

Recommended DMR Configurations for Australian (VK) JOTA Stations (Ver: 2026.5)

‘Be Prepared’

Utilising DMR for JOTA stations is a great way to provide additional redundancy and enhance communications contacts independent of propagation conditions. All qualified operators (Foundation to Advanced) in Australia are permitted to own and operate DMR radios into repeaters and own and operate ‘personal’ hotspots.

To assist Australian amateur operators who are providing/volunteering their services to Scouts and Guides for the purposes of support JOTA and based on operating very busy JOTA stations at the Boree Regatta catering for up to 1000 Scouts and Guides over the JOTA weekend, the St George Amateur Radio Society (SGARS) provides the following guidance and advice regarding DMR setup and configuration.

This guide is broken down into five primary sections as follows:

Part A – The VKDMR Network

Part B – The BrandMeister Network

Part C – Multi-Network operation

Part D – Use of the ‘9990’ Parrot and ‘TG99’ Simplex for JOTA

For Parts A to C, the sections are further broken down into:

Part 0: Introduction/Overview

Part 1: Radio configuration for Repeater, Duplex Hotspot and Simplex Hotspot use.

Part 2: Duplex hotspot configuration and Simplex Hotspot configuration.

Part 3: Operator Etiquette.

In all sections where reference is made to the use of ‘hotspots’, it is assumed that such use will be by means of handheld DMR radios using the lowest power setting possible (given the anticipated close proximity of use to the hotspot in question). Where this is not the case and a ‘mobile’ or ‘base’ station type radio is being used, it is strongly recommended that the lowest possible power setting be used AND that the radio is terminated into a suitably rated dummy load to minimise the associated radiation and prevent overload and/or desensitisation of the hotspot’s receiver circuitry. IF this is not your ‘normal’ mode of operation, it is strongly recommended that you thoroughly test your planned configuration well in advance of the JOTA weekend.

In addition, it is strongly recommended that you thoroughly test your planned JOTA station configuration well in advance of the JOTA weekend to ensure that radio codeplugs, frequency settings, WiFi connection (in particular if using your mobile phone’s WiFi hotspot functionality), repeater coverage etc are fully and correctly configured and confirmed prior to the weekend’s activities. These things are all quite difficult to resolve ‘on the fly’.

Your success using DMR for JOTA is enabled by following the worldwide Scout Motto

‘Be Prepared’.

Part A - VKDMR

Part A0 – Introduction/Overview

At the time of writing (20260828) the VKDMR network is currently undergoing a significant back-end upgrade to the new IPSC3 core.

The migration to the IPSC3 VKDMR core means that there are some changes required for user (radio) codeplugs to align with new configuration of the network. This document assumes that you are ‘homing’ your hotspot to the new IPSC3 core. SGARS will update this document from time to time as we become aware of changes to the VKDMR network.

Activity on the VKDMR Network is best monitored using the web-based dashboards at:

<https://ipsc3.vkdmr.com/dashboard/hotspots> (for hotspots)

<https://ipsc3.vkdmr.com/dashboard/connections> (for repeaters)

<https://ipsc3.vkdmr.com/dashboard/radios> (for last heard stations)

Notes:

- 1. For JOTA 2026 - TG30-39 will be enabled on Friday 16th October and disabled on Monday 19th October.**
- 2. TG30-39 will be established on both VKDMR and ZL-IPSC3 DMR Core and cross-linked.**
- 3. TG30 will be a common VK/ZL JOTA Calling Channel. It will have an extended timeout of somewhere between 30 and 60 minutes, which will be subject to modification over the weekend depending on network performance.**
- 4. TG31-39 are JOTA QSO Talkgroups and will have an extended timeout in the order of 15 minutes, which will be subject to modification over the weekend depending on network performance.**
- 5. The ZL IPSC2 group do not allow non- ZL callsigns (RadiolDs) on their network – as such the link to the new ZL-IPSC3 Core will predominately enable contact with ZL JOTA stations using hotspots.**
- 6. The VKDMR Working Group will be analysing the usage of these talkgroups with a view to how JOTA will be supported in future years. This is clearly a case of ‘Use it or lose it!’**
- 7. Given the extended timeouts identified in 3 and 4 above, it is strongly recommended to TG400 (disconnect) on departing any TG.**
- 8. On IPSC3 based networks - use TG400 (not TG4000) for talkgroup disconnect.**

Part A1 – Radio Codeplug configuration

For repeater operation, it is recommended that the following Talkgroups (TG) be programmed in radios for use with JOTA:

Timeslot 1 (TS1)

TG9 (local repeater chat only – no network routing)

TG30 (VK/ZL JOTA Calling Channel)

TG31-39 (VK & ZL JOTA Chat Channels)

TG3801-3809 (VK Chat Channels) – note that 3801-3809 are now cross-linked to BrandMeister TGs 5051-5059

TG5505 (links to BrandMeister 505 calling channel)

TG9990 (Parrot)

TG400 (Disconnect)

Timeslot 2 (TS2)

TG505 (VK Calling Channel)

TG400 (Disconnect)

For DUPLEX hotspot operation, it is recommended that the following Talkgroups(TG) be programmed in radios for use with JOTA:

Timeslot 1 (TS1)

TG30 (VK/ZL JOTA Calling Channel)

TG31-39 (VK & ZL JOTA Chat Channels)

