



A cartoon illustration of Santa Claus with a white beard, glasses, and a red hat, peeking over a red banner.

Greetings from
the North Pole!

VK & ZL DMR Network Newsletter December 2015

A red Christmas stocking with white trim and a red bow, filled with a teddy bear and other toys.

Hello to all users DMR users in VK & ZL
I hope this December newsletter finds you all
well and hope to hear a few more you on the
DMR Network over the Christmas & New
Year break.

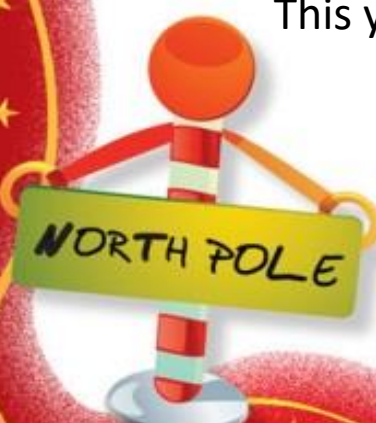
A red and white striped candy cane with a green ribbon bow.

TG 5 for VK & ZL
TG 505 for Local VK and we have just added
into our VK Network the DV4 Mini users that
have been using the DV4 Mini Dongle that
supports the DMR + function.

This year has had a HUGE growth of
DMR users in VK and ZL

Have a Merry Christmas and a
Happy New Year to you all.

From the VK DMR Admin Team

A candy cane-shaped signpost with a green sign that says "NORTH POLE".

NORTH POLE



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Welcome to our Third VK DMR Newsletter, as we are moving forward we would like to explain a few things about the DMR Network for VK & ZL

In VK we currently have **294 Registered users** and this is up from 242 from our last newsletter in October and in ZL they have **174 Registered users** up from 152 Registered users, and we are growing all the time.

We have a Network in place to connect the DMR Network world wide, and also to allow a connection for VK & ZL users to chat all the time, and this is called the VK&ZL Talk Group (TG 5), To make things simple to understand we will use TG as the meaning of Talk Groups & TS as the Meaning of Time Slot.

Talk Groups are as they are named as Groups, and we have a few already in place, So I will use our VK & ZL, TG 5 on TS 2 as an Example as follows, with Time Slots.
TG 5 and using the Time Slot 2 as this is our Regions connection for us.

In VK Currently we have the following Repeaters in operations
VK2RCG in Sydney, **Coming Soon VK2RPH in Sydney**, VK3RSU in Melbourne, **VK3RAD in Melbourne not on-line yet**, VK3RZU on Mt Buller, VK3TE in Mornington Peninsula, VK4RXX in Gold Coast Moving to a New Location, VK4RMC in Brisbane, VK3DU in Cairns, VK6RRR in Perth.

I have delivered VK3RAD to the owners of VK3RAD, but still waiting on the Licence to be transferred back to the original site of Mitcham before going live to Air.

These are all on UHF 70CM Band, we do not currently have any on VHF, as there is a request from WIA to have all digital Repeaters on UHF only.

We will be having a Sunday Evening Group call in on TG 5 / TS2
Time will be **19:30** Local NSW/ACT/VIC +10 **(09:30 UTC) Anyone can run the Net, as it is a good time for people to get in and talk, or just listen if you like**

Also the DMR Mobiles and Portables on the network are from different manufacture's as well, We have Motorola, Vertex Standard, Hytera, CS, Simoco, Tait.
So you are not locked into 1 brand of radio to purchase, as DMR is a Truly OPEN Standard.

All of the Repeaters currently in VK are all Motorola type.

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So you ask, what is so special about DMR well a DMR Repeater is basically like an analogue repeater but is digital and has two time slots, so basically it is like having two digital repeaters in one – on the same frequency. This means you can have two separate conversations going on at the same time using the same repeater frequency. One local amateur can hold a QSO with someone on the Worldwide Talk Group 113/123 at the same time as another local amateur can hold a QSO with another local amateur on Talk Group 9. This is all possible due to the two different digital encoded time slots and the different Talk Groups; Local, Regional, National and International.

