

The Survival Guide to 2-meters for New Amateur Radio Operators

2003.01.06

1) Introduction:

This booklet is intended as an introduction to Amateur Radio for the "New-comer", as well as new members of the Manitoba repeater Society. The contents of this booklet are a guideline for your introduction to Amateur Radio. I would hope that the suggestions will make your first step into the world of Amateur Radio an easy process.

2) Getting Started:

Don't forget, we all were beginners. We were just as nervous as you are now!! All of us can remember our "First time" on the air !! Please let everyone know that you are "new" to the Fraternity of Amateur Radio. This way, any errors you may make will be pointed out to you for correction.

In the past years, call signs were issued in a sequential order. It was therefore easier to tell the newer callsigns because they were in blocks of callsigns, ie VE4BAA, VE4BAB, VE4BAC....etc.. Now, with callsigns being issued in any order, it is difficult to guess at the "new-ness" of a callsign we hear on the air.




It is very important that you associate yourself with a local club or organization. This is your means of getting advice and information about the mysteries of Amateur Radio. All of the Clubs have membership lists for your use to locate someone near you to give you a helping hand.

Two-meters is your best resource for getting help from your fellow Amateur Radio operators. Amateur Radio is a World Wide Fraternity and is there for you and your enjoyment.





3) Equipment Considerations:

Initially, you will probably start off with using 2-meters FM. This is due to the fact that this is the band on which there is the most activity, or people to talk to.





There are three types of equipment:

-  Mobile radio unit in your car, truck, boat etc.
-  Base station unit in your house, cabin, office etc..
-  Hand held unit.



The type of unit you require depends upon your lifestyle and in what areas you intend on operating. Most users in a metropolitan area use a Hand held Unit because of the following points:

-  The Hand held is self-contained, it has its own battery, antenna, and is ready to operate.
-  It does not require any extra equipment to operate.
-  The local Repeater (relay) station operated by the club will relay your signal over a large area.
-  It can be used in your vehicle as a mobile unit, as well as in the back yard while doing other projects.








Mobile Units have the following considerations:

-  You will require an antenna on the vehicle
-  You will require wiring to the 12 volt battery system.
-  You will have a greater radio range because of the greater transmitter power, and the better antenna, as compared to the antenna on a Hand held unit.
-  The radio left in the Vehicle is sometimes an invitation to be stolen due to the advertising of its presence by the antenna on the vehicle. Watch out for the limitations of your insurance coverage due to the fact of how the unit is mounted to the vehicle. A hand held can be removed from the vehicle when you leave.

Base station Units have the following considerations:

-  You will require a outdoor antenna and structure:
 - 1)The structure can be a simple pole, a tree, or a tower
 - 2)There can be some municipal licensing or regulations to conform to.
 - 3)The antenna could be a simple ground plane antenna or a complex yagi or stacked array.
 - 4)The transmission line (coax) is another consideration, it can be RG8 or RG58 type cable.
 - 5)RF grounding of the equipment.
-  A 12-volt power supply is required to power the radio, if you are like most people, and you are using a mobile radio as a base station.





Hand held Portable Units have the following considerations:

-  Size of the Hand held unit.
-  Battery capacity.
-  Power output of the transmitter.
-  Add on accessories.
-  Ability to adapt to other antennas for mobile and base station usage.
-  Hand held if fully self contained, it has its own antenna, battery and is ready to go!
-  Theft of a small unit from the car, office etc..

4) Local Clubs and Associations:





The local clubs are a group of interested Amateur Radio Operators that gather once or so each month and hold a meeting to discuss matters of the organizations. The clubs usually have a "purpose" or "interest" in an aspect of Amateur Radio. The clubs usually have a fund raising process through their "dues" structures. This is the way they

support their projects. News letters are common with the clubs. Membership lists are also available for each member. There are a number of types of Clubs:

-  Repeater clubs
-  Packet radio
-  High Frequency (HF)
-  Emergency, ARES, Municipal organizations.

An example of a large local club would be the **Winnipeg Amateur Radio Club**. The club meets monthly in Winnipeg on the second Monday of each month except July and August.

It is comprised of the following sections:

-  Teaching section for "Ham" courses.
-  Public service section, for events communications.
-  Field day communications events.
-  Club Station





This is a large club of approximately 250 members and therefor has a number of sections within the organization.

5) REPEATERS.

A Repeater is a relay station located on a hill top or any tall object. Its purpose is to extend your radio range and coverage. There are two frequencies involved: #1 for Receive, #2 for Transmit. Or, you receive on one frequency and transmit out on the second frequency. Frequencies for Repeaters are established by Band Plans and a Frequency Coordination process through the Amateur Radio Groups.

Repeaters that cover a wide area or with linking capability are very costly to install and maintain. Equipment, repairs, insurance etc.... can add up to sometimes thousands of dollars per year. These system are not normally maintained by one individual, but rather by a group of people or even a club. As such if you use the repeaters please join the club that maintains the system, so that they can continue to keep the repeater system running from year to year.

Repeaters can be on VHF and UHF frequencies such as 144, 220 or 440 MHz frequencies. These are the most common bands. There are other repeaters on 29, 50, 900, and 1200 MHz. Altitude above average ground level is the prime consideration for radio range:

-  100 ft = not bad
-  200 ft = good
-  500 ft = very good
-  1000 ft + = excellent.

A lot of Repeaters are equipped with PHONE PATCHES for the memberships. Phone patches are a device for making a telephone call from an Amateur Radio Transceiver. These phone calls, in the tradition of Amateur Radio, are for PERSONAL use only. Calls cannot be made to Commercial Companies to order parts or make inquiries about parts, equipment, etc.. Most auto patch systems are on a Repeater. They can also be on a simplex frequency. Due to the expense of the equipment and telephone lines, the Phone Patches are usually restricted to use by members of the organizations.