TG3801-3809 (VK Chat Channels) – note that 3801-3809 are now cross-linked to BrandMeister TGs 5051-5059

TG5505 (links to BrandMeister 505 calling channel)

TG9990 (Parrot)

TG777 (Optional – refer below)

TG400 (Disconnect)

Timeslot 2 (TS2)

TG505 (VK Calling Channel)

TG400 (Disconnect)

For SIMPLEX hotspot operation, it is recommended that the following Talkgroups (TG) be programmed in radios for use with JOTA:

Timeslot 2 (TS2) (default TS for simplex hotspots)

TG30 (JOTA Calling Channel)

TG31-39 (JOTA Chat Channels)

TG3801-3809 (VK Chat Channels) – note that 3801-3809 are now cross-linked to BrandMeister TGs 5051-5059

TG5505 (links to BrandMeister 505 calling channel)

TG9990 (Parrot)

TG400 (Disconnect)

TG505 (VK Calling Channel)

TG777 (Optional – refer below)

Part A2 – Hotspot Configuration

Duplex Hotspot configuration

It is recommended the duplex hotspots are configured in accordance with the WIA bandplan (Rev 2026-1) using input frequencies in the band(434.500-434.790MHz) and output frequencies in the band (441.500-441.790MHz). **Note: These frequencies are different to historically and commonly documented splits found online and elsewhere, typically 439.xxx/434.xxxMHz splits.**

No 'static' talkgroups – the new IPSC3 core ignores this hotspot setting (option).

Operators may wish to consider the use of the new TG777 'Scan' function described below – if so, included TG777 on TS1 in your radio programming in section A1 above.

Configure hotspot OPTIONS with "SCANINCLUDE=30,505,5505" – this will allow you to listen (scan) to all three calling channels using TG777. If you don't want all – consider "SCANINCLUDE=505" – this means that only 505 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG (e.g. TG30 JOTA calling) with ease, alternatively use "SCANINCLUDE=30" – this means that only TG30 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG(e.g. TG505 VK calling) with ease. Using TG777 in this manner assists in not having to 'kerchunk' TGs to activate them to listen for 'calling' traffic (you know – the old 'listen before you transmit' requirement...). More on this functionality can be found [HERE](#).

Simplex Hotspot configuration

It is recommended the simplex hotspots are configured in accordance with the WIA bandplan using frequencies in the band (441.800-442.000MHz). **Note: These frequencies are different to historically and commonly documented frequencies found online and elsewhere, typically 439.125 and 439.150MHz (although we note that 2026-1 bandplan puts analogue (FM) voice internet gateways in what is now a VOICE (Digital) SIMPLEX priority area of the bandplan – even more reason to avoid these frequencies for the time being).**

No 'static' talkgroups – the new IPSC3 core ignores this hotspot setting (option).

Operators may wish to consider the use of the new TG777 'Scan' function described below – if so, included TG777 on TS2 in your radio programming in section A1 above.

Configure hotspot OPTIONS with "SCANINCLUDE=30,505,5505" – this will allow you to listen (scan) to all three calling channels using TG777. If you don't want all – consider "SCANINCLUDE=505" – this means that only 505 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG (e.g. TG30 JOTA calling) with ease, alternatively use "SCANINCLUDE=30" – this means that only TG30 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG(e.g. TG505 VK calling) with ease. Using TG777 in this manner assists in not having to 'kerchunk' TGs to activate them to listen for 'calling' traffic (you know – the old 'listen before you transmit' requirement...). More on this functionality can be found [HERE](#).

Part A3 - Operator Etiquette

SGARS encourages appropriate and considerate operator etiquette – remember, we are demonstrating proficient operating skills to potential future operators (and in some cases, the general public). To this end, we encourage the following:

1. Utilise TG30 as the PRIMARY VK/ZL JOTA Calling Channel. (Reasoning: This keeps available TG505 and TG5505 for other amateur radio operators using the VKDMR and BrandMeister networks but not involved in JOTA).
2. Once a contact has been established, move from TG30 to one of the TG31-39 Chat channels to have your QSOs. (Reasoning: This keeps TG30 available for the next 'CQ JOTA/CQ Jamboree Call').
3. Further to 2, IF AND ONLY IF none of TG31-39 are available, once a contact has been established – move to one of TG3801-3809 chat channels to have your QSOs. (Reasoning: (a) Only if TG31-39 are in use are we now triggering cross-system links (b) refer 5 below).
4. If in 1 TG30 is busy AND TG505 is not, consider using TG505 to make your CQ JOTA/CQ Jamboree call, remembering that most stations will be listening on TG30 for these calls. Once a contact is established, vacate TG505 as soon as possible by moving to a TG per guidance in 2 and 3. (Reasoning: Minimising the disruption to the VK DMR National Calling Frequency imposed by JOTA and keeping the VK DMR network available for other amateur use).
5. The VKDMR repeater network predominately covers the eastern seaboard (hotspots are everywhere). DMR repeaters in other parts of Australia are generally connected to the BrandMeister network. To establish contact with those repeaters – call 'CQ JOTA' / 'CQ Jamboree' on TG5505. Once contact is established, move off the 'calling channel' to TG3801-3809 as these are the only cross-linked (VKDMR<->BrandMeister) chat channels for VK. BrandMeister stations may refer to these as TG5051-TG5059, so be aware of the mapping.
6. In all cases, once a QSO is complete on any Talkgroup, please TG400 (Disconnect) for the benefit of all.
7. Please leave a 3 second gap between overs – in particular if you are jumping onto a calling channel as the previous stations move to another TG (QSY). This allows for IP network propagation and repeater timers to operate and to give the moving stations the clear time to trigger their ends to change TGs (QSY) – especially those that may be using simplex hotspots.
8. The radio programming has included the recommendation of TG9 for repeater use – if you make contact with another JOTA station on the same repeater – then it is recommended to move the QSO to TG9 to minimise VKDMR network traffic.

