
1 year RAC membership only; no sub			
1 year TCA subscription; no member	ship to RAC @ \$44.95 * ⁺		
Family membership; price per extra fa (Does not apply to simple subscriptio		(one TCA per family) *	
*Taxes applicable: 5% GST, 15% HS † Ontario PST of 8% applicable to TC		above amounts	ST: 5%
	CONTACT INFORMATION	ı	
Name: Call sign:			
Address:			
City/Town:			
Province:	Postal Code:		
Family Member Name	Famil	y Member Call sign:	
If you enter something	on line above, a charge of \$20.00	will be added to your me	embership
Email:		Phone #:	
	DONATION OPTIONS		
		\$	
Donation to the Defence of Amateur	ation to the Defence of Amateur Radio Fund enclosed		\$
Donation to the Youth Education Pro	gramme enclosed		\$
DAYMEN	NIT OPTIONS (Observes on)	Grand Total:	\$
PATIME	NT OPTIONS (Cheque or)		
Visa/MasterCard No:			
Card Expiry Date (MM/YY): Name on credit card:			
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	720 Bel	to: Amateurs of Canada Inc. fast Road, Suite 217 ON K1G 0Z5	