REPEATER BASICS



A Repeater is a Receiver and a Transmitter



Its purpose is to receive a signal on one channel (146.240 MHz) and re-transmit it out on another (146.840 MHz).



It is then located on a very high hill or building, so that two or more people can communicate via the repeater over a great distance.



Their signal is relayed through the repeater to each other.



A number of repeaters can be linked together to increase the area covered.

OPERATING GUIDELINES

The following is a section of guide lines to assist you in Repeater Operation.....



Select the Repeater frequency on your radio.

- 1) 147.390 MHz... receive (VE4WPG Repeater) +600 kHz ...Duplex (which is 147.990 MHz on transmit).



Listen First,

- 1) As always in Ham Radio, listen first, and listen for many seconds, not just for a brief moment. If fact, you should make sure all is quiet for at least thirty seconds.



Push the push-to-talk button on your mic or side of your hand held.

- 1) Identify yourself with your callsign.
- 2) Talk about "1-inch" (2.5 CM) from the microphone.
- 3) Release the mic when finished talking.
- 4) Use the word "OVER" to signify you are finished and it is the other persons' turn to talk.



The Repeater stays on the air for approximately 5 seconds after you stop transmitting.

- 1) You do not have to wait for it to drop (stop transmitting).
- 2) You just have to WAIT for the second "BEEP" before talking or the timer on the repeater will cut you off after a couple of minutes.



"CQ" is not used on VHF or UHF as a means of general calling.

- 1) Use phrases such as:

☀ "VE4XXX Monitoring".

☀ "VE4XXX Listening on VE4WPG Repeater".

☀ there are other versions used as well.



"PLEASE" tell us if you are "NEW" on the air!!! We cannot tell by your callsign if you are new to Two Meters and need a little help.....

Hand held/Portables Techniques



Transmitter at 1/2 Watt will do!!

- 1) Saves battery life, battery will last longer till next charging is required.



Antenna "straight" up and down, not horizontal.

- 1) if not, your signal will be weak into the repeater.
- 2) repeater antenna is vertically polarized, you have to be as well.



Talk 1-inch away from the portable. (2.5 cm)

Mobiles



Mount the antenna at least 1-meter (one half wavelength) away from any metal objects. I.E. - your broadcast band (FM) antenna, roof racks etc..



The Antenna is 90% of the radio system.

- 1) 1/2 wave or 5/8 wave antenna work best !!



5 Watts on low power will do !!

- 1) creates less interference to other repeaters on the same frequency !!



Speak about 1-inch (2.5 cm) from the microphone.

- 1) don't squeeze the touch tone buttons on the back side.!!



Wire the Radio directly to the battery to stop alternator whine on your transmitter.

- 1) use a second fuse at the battery connection in case the wire shorts at the fire-wall.
- 2) make sure there is a fuse in the black negative ground wire to the radio. The radio will be damaged by the starter current if the ground comes off the motor.



VERY IMPORTANT, use a mic clip on the dash, and ALWAYS hang up the mic on it...!!!







- 1) many times, lots of us have sat on the microphone and provided live entertainment for the repeater listeners...!!!

6) Two Meter Net Etiquette

The Manitoba Repeater Society Inc.'s linking system is fully on-line. MRS is also working with several other repeater groups in Manitoba and Northwestern Ontario to maintain a wide area repeater coverage. Linked repeaters extend from Flin Flon down Highway 10 to Neepawa and Brandon, through the Interlake, Winnipeg City and the surrounding area South to the American border, up into the Whiteshell Park and East along the Trans-Canada Highway as far as Sioux Lookout.

With this wide area coverage there will be many more amateurs using the Two Meter Nets Thursdays and Sundays. This will mean longer nets as more people check in, use the Swap and Shop or make announcements.

If everyone employs the following procedures the nets will continue to run efficiently.

-  Press your microphone button for one second, then transmit. Your transmission might be traveling through half a dozen repeaters from one end of the system to the other. It takes time for all those relays to click over when the repeaters switch to transmit from receive. Pressing your mike button for a second ensures that the Net Control Station (NCS) will hear your entire call sign.
-  Always give your full call sign, using proper phonetics, when you check in. This assists the NCS to copy your call sign correctly the first time which reduces confusion and the need for repeats. (ie. VE4 Hotel Kilo)
-  The 2 meter nets are controlled and directed nets. You should transmit only when requested by the Net Controller, and you must direct all transmissions through the NCS. If you wish to speak to another station, request permission from the NCS.
-  Listen closely during check ins, and reply only when the NCS calls for check ins on the repeater you are monitoring. The present system of calling by repeater was carefully developed to spread out check ins. Pileups simply waste time since the NCS must ask for repeats.
-  Keep "arrangements" brief. If you can't finish an arrangement in a couple of sentences, please make arrangements to QSY or wait until after the net is completed.
-  When making additions or deletions to the "Swap and Shop" portion of the net, remember to speak S * L * O * W * L * Y. Net control operators must write down what you are saying and can not normally keep up to the speed of natural conversation. It is a good idea to write down the items you want to list before calling in.

7) Common Sense

When using the repeaters, please remember that you are on a party line. In other words, you are not the only one who may want to use the system. Please leave a slight pause before you start your QSO exchange with the party you are talking to. This will give someone else who may need the repeater/link a chance to identify themselves.