Following the above guidance maximises the opportunity for the VKDMR network to be utilised effectively and efficiently to support JOTA across VK – establishing and maintaining contacts for Scouts and Guides (the primary purpose of JOTA) and given them the best chance of a great 'on air' experience, whilst also allowing non-JOTA traffic to still utilise the VKDMR network.

Part B - BrandMeister

Part B0 – Introduction/Overview

The second DMR network that is widely supported in Australia is BrandMeister, in particular for repeaters not on the eastern seaboard. As highlighted in Part A above, the VKDMR network does now have some cross-linking to the BrandMeister network, however it is limited. For VK based JOTA stations looking to easily extend beyond the bounds of Australia – BrandMeister is a great option to have in your toolkit – especially for busy stations working well into the evening when the number of VK JOTA stations operating drops off. Getting on the BrandMeister network directly opens up the ‘rest of the world’ however that also means you are now also competing with the ‘rest of the world’ for contacts – it **is** a double-edged sword. Having direct access to the BrandMeister network also increases the likelihood/possibility of VK Eastern seaboard stations establishing JOTA contacts with SA and WA operators using DMR repeaters.

It was noted there were no Australian (VK) JOTA TGs so for 2026 members from SGARS approached the country administrator and have established two new TGs – 50597 and 50598, in line with typical global practice on the BrandMeister network. TG50597 is the preferred VK JOTA Calling Channel (keeping TG505 free for everyone else) and TG50598 is the VK JOTA TAC. Feedback from BrandMeister operators on this arrangement would be appreciated.

SGARS will update this document from time to time as we become aware of changes to the BrandMeister network.

Activity on the BrandMeister Network is best monitored using the web-based ‘Hose line’ dashboard at:

<https://hose.brandmeister.network/>

Part B1 – Radio Codeplug configuration

For repeater operation, the complication is that each repeater owner has authority to assign the talkgroups to timeslots and as such you may need to make adjustments to the list below depending on the repeater into which you wish to operate (Appendix A has hyperlinks to each of the VK BrandMeister repeater pages so you can check this for yourself) however it is recommended that the following Talkgroups(TG) be programmed in radios for use with JOTA. It is noted that a number of repeaters have TG505 configured as 'STATIC' on Timeslot 1 – in this case, you may wish to consider moving the other talkgroups listed below in Timeslot 1 (TS1) to Timeslot 2 (TS2) for ease of transferring

Timeslot 1 (TS1)

TG50597 VK JOTA Calling Chanel

TG50598 VK JOTA TAC (Chat Channel)

TG505 (links to VKDMR 5505)

TG907 Worldwide BrandMeister JOTA Calling Channel

TG5051-5059 (cross-linked to VKDMR TG3801-3809)

TG9071-9078 JOTA TAC (Chat Channels)

TG901-903 Worldwide TAC (Chat Channel)

TG310-319 US TAC (Chat Channels)

TG913 English TAC (Chat Channels)

TG923 European English TAC (Chat Channels)

TG4000 (Disconnect)

Timeslot 2 (TS2)

Private Call - ID9990 (Parrot)

Private Call – ID505997 (VK Parrot)

Also refer to the additional talkgroups (TGs) listed below in **Part B4** for inclusion where deemed necessary.

For DUPLEX hotspot operation, it is recommended that the following Talkgroups(TG) be programmed in radios for use with JOTA:

Timeslot 1 (TS1)

TG50598 VK JOTA TAC (Chat Channel)

TG5051-5059 (cross-linked to VKDMR TG3801-3809)

TG9071-9078 JOTA TAC (Chat Channels)

TG901-903 Worldwide TAC (Chat Channel)

TG310-319 US TAC (Chat Channels)

TG913 English TAC (Chat Channels)

TG923 European English TAC (Chat Channels)

TG4000 (Disconnect)

Timeslot 2 (TS2)

TG50597 VK JOTA Calling Channel

TG907: Worldwide JOTA Calling Channel

TG505 (links to VKDMR 5505)

ID9990 (Parrot) – Note: This is a private call to ID9990 NOT a TG call.

ID505997 (VK Parrot) - Note: This is a private call to ID505997 NOT a TG call.

TG4000 (Disconnect)

Also refer to the additional talkgroups (TGs) listed below in **Part B4** for inclusion where deemed necessary.