Everyone is welcome to use the repeater at any time as long as you are a licensed radio amateur! Just please ensure you disable GPS if you have that in your radio as it creates unnecessary data traffic on the network. Also, **NO DIRECT CALLS** are permitted. Please also stick to the **Recognised Talk Groups** and do not make up your own **(See the last page)**

We have a Net meeting on TG 5 / TS 2 every Sunday Evening.
It is not formal, and anyone can join in, to hear about DMR and what is going on in the world about DMR
We do not have a fixed person to conduct the net each week

VK DMR Simplex Frequencies

The following is the frequencies for operating a DMR radio in Simplex mode in VK are:
Digital Simplex – 439.200 MHz Digital voice calling frequency

Channel spacing is 12.5 KHz

Channels reserved for special purposes should be kept clear of other operation.

Colour Code = 1

Talk group = TG 505

Admit Criteria = Always

In Call Criteria = Always

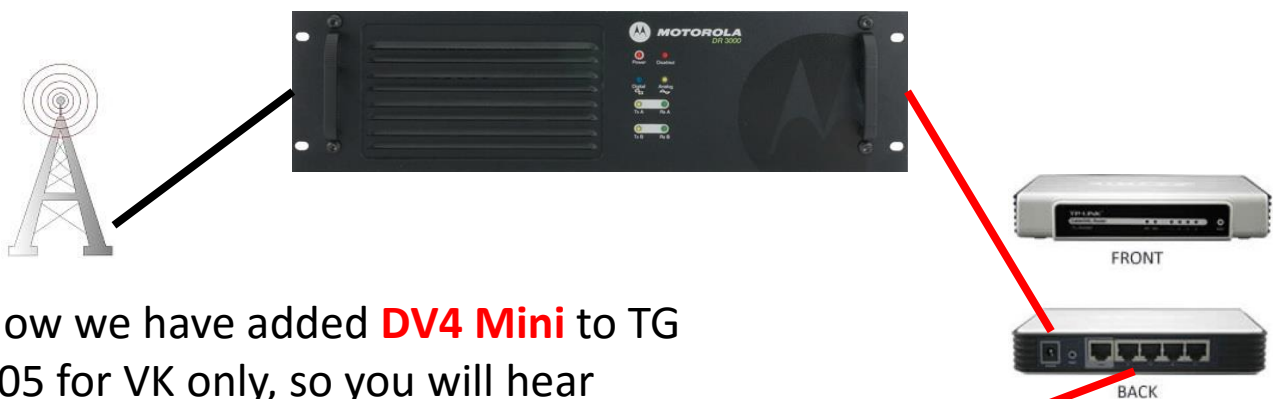
Just remember when you put your call out to state what Simplex Channel you are calling on as this will allow anyone who has their radio on scan to know what channel you are TX on because if they do not press their PTT within a couple of seconds their radio will drop back into scanning mode and they will have to wait until you transmit again.

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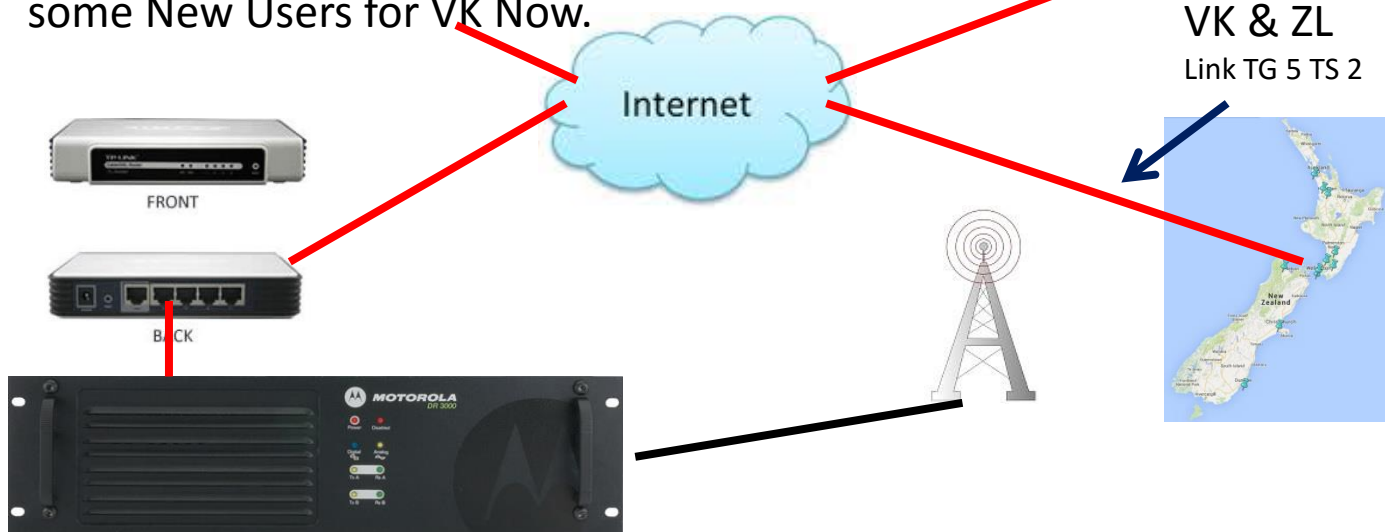
I have been contact by a few of the Amateurs in VK about been able to supply a repeater for other areas of Australia.