When calling another station, please make sure the repeater is not in use. Monitor for a few seconds to make sure there is no QSO in progress. If you hear nothing you are mostly assured the frequency is clear. This is especially important when using the linking system, as you could end up jumping into the middle of a net or emergency situation. When breaking in on an ongoing QSO, please do so only if, it is an emergency, if you need to make a short call, or if you intend on joining the QSO. It is considered very rude to break in on a QSO just to start up your own. Give the first parties time to finish their QSO before you take over the repeater. During your QSO please note the courtesy tone that the repeater gives. The idea of the courtesy tone is to allow other stations to have time to break-in, in the event of an

emergency. Please do not start your transmission until you hear the tone. If the repeater you are on does not have a tone then please wait for the squelch tail or the carrier to drop. **REMEMBER: Emergency Traffic takes priority over all other traffic.**

8) Call Signs

Hams are very famous, it seems, for needless conversation. By this, I mean the constant exchange of identifying your station, and that of the other party. According to my interpretation of the regulations; you only need to identify your station when you first start your QSO and then every 30 minutes, and at the end of your QSO. You do not have to identify the other parties station, that is their responsibility. It is suggested that you always use international phonetics (ie. Mike, Alpha, November) when giving your call sign. This especially true when you are on the fringe of the repeaters footprint, or during nets and emergency situations. A lot of letters sound the same when spoken quickly, or with QRM (ie. C,D,E,G,T,V). Please try to remove this needlessness from our airwaves.

9) Mobile Operation

When traveling around the province or even the city where the repeater is located, you may from time to time experience dead spots. Do not worry, simply move to another location and try again. If you are in your car please make sure that you have eliminated as much of the background QRM as possible. (ie. broadcast radio, wind noise, etc..). The repeater system is designed to provide superior audio throughout the entire linking system. Any noise that goes into the system will be amplified several times, and could end up being stronger than your voice at the receiving end of the QSO. Do not speak directly into the microphone, this just ends to producing popping sounds. It is suggested that you hold the microphone approximately 4-6 cm. from your face and speak across (diagonal) to the microphone. Please make sure that when you are finished with your QSO that your microphone is placed back on its bracket, and is not left on the seat where the PTT may be stuck in the closed position. Nothing is more embarrassing than tying up a series of repeaters with an open microphone. Squelch should be adjusted when getting near the fringe of the repeaters coverage, as the signal gets weaker.

10) Portable Operation

Amateurs these days are using small hand held rigs. While these are adequate for most city operations, they are not intended for use along the highways. The current set-up of M.R.S. is for operation of mobile rigs with 40 watts of power to a 5/8 wave roof mounted antenna. When your signal is too weak to make it to the repeater, so is the repeater's ability to make it back to your vehicle. Portable rigs just do not have the power for this type of operation. Please use your portable rigs only when in the vicinity of the local repeater. If you run with low power, please make sure that it is enough to make it to the repeater without needless noise. **Remember that a noisy signal into the repeater; means a noisy signal out all repeaters that are on the link**

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11) Ker-chunking

Now that the Manitoba Repeater Society has a series of repeaters linked to various other repeaters and systems, it has become very obvious that a number of our fellow hams are kerchunking these repeaters. If you are one of these hams please remember that not only are you kerchunking the local repeater, but you are also kerchunking many other repeaters and hundreds of radios monitoring those repeaters.

One possible reason to kerchunk a repeater would be to test if your rig is transmitting (always use a dummy load for this). The another possible reason would be to test if the repeater is transmitting. For that one second transmission it is suggested that you also send some audio along with your transmission. This should be your call sign.

The network administrators are always monitoring the links for a repeater that may not be functioning properly. If there is kerchunking, it is very hard to know if it is an ungrateful ham or a malfunction on a link radio. Some systems like to run their system hot-linked at all times due to the vast area they are in. Hams in these areas leave their rigs on all day long in the event a fellow hams is in need of assistance while traveling. If there is constant kerchunking, they just might end up turning off their rig and missing that emergency call for help. **Please be courteous and think of your fellow Ham.**

12) Nets

Nets have become very popular on 2 meters & 70 centimeters. The Manitoba Repeater Society encourages people who have a need for a net to start them, and then ensure that they continue. If anyone wishes to start a net they are more than welcome. The repeaters and their links have been established for the use of fellow hams for their enjoyment of the hobby. They are also there for use in the event of an emergency situation. The use of controlled nets is a way of training net controller operators and monitoring hams, proper technique and skill, should they ever be required. If you have a net you would like to get started, please contact the president of the Manitoba Repeater Society, who will help to coordinate a scheduled time for the net to take place. With the system growing and linking to other systems, we have found a need to coordinate the various nets that are happening around our province and neighbouring provinces. Some of these nets are:

The MRS Net: (The Manitoba Repeater Society)

The MRS linked system, and other systems

Training exercise, Bulletins, Arrangements, Swap & Shop

Thursdays @ 9:00 PM Local time

Sundays @ 9:00 PM Local time.

The LOWARC Net: (The Lake Of the Woods Amateur Radio Club)

The LOWARC System, (other links are invited to join)

Bulletins, and General club news.

Sundays @ 7:30 PM Local time.

The DAR"C" Net: (The Dauphin Amateur Radio Club)

The DAR"C system.

Sundays @ 8:00 PM local time.

The Senior's Net:

The VE4WPG Repeater (other links to be established)

Information exchange of WSCRC news, and informal talk

Weekdays @ 9:00 AM local time.

The Dryden Amateur Radio Society Net

LOWARS system (other system are invited to join in)








Bulletins & General Club news

Mondays @ 7:30 PM Local time.

13) How to operate the Simplex Auto-Patch

The Manitoba Repeater Society maintains an Auto-Patch, VE4WRS, for use by its members while in the calling area of the City of Winnipeg. The auto-patch is located on top of the Richardson Building and offers excellent coverage for its intended use. (NOTE: The auto-patch is not to be used to by-pass normal toll charges.) The antenna used is of a zero gain type. The reason for this is so that the auto-patch will not be used outside of the Winnipeg calling area. The Autopatch has been established for use by MRS members only. Access to the patch is via an access code which is changed from time to time. Please do not release this code to anyone. If a visitor to the area wants to use the autopatch please initiate the call for them, and then shut the patch down when they are done. Please note that you must insure that the call is within auto-patch & amateur radio requirements.

The use of the auto-patch is fairly simple, provided that you follow the procedures properly.