For SIMPLEX hotspot operation, it is recommended that the following Talkgroups (TG) be programmed in radios for use with JOTA:

Timeslot 2 (TS2) (default TS for simplex hotspots)

TG50597 VK JOTA Calling Chanel

TG50598 VK JOTA TAC (Chat Channel)

TG505 (links to VKDMR 5505)

TG907 Worldwide BrandMeister JOTA Calling Channel

TG5051-5059 (cross-linked to VKDMR TG3801-3809)

TG9071-9078 JOTA TAC (Chat Channels)

TG901-903 Worldwide TAC (Chat Channel)

TG310-319 US TAC (Chat Channels)

TG913 English TAC (Chat Channels)

TG923 European English TAC (Chat Channels)

TG4000 (Disconnect)

ID9990 (Parrot) – Note: This is a private call to ID9990 NOT a TG call.

ID505997 (VK Parrot) - Note: This is a private call to ID505997 NOT a TG call.

Also refer to the additional talkgroups (TGs) listed below in **Part B4** for inclusion where deemed necessary.

Part B2 – Hotspot Configuration

Duplex Hotspot configuration

It is recommended the duplex hotspots are configured in accordance with the WIA bandplan (Rev 2026-1) using input frequencies in the band (434.500-434.790MHz) and output frequencies in the band (441.500-441.790MHz). **Note: These frequencies are different to historically and commonly documented splits found online and elsewhere, typically 439.xxx/434.xxxMHz splits.**

Given that there are three potential ‘calling’ talkgroups (TG50597, TG505 and TG907), you can choose to make one or more ‘static’ depending on your desired operation. Alternatively, you can choose to make none ‘static’, in which case you’ll need to remember to ‘activate’ them every 15 minutes where idle. To do this, log into your BrandMeister profile, Select Self-Care, your device and make the settings accordingly, e.g.

The screenshot shows the BrandMeister Self-Care interface for configuring a duplex hotspot. On the left is a dark sidebar with navigation options: 'Information', 'My Devices', and 'Device Logs'. The main content area is titled 'Sysops' and includes a '+ Add Sysop' button. Below this is a table with columns for 'Call sign', 'Read Settings', 'Write Settings', 'Manage Sysops', and 'Actions'. A message 'No data available in table' is displayed. The 'Actions' section contains several controls: a 'PRIMARY' section with a 'Get IP address' button; a 'SESSION TRAFFIC (DUPLX)' section with buttons for 'Drop call on slot 1', 'Drop dynamic groups on slot 1', 'Drop call on slot 2', and 'Drop dynamic groups on slot 2'; and a 'DEVICE CONTROL' section with a 'Reset connection' button. At the bottom, there are two 'Static Talkgroups Timeslot' configuration sections. 'Static Talkgroups Timeslot 1' has two empty input fields with right and left arrow buttons between them. 'Static Talkgroups Timeslot 2' has two empty input fields with right and left arrow buttons between them, and a dropdown menu on the right showing 'Australia (905)' and 'JOTA (907)'.

Simplex Hotspot configuration

It is recommended the simplex hotspots are configured in accordance with the WIA bandplan using frequencies in the band (441.800-442.000MHz). **Note: These frequencies are different to historically and commonly documented frequencies found online and elsewhere, typically 439.125 and 439.150MHz (although we note that 2026-1 bandplan puts analogue (FM) voice internet gateways in what is now a VOICE (Digital) SIMPLEX priority area of the bandplan – even more reason to avoid these frequencies for the time being).**

No TGs static.

Part B3 - Operator Etiquette

SGARS encourages appropriate and considerate operator etiquette – remember, we are demonstrating proficient operating skills to potential future operators (and in some cases, the general public). To this end, we encourage the following:

Working overseas JOTA stations:

1. Utilise TG907 as the PRIMARY (World Wide) JOTA Calling Channel. (Reasoning: This keeps available TG505 for other amateur radio operators using both the BrandMeister and VKDMR networks but not involved in JOTA).
2. Once a contact has been established, move from TG907 to one of the TG9071-9078 Chat channels to have your QSOs. (Reasoning: This keeps TG907 available for the next 'CQ JOTA Call').
3. IF and only IF none of TG9071-9078 are available, once a contact has been established – move to one of TG901-903 (if the other station is overseas) chat channels to have your QSOs. (Reasoning: Only if the primary BrandMeister JOTA TGs are in use are we moving the limited number of 'generic' international TGs (which the overseas station is most likely to already have programmed into their radio)
4. In all cases, once a QSO is complete on any talkgroup, please TG4000 (Disconnect) for the benefit of all.
5. Please leave a 3 second gap between overs – in particular if you are jumping on a calling channel as the previous stations move to another TG (QSY). This allows for IP network propagation and repeater timers to operate and to give the moving stations the clear time to trigger their ends to change TGs (QSY).
6. The radio programming has included the recommendation of TG9 for repeater use – if you make contact with another JOTA station on the same repeater – then it is recommended to move the QSO to TG9 to minimise BrandMeister network traffic.

Working VK JOTA stations:

1. If attempting to contact an VK JOTA Station: Utilise TG50597 as the PRIMARY VK JOTA Calling Channel. (Reasoning: This keeps available TG505 for other amateur radio operators using both the BrandMeister and VKDMR networks but not involved in JOTA).
2. Once a contact has been established, move from TG50597 to TG50598 (the VK JOTA TAC) (Reasoning: This keeps TG9071-9078 available for international JOTA traffic)
3. If TG50598 is already in use in 2 above, move to one of the TG9071-9078 Chat channels to have your QSOs.
4. Further to 2 & 3 above, IF and only IF none of TG50598 and TG9071-9078 are available, once a contact has been established – move to either
 - a. one of TG901-903 (if the other station is overseas) chat channels, or
 - b. one of TG5051-5059 (if the other station is within VK) chat channels,

to have your QSOs. (Reasoning: (a) Only if the primary BrandMeister JOTA TGs are in use are we moving the limited number of ‘generic’ international TGs (which the overseas station is most likely to already have programmed into their radio) OR triggering cross-system links, and (b) refer 6 below).