I then asked do you have a Internet connection for a repeater and the answer is normally NO, and do you have a Duplexer for the Repeater and again the answer is NO

The DMR Repeater needs a Internet connection on site as the Repeater has an Ethernet connection on the rear, and you need to also have a router to connect between the Internet connection and the Repeater.



Now we have added **DV4 Mini** to TG 505 for VK only, so you will hear some New Users for VK Now.



So you need a DMR Repeater & Router and Internet Connection to connect into the VK/ZL Network, and then you local DMR Connection is done.

Clubs can get involved as well, as they can conduct net meeting on a Talk Group for there local use as well, and this will not be passed around onto other DMR Repeaters.

DMR makes use of Time slots so the repeaters can also have other repeaters connected at the same time and not getting in the way of local traffic use.

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Frequently Asked Questions

1. What is DMR?

DMR, which is short for Digital Mobile Radio, is a published standard for digital voice communications utilising TDMA technology. There are several manufacturers that build DMR radio equipment, including Motorola, Vertex Standard, Kirisun, Hytera and Connect Systems to name a few.

2. What is MOTOTRBO or TRBO?

MOTOTRBO, or sometimes called TRBO for short, is the brand name for Motorola's DMR capable radios.

3. What are the benefits of using DMR?

The common benefits of using DMR include:

Crystal-clear audio without background noise or static;; Text messaging capability, Integrated voice and data applications on one device, Up to 40% longer battery life as compared to similar analogue FM operation.

4. Who can I talk to using DMR?

Using DMR, you can talk to other thousands of other DMR users world wide using hundreds of DMR repeaters located all over the globe. Unlike using IRLP or EchoLink where other repeaters are dialled-on-demand using a node number, DMR users can communicate with one another simply by selecting one of the available talk groups or channels. The most commonly used talk groups include:

TG 1,World Wide talk group, TG 3, North American talk group, TG 5 Local, VK-ZL, TG 13, World-Wide English.

5. Does DMR provide better coverage than analogue FM?

Not really. While DMR communication is completely static free, once it reaches the threshold of coverage, it will become unusable, whereas with analogue FM, users may continue to be heard even when the signal is mostly noise. As such, usable coverage is very much subjective from one operator to another.

6. What special license will I need to be able to use DMR?

Users will only need their Advanced or Standard Licence Qualification (Foundation Licences are not permitted Digital communications) to be able to use DMR on either the 2m or 70cm bands.

Currently in Australia (VK) we are only on UHF (70CM)

7. Is DMR compatible with D-STAR, Yaesu's digital radio or NXDN?

No. These are separate digital technologies and are not compatible with one other.

8. How is the VK/ZL DMR repeaters linked to the global DMR network?

The VK/ZL DMR repeater is linked to other DMR repeaters globally using the DMR-MARC network. This linking is accomplished using the Internet.

9. Can I use my DMR radio if I travel outside of my local area?

Yes! Users with DMR radios can use any repeater on the DMR-MARC network when they travel. You just simply need to add the frequency and channel information specific to other DMR-MARC networked repeaters into your DMR radio. Please note that DMR repeaters are available around the world on both the 2m and 70cm bands, so you would need a DMR radio on the appropriate band to access repeaters in these areas.

10. Will DMR radios work on analogue FM also?

Yes. Most DMR radios will work on both DMR and analogue FM.

11. Where can I buy DMR radios?

Often the people running your local DMR Repeater are the best people to speak to first about suitable radios and might actually be able to sell you a second hand radio and configured up for you ready to go as a good starting point.

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12. What is a Subscriber ID?