-  Tune your radio to 145.450 MHz. (simplex mode)
-  Please ID (ie. This is VE4ABC requesting auto-patch)
-  Press the * for 1 second followed by the access code.
-  Wait for the patch to ID and give a dial tone. (the patch is sampling or looking for a mobile PTT at a 0.6 sec. rate.)
-  Press the first of the numbers for 1 second and without pausing speed dial the remainder of the numbers.
-  When the called party has answered and paused, the patch starts to sample at the fast (0.6s) rate looking for the mobile to reply. A very short pause between the mobile PTT and speaking will ensure that the first word of the mobile's party is not chopped off. The patch will stay in the receive mode for the duration of the mobile's transmission.
-  To shut down the patch, press the # for three seconds followed by the code digits.

To minimize the signal loss (when the patch is in the Xmit mode), telephone line audio when detected, tells the patch to sample at the slow rate of every 2.4 seconds. This means to 'break' a person talking on the phone, or to shut down the patch when ringing, busy signal, a MTS recording, or any audio from the telephone side of the conversation is present, up to 2.4 seconds of carrier may be required before the patch reverts to receive mode.

Remember the patch is a simplex device, with a micro-processor doing the task of deciding when to receive or transmit. It is hoped that this brief outline of operation will aid in its use. The patch has been adjusted to accept DTMF tones of 2 to 5 KHz. deviation. Rigs with excessively high or low deviation will have problems of addressing and dialing.

Emergency use of the Auto-Patch

Currently there is no set procedure. However the 911 operators have been made aware of the fact that as Amateurs Radio Operators, we have access to an Auto-Patch which can be used to call the 911 system. I also believe that the 911 operators were given a demonstration of the Auto-Patch. If you ever run into an emergency situation and must use the Auto-Patch, please follow these simple rules:

-  Identify yourself as an Amateur Radio Operator (with callsign), and that you are using the Auto-Patch.
-  The Auto-Patch has a time-out feature which will shut down the Auto-patch if there is no audio transmitted to the system within 3 minutes. Please key your mic every two (2) minutes if you are placed on hold.
-  The entire call is also on a time limit of 15 minutes. You may want to inform the 911 operator of this fact.

Lets all hope that you will never need to use the Auto-Patch for this purpose, but be grateful it is there just in case !!

14) Blue Book

The Manitoba Blue Book is a listing of all Amateur Radio Operators in Manitoba. Very similar to your local telephone book, but a lot more useful. The book is produced about every year and a half and is sold at Flea Markets and HamFests. Proceeds from the sale of the Blue Book go directly back into amateur radio to help fund projects like repeater purchases, digital linking systems equipment, etc... No funds ever go into an individual person pockets. The book is produced strictly by volunteer efforts.. The book contains listings by callsign, cross reference of callsign to name and name to callsign, listing of callsigns by location, repeater listings by location and by frequency, listings of nets and club meetings times, as well as other useful information. Please make sure you are listed in the Blue Book by sending your information to:

Manitoba Blue Book
c/o Bill Bowman, VE4UB
744 Christie Avenue
Selkirk, MB R1A 2H9

Email: ve4ub@rac.ca
Fax: 204-785-8742

15) Radio Amateurs of Canada

Radio Amateurs of Canada (RAC) is the national organization that represents all Amateur Radio Operators in Canada on all HAM related issues with the federal government (Industry Canada) on important national issues such as tower legislation, RF interference and spectrum and with the International Amateur Radio Union (IARU), which works with the International Telecommunications Union (ITU) to preserve and expand our frequency spectrum allocations.

- 📠 E-Mail, Packet and On-Air Canadian News Bulletin Service
- 📠 Sponsor of The Canadian Amateur Radio Hall of Fame
- 📠 Sponsor of six major Canadian amateur radio operating awards
- 📠 Sponsor of the RAC Canada Day Contest and RAC Winter Contest
- 📠 Sponsor of the Canada-wide Amateur Radio Emergency Service
- 📠 Sponsor of the Canada-wide National Traffic System
- 📠 Sponsor of The RAC Affiliated Club Program
- 📠 Sponsor of the free Provincial Incoming QSL Bureaus
- 📠 Source for the CEPT and IARP international operating permits
- 📠 Publisher of the long-needed RAC Operating Manual
- 📠 Publisher of The RAC Basic and Advanced Study Guides
- 📠 Publisher of The RAC Repeater Map Book and Directory
- 📠 Publisher of The RAC Tower Approval Documents
- 📠 Publisher of the RAC Video Cassettes for home or club
- 📠 World-Class Web Site – right here at <http://www.rac.ca/>
- 📠 Free Outgoing QSL Bureau Service
- 📠 E-mail redirection service - one easy e-mail address that is redirected to where ever you want.
- 📠 **6 issues per year of The Canadian Amateur - Canada's premier amateur radio magazine**

All of the above is yours when you join. The annual membership fee is \$39.95 per year. Membership information or applications can be requested from:

Radio Amateurs of Canada
720 Belfast Road, Suite 217
Ottawa Ontario K1G 0Z5

FAX: (613) 244-4369
Phone: 1 (877) 273-8304 (toll-free- membership applications only)
e-mail rachq@rac.ca
<http://www.rac.ca>

16) Repeater Codes

Repeaters (Repeaters are normally hot-linked unless indicated)

<u>Location</u>	<u>Freq.</u>	<u>Prefix</u>	<u>Hubs</u>	<u>Link 1></u>	<u>Link 2 ></u>	<u>Link 3 ></u>	<u>Link 4></u>
Starbuck	146.61-	#46	VE4MAN	VE4WPG		VE4CDN	
Winnipeg	147.39+	#45	VE4WPG ⁽¹⁾	VE4VJ	VE4MAN	VE4MIL	VE4GIM
Gimli	146.85-	#44	VE4GIM	VE4WPG			
Milner Ridge	145.21-	#42	VE4MIL	VE4WPG	VE4FAL ⁽¹⁾	VE4MBR	