5. If in 1 TG50597 is busy AND TG505 is not, consider using TG505 to make your CQ JOTA call, remembering that most stations will be listening on TG907 and/or TG50597 for these calls. Once a contact is established, vacate TG505 as soon as possible by moving to a TG per guidance in 2-4 above. (Reasoning: Minimising the disruption to the BrandMeister and VKDMR National Calling TGs imposed by JOTA and keeping the both the BrandMeister and VKDMR networks available for other amateur use).
6. The VKDMR network predominately covers the eastern seaboard. DMR repeaters in other parts of Australia are generally connected to the Brandmeister network. When moving to a BrandMeister TG5051-TG5059, VKDMR users may refer to these as TG3801-3809 so be aware of the mapping.
7. In all cases, once a QSO is complete on any talkgroup, please TG4000 (Disconnect) for the benefit of all.
8. Please leave a 3 second gap between overs – in particular if you are jumping on a calling channel as the previous stations move to another TG (QSY). This allows for IP network propagation and repeater timers to operate and to give the moving stations the clear time to trigger their ends to change TGs (QSY).
9. The radio programming has included the recommendation of TG9 for repeater use – if you make contact with another JOTA station on the same repeater – then it is recommended to move the QSO to TG9 to minimise BrandMeister network traffic.

Following the above guidance maximises the opportunity for the DMR networks to be utilised effectively and efficiently to support JOTA across VK – establishing and maintaining contacts for Scouts and Guides (the primary purpose of JOTA) and given them the best chance of a great ‘on air’ experience, whilst also allowing non-JOTA traffic to still utilise the DMR networks.

Part B4 - Other TGs to consider on Timeslot 1 (TS1)

TG50297 (JOTA Malaysia) - Malay speaking

TG50298 (JOTA Malaysia) – Malay speaking

TG90710 (JOTA DACH) – German speaking

~~TG90737 (JOTA French) – French speaking~~

TG204907 (JOTA NL CQ) – Dutch speaking

~~TG222907 (JOTA Italy) – Italian speaking~~

TG235907 (JOTA UK) – English speaking

TG240907 (JOTA SE) - Sweden

TG250907 (JOTA RU) – Russian speaking

TG263907 (JOTA DL) – Germany – German speaking

TG268907 (JOTA PT) – Portugal, Portuguese speaking

TG272907 (JOTA IRL) – Ireland (English speaking)

~~TG33457 (JOTA Mexico) – Spanish speaking~~

~~TG748907 (JOTA Uruguay) – Spanish speaking~~

~~TG748919 (JOTA Uruguay) – Spanish speaking~~

~~TG724907 (JOTA Brazil) – Portuguese speaking~~

Note: ~~Strikeout~~ used to denote TGs listed in [Scouts JOTA-JOTI Ham Radio Handbook](#) but that do not appear to be configured in the BrandMeister network at the time of writing.

Part C - Multi-Network Considerations

Part C0 – Introduction/Overview

So, you find yourself here wondering ‘What if want both BrandMeister and VKDMR access?’ Well, we have a few suggestions as follows:

Part C1 – One Hotspot – Multi-Configurations (the Keep It Simple Stupid (KISS) method)

If you are using a hotspot with WPSD (not Pi-Star) installed, it is possible to connect into the web interface and configure two separate profiles, one for VKDMR and one for BrandMeister. Then, using the same interface, you can select which you wish to utilise at a particular time. Currently, it is not possible to programme the Nextion touch screens(where available on the hotspot) to allow ‘Profile Selection’ – this must be done via the Web Interface.

Part C2 – One Hotspot – 2 Networks simultaneously (not for the faint hearted)

If you are using a hotspot with WPSD (not Pi-Star) installed, it is possible to configure and connect to both the VKDMR and BrandMeister networks. To get this all working and tested, we strongly recommend you set aside an hour or so to ensure the WPSD and radio codeplug configuration are all correct.

Step 1: In the WPSD Dashboard – Configuration, determine which of the networks you wish to be your primary (in this example we have assumed it is the ‘VKDMR network’) and configure that network first included turning on ‘Network Enable’ in the DMR+/FreeDMR/AND/HBlink Network Settings section. The bottom right hand side of that network configuration box should show ‘! Primary Network – No talkgroup prefix’. Perform a reset on your WPSD device and ensure that this is all working as intended before doing the next step.

Step 2: Return to this WPSD Dashboard- Configuration page. Go to the BrandMeister Network Settings page and configure your hotspot accordingly including turning on the ‘BrandMeister Network Enable’ switch. There should be a note ‘! Uses “2” talkgroup prefix. Perform a reset on your WPSD device and ensure that VKDMR is still working as intended.