A Subscriber ID is a unique identification number that allows your DMR radio to operate on the DMR-MARC network. All DMR radios require a unique Subscriber ID and they can easily be obtained by completing a request form. If you intend to have multiple DMR radios active at the same time, then you can request a Subscriber ID for each radio. Please do not transmit with your DMR radio until you have received a Subscriber ID and have this programmed into your radio. Using ad-hoc Subscriber ID numbers will cause conflicts with other users on the network.

13. How do you use Talk Groups

TG1 is for Worldwide Calling and for QSOs less than 2 mins. **This is not a talk group to ragchew on.**

TG 5 is for VK/ZL Calling and general chatting

TG 9 is the Local Calling Group

TG13 Worldwide English for English speakers,.

TG 505 is the Group calling Talk Group for VK and is not passed outside of VK, and this is also used for Local calling if you want to call on a Simplex Frequency.

TG13 is available 24/7 on many systems and not PTT so for English speakers it will work if you want to make international calls and there is no time limit other than being courteous and **not** monopolizing the Talk group so others can use it.

PLEASE DO make those international English calls on TG13.

Make our fellow overseas hams feel welcomed to join us. Let's key up on TG13 from time to time by announcing our call and asking for any international traffic using plain language. (Don't call CQ CQ CQ – this is not HF).

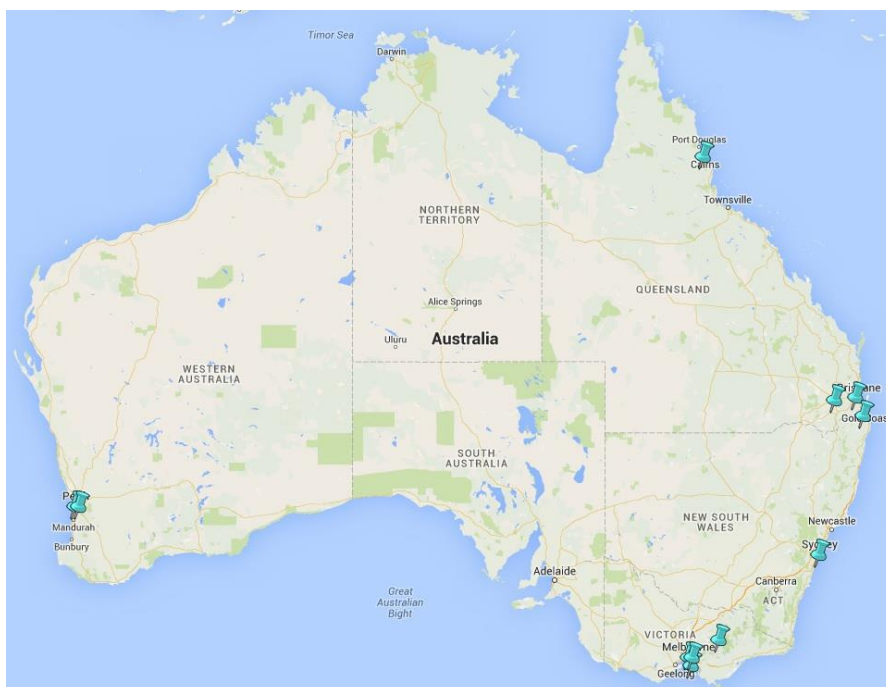
You'll also notice that there are two nets on TG13 – the weekly tech net and the UK net.

Just remember we have our VK/ZL Net meeting on Sunday Evening.

Please spread the word.

Please do a better job educating people about how the talk groups work.

The DMR-MARC Network have many new users every week.



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Now for our current TG for VK below.

Please only use these configurations only, and do not make up any other TG, as we have just added TG 100 Tech Group, and this linked to the TG 100 Group from the USA, for you who want to know more about DMR and the rest of Technical people on DMR.

Name	Time Slot	Talk Group	Description
WW	1	1	World Wide calling channel only and then move off to other TG (Talk Group)
VK/ZL	2	5	All regional repeaters - only Australia & NZ are currently active. This is the main talk group for VK & ZL Contacts
Local	1	9	Local traffic
WWE	1	13	World Wide English language talk group This is the main talk group for worldwide contacts
Tech	1	100	Tech talk group
UAE1	1	113	World Wide English language user activated talk group
UAE2	1	123	World Wide English language user activated talk group
VK	2	505	VK-wide Network with DV4 Mini Users now added,

Contact People in Australia below.