Repeaters accessed via Palomar controller - use proper prefix * or #NN

			ON	OFF
Morris	145.27-	VE4CDN (use VE4MAN controller)	403	430
Winnipeg	443.500+	VE4VJ (use VE4WPG controller)	401	410
Hadashville	147.36+	VE4EMB (hot linked to VE4FAL)		
Winnipeg	145.45s	VE4WRS ⁽¹⁾ (autopatch/pager)	*64	#64

Other Clubs & Systems

Brandon	146.73-	VE4TED ⁽¹⁾ Brandon via #47	402	500
Lundar	145.43-	VE4SIX ⁽¹⁾ DAR "C" gateway via VE4VJ	498	497
Selkirk	147.06+	VE4MBR ⁽¹⁾ Triple 'S' gateway via #42	403*	430*
Falcon Lake	146.64-	#40 VE4FAL ⁽¹⁾ LOWARS gateway via #40	402	500
Dryden	147.24+	#38 VE3DRY ⁽¹⁾ Dryden via LOWARS #32	403	500

⁽¹⁾ - Repeater/link is normally off-line

Palomar Controller commands

Reset to Default State - Prefix, 500

	ON	OFF	Repeater status	CW	Voice
Link # 1	prefix, 401	410	L1 status	04D	099A
Link # 2	prefix, 402	420	L2 status	71A	711A
Link # 3	prefix, 403	430	L3 status	72A	722A
Link # 4	prefix, 404	440	L4 status	73A	733A
Repeater	prefix, 406	460	L4 status	74A	744A
			Time (12 hour)	861	8661
			Time (24 hour)	862	8662
			Date	863	8663
			Day of week	864	
			Start local Identifier	018	
			Start remote Identifier	019	
			Location	09A	
			Controller Status	411	411

The codes that 95% of the users will need.

In Winnipeg using VE4WPG, calling outside Winnipeg	*406
In Winnipeg using VE4WPG, resetting controller	*500
Outside Winnipeg, calling VE4WPG	#45406
Outside Winnipeg, resetting VE4WPG	#45500

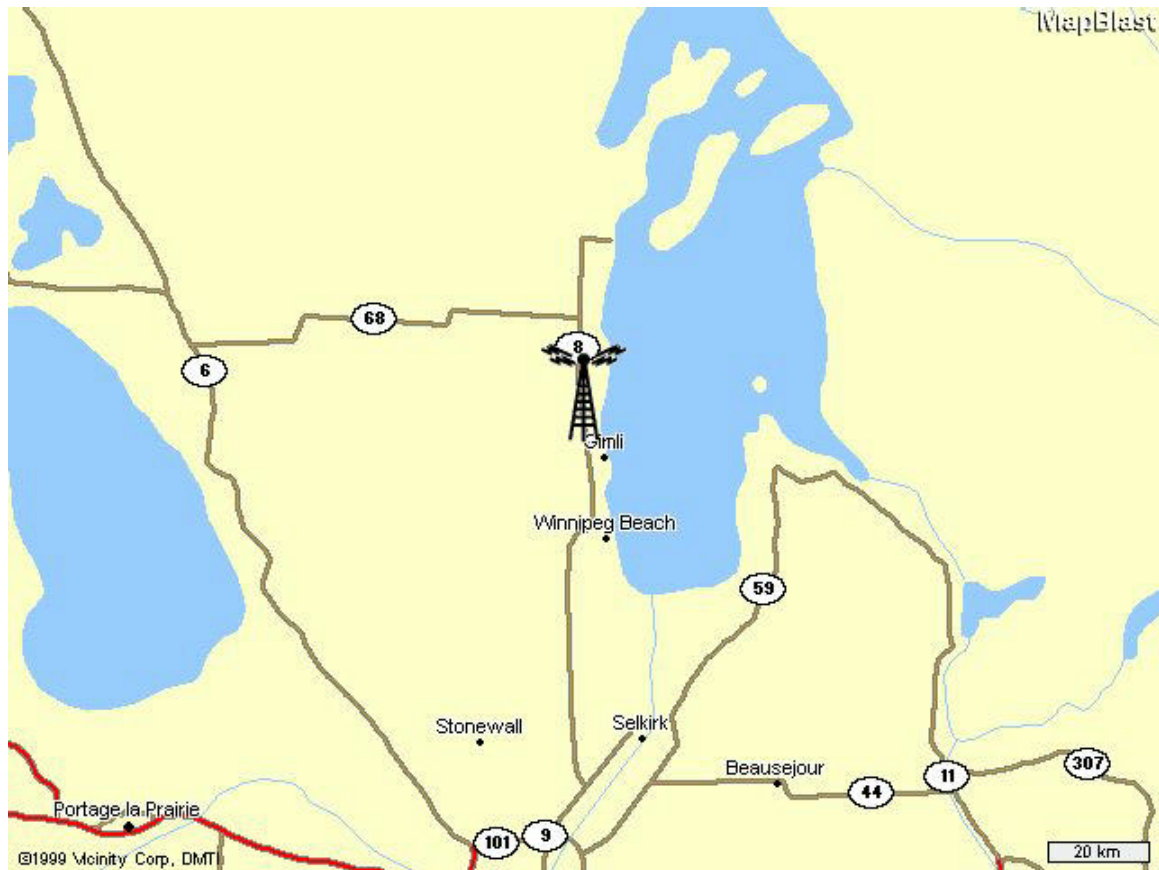
17) Coverage Maps (approx. coverage using 40 watt mobile)