Step 4: In WSPD, go into the Admin->Advanced->Full Editors->DMR->DMR Gateway and amend the routing rules for [DMR Network 1] as follows:

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Step 3: When creating your radio codeplug – you will now need to prefix a digit ‘2’ to your BrandMeister Talkgroups. For TG4000 and any ‘Parrot’ – use TG9 as your Receive Talkgroup. ALL TGs and PRIVATE call numbers must be in 7 digit format for this to work, e.g. TG907 becomes TG2000907.

Step 4: Using your new codeplug with the ‘2’ prefix for BrandMeister TG and IDs, test to ensure that the BrandMeister configuration is working as intended.

Step 5: In use, you will use the normal TG numbers for the VKDMR network and when you wish to access the BrandMeister network, you will utilise the ‘2’ prefixed talkgroups (e.g. 2000907 for the JOTA Calling channel, 2000901-2000908 for JOTA TAC channels).

Part C3 – 2 Networks – 2 Hotspots (another KISS solution)

If you are looking to be able to use both networks simultaneously, or effectively side-by-side, then the recommendation is to either use one duplex hotspot and one simplex hotspot configured as per the recommendations above with the following frequency recommendations:

Duplex Hotspot – 441.790MHz output, 434.790MHz input.

Simplex Hotspot – 439.0375MHz (this frequency lands in the VOICE (Digital) SIMPLEX segment of the WIA Bandplan (2026-1) maximising the separation from the Duplex hotspot frequencies above.

Alternatively:

Duplex Hotspot – 441.500MHz output, 434.500MHz input.

Simplex Hotspot – 442.000MHz (this frequency lands in the VOICE (Digital low power hotspot) SIMPLEX segment of the WIA Bandplan (2026-1) maximising the separation from the Duplex hotspot frequencies above.

There are variations on a theme within this option – you could use two simplex hotspots or two duplex hotspots with sufficient frequency separation. Whatever option you choose – it is strongly recommended to maximise the distance (within reason) between the two hotspots and test the configuration in the proposed operational arrangement. We have successfully tested the above configurations with RF Power Level set to 50% and with less than 1 metre separation between hotspots without interference or blocking occurring.

Part C4 – 2 Networks – 4 Hotspots (i.e. the Multi Multi-Multi configuration)

Sometimes, two just isn't enough – if you run a large, very busy JOTA station. So, what do you do? Double down! We believe few JOTA stations will need to go to this length however refer to Appendix B as to how and why we ended up here.

Based on testing, our recommendation is as follows:

Station 1:

Duplex Hotspot – 441.500MHz output, 434.500MHz input.

Simplex Hotspot – 439.0375MHz. (this frequency lands in the VOICE (Digital) SIMPLEX segment of the WIA Bandplan (2026-1) maximising the separation from the Duplex hotspot frequencies above.) A tested alternate is 442.000MHz.

Station 2:

Duplex Hotspot – 441.790MHz output, 434.790MHz input.

Simplex Hotspot – 441.000MHz.

Obviously, any physical separation between the operation stations 1 and 2 will assist in avoiding cross station interference. We have successfully tested the above configuration with RF Power Level set to 50% and with less than 1 metre separation between all four hotspots without interference/blocking/desensitisation occurring.

Part D – Use of the ‘9990 Parrot’ and ‘TG99 Simplex’ for JOTA

Sometimes, you may find you just can't find any other JOTA station to contact yet you have an eager bunch of Scouts or Guides looking to get on the radio. Based on our experience, we had learnt to pivot using two different methods in these 'times of need'.

1. Use of the 9990 Parrot – In this case, we use the '9990 Parrot' (noting the differing radio setup requirements between VKDMR and BrandMeister networks*) to allow the Scouts or Guides to use the radio and listen to their own voice coming back. Using this exercise, they learn to speak slowly and clearly, mouth-to-mic separation/distance and in doing so gain an appreciation and understanding of what is actually heard at the other end of the contact and how these factors influence radio communication.
2. Use of TG99 Simplex – In this case, we split the group into two or have a 'roving operator' out of earshot of each other. Both radios are switched to TG99 Simplex operation (note: the recommended frequency for this is 439.200MHz on TS1 CC1). Now the QSO can occur using DMR SIMPLEX radio-to-radio without any additional infrastructure required.

Both of the above can be great 'time fillers' while someone else is actively calling CQ to establish a contact, whether that is on HF, VHF/UHF or DMR.

* - Note that some radios will not allow you to programme **both** a TG9990 and a Private Call ID9990 into the code plug. This is the case with the Ailunce HD1(GPS) and the TYT MD-890(GPS) using the manufacturers' CPS. In this case, we recommend programming it as a Private Call (ID9990) into the code plug as BrandMeister **requires** a Private Call and VKDMR **will accept** it as either a Group Call or a Private Call.

Appendix A – Australian DMR Repeaters (20260808)

Below is a list of currently operational DMR Repeaters in Australia (taken from the WIA's published database dated 260705, the [VKDMR-IPSC3](#) Repeater dashboard and the BrandMeister website) including to which DMR network they are 'homed'. For BrandMeister homed repeaters, the 'home' information includes a URL hyperlink so that TG-TS and other information to assist in preparing appropriate radio codeplugs. Where additional information is required, it is recommended that operators contact the repeater owner's directly. Any information obtained that may be of use to other operators which could be incorporated into this document would be appreciated.