Peter Brennan	VK3TE	vk3te@bigpond.com
Joe Nevin	VK6ZTN	joe.nevin@gmail.com
Danny Ainsworth	VK4ZUK	vk4zuk@gmail.com

Yahoo Group:

<https://groups.yahoo.com/neo/groups/VK-DMR/info>

If you have any Code Plugs (Program files to share upload to here please.)

Various Links:

<http://vkdmr.net/> - VK cBridge status

<http://vk6rrr.blogspot.com.au/>

<http://dmr.darc.de/>

<http://dmr-bridge.digital-hamradio.net:42420/MinimalNetwatch>

<http://www.foxhollow.ca/DMR/Contacts/MD380/DMR-Contacts-CS700-MD380%20AUSTRALIA.TXT>

<http://www.trbolnk.com/dmr/>

<http://arec.info/downloads/>

<http://dmrtechtalk.org/index.php/repeaters/>

<http://dmrtechtalk.org/>

DV4 Mini Information below.

http://www.helitron.de/shop/product_info.php?language=en&products_id=81

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Below is an Example of the setup of a DV4 Mini USB stick

The screenshot shows the DV4mini Control Panel in network mode. The CPU usage is 4%. The interface includes tabs for DV Control, Expert Settings, RSSI, Reflector Info, FW Update, and Info. The Network Settings section shows two DV4minis found: 192.168.1.20 (13921 [F3068F] busy) and 192.168.1.113 (13921 [59E14E] connected). The DMR section has a dropdown for DMR-QRG Correction [HZ] set to 0 and a dropdown for choose nearest DMR Master set to BR:MASTER-5051. The Misc. Settings section shows Language set to English and Transmit Buffer Size set to 1.0. The S-Meter shows -99 dBm. The log window displays the following text:

```
23:32:22,944 (0000): C4FM ... Disconnect from C4FM/P25 Reflector
23:32:22,944 (0000): C4FM ... Disconnected from C4FM/P25 Reflector
23:32:22,944 (0000): DMR ... Set Dongle ID:#5054035/VK4TUX
23:32:24,832 (1888): DV4mini ... write config to: C:\Users\bigdad\Documents\dv4m02016459E14E.cfg
23:32:24,832 (0000): DV4mini ... VK4TUX D 5054035 M 436000000 436000000 qth:QG62EI town:BRISBANE
23:32:24,832 (0000): ADF ... set RX / TX qrg: 436000000 / 436000000
23:32:24,832 (0000): DV4mini ... set mode: DMR
23:32:24,832 (0000): DMR ... Set Dongle ID:#5054035/VK4TUX
23:32:26,844 (2012): ADF ... set RX / TX qrg: 436000000 / 436000000
```

The screenshot shows the DV4mini Control Panel in network mode with personal settings. The CPU usage is 5%. The Personal Settings section includes DMR/CCS7 ID (5054035), Hotspot Callsign (VK4TUX), Location (BRISBANE), and QTH Locator (QG62EI). The DV4mini Settings section shows DMR+ selected, Power set to 12mW, RX-QRG (436 MHz), and TX-QRG (436 MHz). The DMR-Brandmaster section shows TG505 Australia with a frequency list where 4805 is selected. The Info section shows a disconnected status for PCS001. The S-Meter shows -102 dBm. The log window displays the following text:

```
23:32:22,944 (0000): C4FM ... Disconnect from C4FM/P25 Reflector
23:32:22,944 (0000): C4FM ... Disconnected from C4FM/P25 Reflector
23:32:22,944 (0000): DMR ... Set Dongle ID:#5054035/VK4TUX
23:32:24,832 (1888): DV4mini ... write config to: C:\Users\bigdad\Documents\dv4m02016459E14E.cfg
23:32:24,832 (0000): DV4mini ... VK4TUX D 5054035 M 436000000 436000000 qth:QG62EI town:BRISBANE
23:32:24,832 (0000): ADF ... set RX / TX qrg: 436000000 / 436000000
23:32:24,832 (0000): DV4mini ... set mode: DMR
23:32:24,832 (0000): DMR ... Set Dongle ID:#5054035/VK4TUX
23:32:26,844 (2012): ADF ... set RX / TX qrg: 436000000 / 436000000
```

If you have one of these DV4 Mini USB stick and you are having issues please contact **Adrian VK4TUX** as he is the person who contact the VK Admin people to see if they could have a connection into the VKTRBO Network, and if any are in ZL please contact your Admin people to see if they can make the connections for you as well as a Local ZL TG just like we done for VK.