VE4CDN



VE4MAN

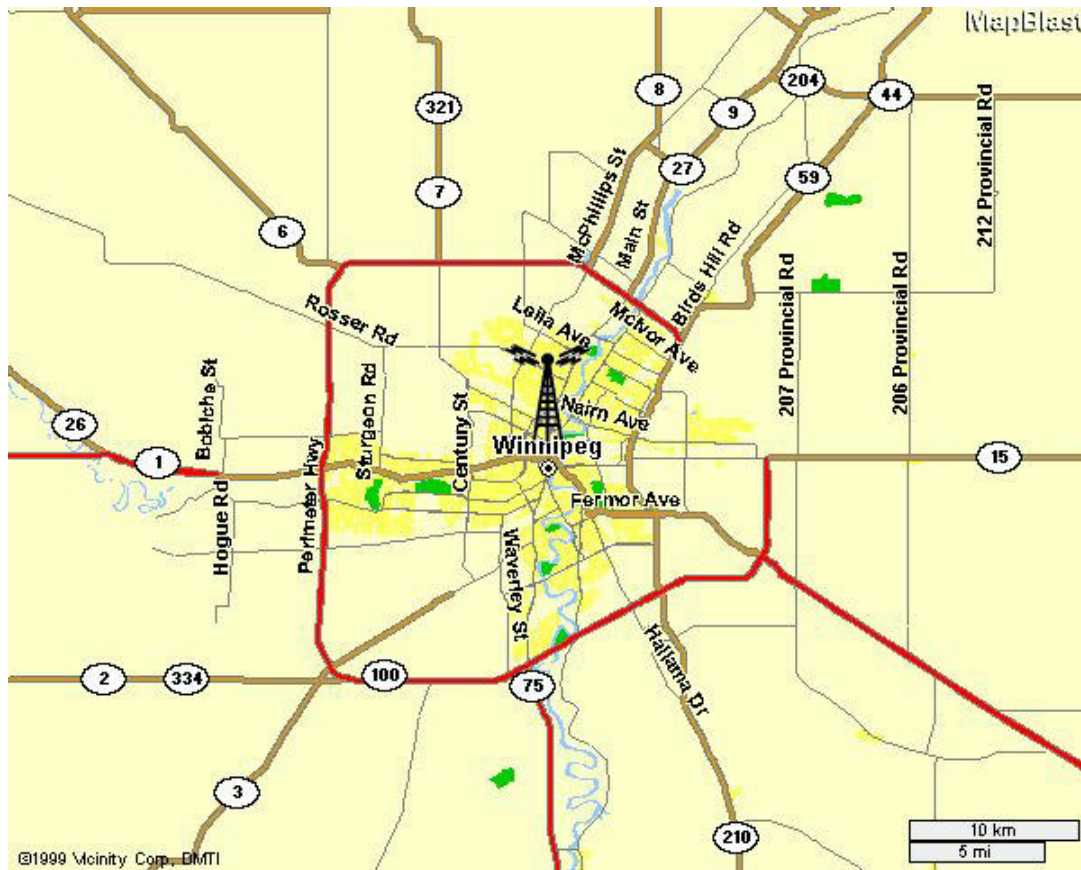


VE4GIM



VE4MIL

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VE4WPG



VE4WRS

NON MRS Repeaters

VE4TED



VE4MBR





VE4???