Callsign	Output (MHz)	Input (MHz)	Location	Service Area	Network
VK1RBM	438.8125	431.8125	Isaacs Ridge	Canberra Central	VKDMR
VK2RYS	438.100	431.100	Yass	Yass	VKDMR
VK2RDX	438.150	431.150	Mt Bindo	West Blue Mountains	VKDMR
VK2RGN	438.325	433.325	Goulburn	Goulburn	VKDMR
VK2RHT	438.350	432.950	Chatswood	Sydney	VKDMR
VK2RMB#	438.400	433.400	Terrey Hills	Terry Hills	VKDMR
VK2RCN	438.425	433.425	Hastings Region NSW	Hastings Region NSW	VKDMR
VK2RLE	438.425	433.425	Engadine	Sydney	VKDMR
VK2RPM	438.525	433.525	Middle Brother	South Hastings NSW	VKDMR
VK2RAY	438.575	431.575	Albury	Albury	BrandMeister
VK2RNW#	438.575	431.575	Mount Kaputar	Mount Kaputar	VKDMR
VK2ROT	438.575	433.575	Paddington	Sydney CBD and East	VKDMR
VK2RWI	438.600	433.600	Dural	Sydney	VKDMR
VK2RUM#	438.625	431.625	Sugarloaf Range	Newcastle	VKDMR
VK2RNC	438.675	433.675	Hunter Region NSW	Hunter Region NSW	VKDMR
VK2RAQ*	438.725	433.725	Mt Canobolas	Orange area	VKDMR
VK2RMP	438.725	433.725	South Coast NSW	South Coast NSW	VKDMR
VK2RWO	438.800	431.800	South Borderland NSW	South Borderland NSW	VKDMR
VK2RBT	438.825	431.825	Big Box Trig	South Central Tablelands	BrandMeister
VK2ROJ	438.825	431.825	Gan Gan Hill	Port Stephens	VKDMR
VK2RAG	438.850	431.850	Central Coast NSW	Central Coast NSW	VKDMR
VK2RZL	438.9375	431.9375	Mt Arthur	Upper Hunter	VKDMR
VK2RCG	439.500	434.500	Sydney	Sydney City	VKDMR
VK2RGL	439.775	434.775	Cabbage Tree Mountain	Forster-Tuncurry	VKDMR
VK2RDO	439.875	434.875	Mt Yarrahapinni	Kepmsey-Macksville	VKDMR
VK2RKG	439.875	434.875	West Bathurst	West Bathurst	VKDMR
VK2RCV	439.9125	434.9125	Pine Brush	Clarence Valley	VKDMR
VK2RCM	439.925	434.925	Tura	Tura	BrandMeister
VK2RDD	439.950	434.950	Dubbo	Dubbo	VKDMR
VK2RHR	439.900	434.900	High Range	Southern Highlands	VKDMR
VK3RAG	146.775	146.175	Rennies Hill	Rennies Hill	VKDMR
VK3RCQ	147.325	147.925	Junortoun	Bendigo	VKDMR
VK3RSU	438.100	431.100	Melbourne	Melbourne	VKDMR
VK3RLE	438.125	433.125	Mansfield	Mansfield	VKDMR
VK3RTA	438.125	431.125	Beulah	Beulah	VKDMR
VK3RIR	438.150	433.150	Bendigo	Bendigo	BrandMeister
VK3RDR	438.2625	431.2625	Granbourne	South East Melbourne	VKDMR
VK3RHD	438.325	431.325	Horsham	Horsham	BrandMeister / FreeDMR
VK3RGV	438.650	431.650	Mt Wombat	North East Victoria	VKDMR
VK3RMC	438.7125	431.7125	Narre Warren	South East Melbourne	VKDMR
VK3ROO	438.725	431.725	Croydon	Croydon	VKDMR
VK3RYN	438.725	431.725	Yallourn North	Yallourn North	VKDMR
VK3RDS	438.7625	431.7625	Shepparton	Shapparton	VKDMR
VK3RSA	438.800	431.800	Emerald	Emerald	VKDMR
VK3RSU	438.825	431.825	Mt Waverley	Mt Waverley	VKDMR
VK3RAH	438.850	431.850	Melbourne	Melbourne	BrandMeister
VK3RCQ	438.850	431.850	Junortoun	Bendigo	VKDMR
VK3RWV	439.350	434.350	Oakleigh-Portable	Oakleigh-Portable	VKDMR
VK3RMC	439.375	434.375	Narre Warren North	Melbourne South East	VKDMR
VK3RSV	439.425	434.425	Noble Park	Noble Park	VKDMR
VK3RGL	439.500	434.500	Mt Anakie	Geelong	VKDMR
VK3RPF	439.525	434.525	Pretty Satty	Kilmore	VKDMR