VE4FAL



VE3 Repeaters

Dauphin Repeater Network



VE4SIX

VE4LDR



VE4SHR



VE4DPN



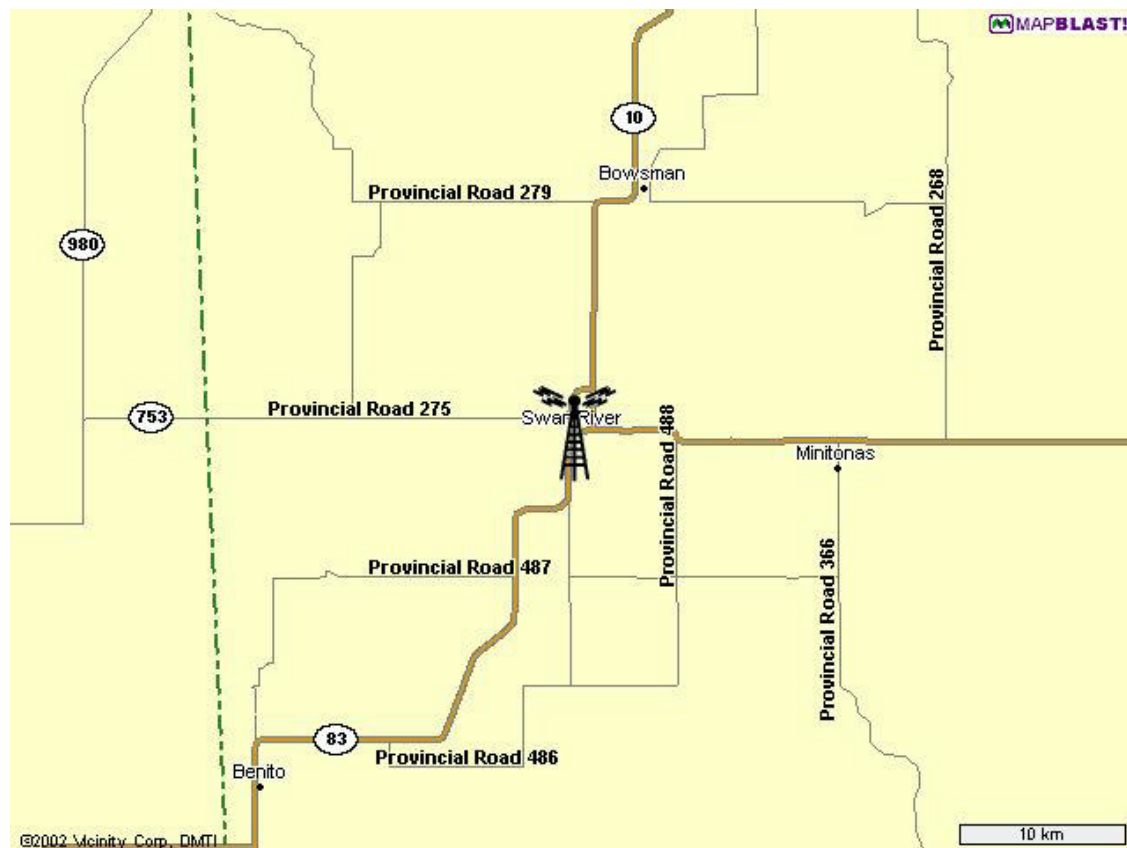
VE4BVR



VE4BAS



VE4SRR





VE4PAS



VE4FFR

18 Repeater Data Sheets - Manitoba Repeater Society System

VE4CDN	144.67/ 145.27 (-600 KHz)	Morris, MB
Host: N.M. Paterson & Sons Limited	Location: South end of the town of Morris	hot-linked via the VE4MAN controller
VE4MAN	146.01/ 146.61 (-600 KHz)	Starbuck, MB
Host: Canadian Broadcasting Corporation	Location: 22 miles WSW of Winnipeg, 2 Miles E of Starbuck along Highway # 2	Connected to backbone Link 3 to VE4CDN
VE4PLP		Portage La Prairie, MB
Host: Manitoba Hydro	Location: South of the Dam	Intermediate link between VE4MAN & VE4NEP. Future repeater.
VE4WPG	147.99/ 147.39 (+600 KHz)	Winnipeg, MB
Host: James Richardson & Company	Location: Richardson Bldg, One Lombard Place	Normally off-line, Voice card
VE4WRS	145.45 (simplex)	Winnipeg, MB
Host: James Richardson & Company	Location: Richardson Bldg, One Lombard Place	Auto-patch
VE4VJ	448.50/ 443.50 (+5.MHz)	Winnipeg, MB
Host: James Richardson & Company	Location: Richardson Bldg, One Lombard Place	Connected to backbone link # 1, from VE4WPG Gateway to VE4SIX
VE4GIM	146.25/ 146.85 (-600 KHz)	Gimli, MB
Host: Seagram Distillers Inc.	Location: Seagram's Distillery, NorthWest of Gimli	Normally off-line, via VE4VJ 485* ON 486* OFF
VE4MIL	144.61/ 145.21 (-600 KHz)	Milner Ridge, MB
Host: Manitoba Highways	Location: 30 miles NE Beausejour, 5 miles N of Hwy 44, E of Hwy 214	Connected to backbone Link #2 gateway to VE4FAL
VE4EMB	147.96/ 147.36 (+600 KHz)	Hadashville, MB
Host: Manitoba Telephone System	Location: 1 mile S of Hadashville, 1 mile N of Hwy1 # Hwy 11	Hot-Linked to VE4FAL

Non - M.R.S. Repeaters - accessible via MRS Gateways

VE4TED	146.13/ 146.73 (-600 KHz)	Brandon, MB
Owner: Brandon Amateur Radio Club	Location:	Gateway at VE4NEP - 403 ON 430 OFF

VE4MBR	147.66/ 147.06 (+600 KHz) CTCSS (PL) 127.3Hz (3A)	Selkirk, MB
Owner: Triple S Communications Group	Location: Manitoba Pool Elevator, Selkirk City Center	Gateway at VE4MIL - 403 ON 430 OFF

VE4		Manigotogan, MB
Owner: Ron Place, VE4PL		Future gateway at VE4GIM Link # 2 - 402 ON 420 OFF

PineTree Intertie - Systems - gateway at VE4FAL

VE4FAL	146.04/ 146.64 (-600 KHz)	Falcon Lake, MB
Owner: Lake of the Woods Amateur Radio Society	Location: South Shore, Falcon Lake	VE3 gateway - 402 ON 420 OFF Connected to VE3 backbone

VE3LWR	146.43/ 147.03 (-600 KHz)	Kenora, ON
Owner: Lake of the Woods Amateur Radio Society	Location: Hilly Lake, Hwy 17, E of Kenora	Connected to backbone, Voice Card Phone Patch *789 UP, # DOWN

VE3SXN	144.57/ 145.17 (-600 KHz)	Sioux Narrows, ON
Owner: Lake of the Woods Amateur Radio Society	Location: Sioux Narrows	Connected to backbone Phone Patch *789 UP, # DOWN

VE3RBK	147.66/ 147.06 (+600 KHz)	Blackhawk, ON
Owner: Rainy Lake Amateur Radio Club	Location: West of Hwy 17 at Finland, 5 Miles N of Emo	Connected to backbone

VE3RLC	146.22/ 146.82 (-600 KHz)	Fort Frances, ON
Owner: Rainy Lake Amateur Radio Club	Location: Water Tower, Fort Frances City Center	Connected to backbone Phone Patch *789 UP, # DOWN

VE3YXL	146.25/ 146.85 (-600 KHz)	Souix Lookout, ON
Owner: Sioux Lookout Amateur Radio Group	Location: Hospital, Town of Sioux Lookout	Linked via VE3DRY on link # 2

VE3DRY	147.855/ 147.255 (+600 KHz)	Dryden, ON
Owner: Amateur Radio Society of Dryden	Location: 5 miles N of City Center	Connected to backbone Phone Patch

DAR'C' Linking Network

<i>VE4SIX</i>	144.83/ <u>145.43</u> (-600 KHz)	<i>Woodlands, MB</i>
Owner: Dauphin Amateur Radio Club	Location: Woodlands, MB	Gateway point from VE4VJ 498 ON , 497 OFF
<i>VE4LDR</i>	146.37/ <u>146.97</u> (-600 KHz)	<i>Lundar, MB</i>
Owner: Dauphin Amateur Radio Club	Location: Lundar, MB	
<i>VE4SHR</i>	146.20/ <u>146.70</u> (-600 KHz)	<i>Spearhill, MB</i>
Owner: Dauphin Amateur Radio Club	Location: Spearhill, MB	Autopatch
<i>VE4DPN</i>	146.04/ <u>146.64</u> (-600 KHz)	<i>Dauphin, MB</i>
Owner: Dauphin Amateur Radio Club		Autopatch
<i>VE4BVR</i>	147.84/ <u>147.24</u> (+600 KHz)	<i>Russell, MB</i>
Owner: Dauphin Amateur Radio Club	Location: Russell, MB	
<i>VE4SRR</i>	144.85/ <u>145.45</u> (-600 KHz)	<i>Swan River, MB</i>
Owner: Dauphin Amateur Radio Club	Location: 5 miles North of Durban on Thunder Mountain.	
<i>VE4EDU</i>	144.67/ <u>145.27</u> (-600 KHz)	<i>Winnipeg, MB</i>
Owner: Wayne Warren, VE4WR	Location: St. James Collegiate, Winnipeg MB	
<i>VE4PAS</i>	144.75/ <u>145.35</u> (-600 KHz)	
<i>VE4FFR</i>	146.34/ <u>146.94</u> (-600 KHz)	<i>Flin Flon, MB</i>

19) Clubs

Application for Membership (for a friend)									
Attn. MRS Membership Chairperson									
C/O Winnipeg Seniors Citizens Radio Club									
598 St.. Mary's Road									
Winnipeg, MB R2M 3L5									
Name: _____ Call Sign _____									
Address: _____ City: _____ Prov: __ Postal Code: _____									
Phone: _____ E-mail: _____									
\$25.00 Members - (New Members see fee schedule)									
\$10.00 Addn'l Family Member residing at the same residence As the initial member.									
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Calendar Year Ending: _____ Certificate Required: _____ Membership card required _____</div>	<div style="border: 1px solid black; padding: 10px; margin-top: 10px;">M.R.S. Current Fee Schedule <i>Pro-rated quarterly-new members only</i> Membership expires Dec 31 of current year <table style="width: 100%; border-collapse: collapse;"><tr><td>January to December</td><td style="text-align: right;">\$25.00</td></tr><tr><td>April - December</td><td style="text-align: right;">\$18.75</td></tr><tr><td>July to December</td><td style="text-align: right;">\$12.50</td></tr><tr><td>October to December</td><td style="text-align: right;">\$ 6.25</td></tr></table></div>	January to December	\$25.00	April - December	\$18.75	July to December	\$12.50	October to December	\$ 6.25
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April - December	\$18.75								
July to December	\$12.50								
October to December	\$ 6.25								

Manitoba Repeater Society (MRS)

C/O Winnipeg Senior Citizens Radio Club

598 St. Mary's Road

Winnipeg MB R2M 3L5

<http://ve4.net/mrs/>

Winnipeg Amateur Radio Club (WARC)

C/O VE4WSC

598 St. Mary's Road

Winnipeg MB R2M 3L5

www.ve4.net/warc

Winnipeg Amateur Radio Emergency Services (W-ARES)

C/O VE4MBQ

90 Cail Bay

Winnipeg, MB R2P 1X4

<http://www.winnipegares.ca>

The Manitoba Amateur Radio Museum Inc.

C/O VE4ARM/VE4MTR

Box 10

Austin, MB R0H 0C0

<http://www.mts.net/~dsnydal/austin.html>

Beausejour Amateur Radio Club (BARC)

P.O Box 1011

Beausejour, MB R0E 0C0

Birtle ARC

Box 253

Birtle, MB R0M 0C0

SouthWestern Manitoba ARC

Box 365

Carman, MB R0G 0J0

Dauphin ARC (DAR'C')

1 Cruise Drive

Dauphin, MB R7N 3A5

<http://www.mts.net/~ve4stu>

Flin Flon Amateur Radio Club

2 Boundary Ave

Flin Flon, MB R8A 0P2

Triple S Communications Group

744 Christie Avenue

Selkirk, MB R1A 2H9

<http://www.ve4sss.ca/>

CFB Shilo Amateur Radio Club

PO Box 806

Shilo, MB R0K 2A0

Interlake Amateur Radio Club

Box 202

Teulon, MB R0C 3B0

Thompson Amateur Radio Club

Box 23

Thompson, MB R8M 1M9

1st Sun Valley Venturers

c/o 47 Mutchmor Close

Winnipeg, MB R2K 3R5

<http://welcome.to/sunvalleyventurers>

735 (WINNIPEG) COMM REGT

969 ST. MATHEWS

Winnipeg, MB R3G 0J7

University of Manitoba ARS

BOX 73 UNIVERSITY CENTRE, U OF M

Winnipeg, MB R3T 2N2

<http://www.ee.umanitoba.ca/~pehn/umars/>

Winnipeg Senior Citizens ARC

c/o VE4WSC

598 St. Mary's Road

Winnipeg, MB R2M 3L5

<http://www.mts.net/~ve4wsc/>

Winnipeg DX Club

Box 52, Grp 327, Rr 3

Winnipeg, MB R0E 0C0

Amateur Radio Assoc. of Wpg

87 Belton St

Winnipeg, MB R2R 2L3

CDN Broadcasting Corp Employees

541 Portage Avenue

Winnipeg, MB R3G 1T9

Girl Guides Canada

C/O VE4WSC,

598 St. Mary's Road

Winnipeg, MB R2M 3L5

R.C. Sea Cadet Amateur Radio

51 Navy Way

Winnipeg, MB R3C 4J7

Pugad Lawin Amateur Radio Club

81 Amersham Cres.

Winnipeg, MB R2N 3H1

Written for the new Amateur Radio Operators of Manitoba with extractions from VE7BEU's, Survival Guide to 2-meters by Alan Muir, VE4BEU.

Muir Communications Ltd.

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Victoria, B.C. V8Z 3K6

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Fax : 250-475-2034

Webpage: <http://www.muircom.com> Email: ve4beu@muircom.com



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Winnipeg, MB R2M 3L5