Callsign	Output (MHz)	Input (MHz)	Location	Service Area	Network
VK3RZU	439.675	434.675	Mt Butler	Mansfield	VKDMR
VK3RPS	439.725	434.725	Mt Cottrell	Melbourne West	VKDMR
VK3RSS	439.975	434.975	Gembrook	Gembrook	VKDMR
VK3RBA	439.9875	432.9875	Mt Buninyong	Battarat	BrandMeister5er
VK4RBX	146.7875	146.1875	Ipswich	Ipswich	BrandMeister
VK4RSL	438.175	433.175	Noosa Heads	Sunshine Coast North	VKDMR
VK4RAR	438.350	431.350	Mt Archer	Mt Archer	VKDMR
VK4RBY	438.600	433.600	Mackay	Mackay	BrandMeister
VK4ROK	438.6125	431.6125	Rockhampton	Rockhampton	VKDMR
VK4RBT	438.7125	431.7125	Wongawallan	Gold Coast	VKDMR
VK4RBA	438.725	431.725	Rochedale	Rochedale	VKDMR
VK4NMS [#]	438.7875	431.7875	Noosa	Noosa	VKDMR
VK4RJW [#]	438.800	431.800	Norman Gardens	Rockhampton	VKDMR
VK4RMC	438.800	431.800	Mt Coot-Tha	Brisbane	VKDMR
VK4RJW	438.8125	431.8125	Norman Gardens	Rockhampton	BrandMeister
VK4RDB	438.825	431.825	Mt Cotton	Brisbane South	BrandMeister
VK4RAI [#]	438.8375	431.8375	Ipswich	Ipswich	VKDMR
VK4RBX	438.8375	431.8375	The Knobby	Ipswich	VKDMR
VK4RNX	438.8875	431.8875	Wilkes Knob	Sunshine Coast	VKDMR
VK4RBK	438.9375	431.9375	Bones Knob	Tolga	VKDMR
VK4RTQ	439.4875	434.4875	Mt Kynoch	Toowoomba	VKDMR
VK4RLU[#]	439.875	434.875	Mt Dunsinanne	Logan	VKDMR
VK5RWN	438.900	431.900	Banksia Park	Adelaide	VKDMR
VK5RMU	438.9125	431.9125	Murray Bridge	Murray Bridge	VKDMR
VK6RRR	438.200	431.200	Katgoolie	Katgoolie	VKDMR
VK6RLM	438.525	431.525	Roleystone	Perth South East	BrandMeister
VK6RDM	439.8625	434.8625	Perth	Perth	BrandMeister
VK7RJG	438.4125	431.4125	Mt Arthur	North Tasmania	VKDMR
VK7RCR	438.525	433.525	Lenah Valley	Hobart	VKDMR
VK7RAD	438.675	431.675	Hobart	Hobart	VKDMR
VK7RAK	438.700	433.700	Gagebrook	Hobart	VKDMR
VK7RUN	438.825	431.825	Trevallyn	Launceston	VKDMR
VK8RDD	438.800	431.800	Larrakeyah	Darwin	VKDMR

Notes:

1. ~~Strikethrough~~ represents repeaters offline at the time of writing.
2. [#] represents a repeater that does not appear in an ACMA RRL search (for reasons unknown) or the callsign may appear in the database with a different frequency assignment.

Appendix B – Why did we write this document?

The St George Amateur Radio Society (Inc.) has been providing JOTA station services to the Boree Regatta (a joint Scout and Guides activity) servicing up to 1000 Scouts and Guides for over 30 years. The JOTA station(s) provide an 'on-air' JOTA experience for between 500 and 800 Scouts and Guides over the JOTA weekend with the JOTA station(s) operating from 10am-10pm (AEDT) on the Saturday and 9am to 12noon (AEDT) on the Sunday in an 'off grid' field day style operation (i.e. we are not operating out of a permanently established facility). Over the years, the station(s) have run a combination of HF, FM VHF/UHF into repeaters (including those that are internet connected via IRLP or Echolink) and in recent years DMR via repeaters and/or hotspots. Needing to cater for two groups of up to 10 youth members per group in half hour timeslots over the full duration of the event places a significant demand on the operators to establish and maintain contacts with remote JOTA stations necessitating the ongoing diversification of the station setups to address propagation, time zones and an apparent reduction in the number of active JOTA stations in Australia. In recent years, we have seen the benefits of using DMR, in particular via hotspots, as well as having experienced the difficulties of working stations due to DMR network routing issues, a lack of Talk Groups and other operating factors. We are of the opinion that if the DMR networks are suitably and adequately configured, DMR could well become the 'go-to' technology for JOTA stations – especially those that may not be as well resourced. Getting a DMR station online can be done relatively cost effectively, whether by:

1. Using a hotspot connected to a wifi signal provided by a mobile phone and a handheld for radio access, or
2. Using a local repeater and a handheld, or
3. Using a local repeater and a 'mobile' or 'base' station and a cheap and easy vertical antenna installation.

DMR is now available (as of 21 September 2019) to all Australian amateur radio operators (yes, Foundation qualified operators are now permitted to operate digital modes and establish hotspots) – increasing the opportunity for DMR to be accessible to Scouts and Guides themselves and their leadership, or for the purposes of JOTA – via the assistance of local amateur radio clubs members and the general amateur radio population. With satellite internet services, like Starlink and NBN satellite (Sky Muster) services, even the most remote Scouts and Guides can more easily be serviced and assess JOTA.

However, to facilitate supporting DMR operation in Australia and New Zealand, enhancing the ability to connect JOTA stations, both within Australia and to Australia, we saw a need (due to the apparent absence thereof otherwise) of some guidance material for operators possibly new to DMR and/or the nuances of operating amateur radio stations for JOTA (and we selfishly need as many possible JOTA stations to contact as possible) – so we wrote this document.

We hope this material is of use and provides some insight and look forward to catching you on the air (by whatever means) from the VK2LE (the callsign of the St George Amateur Radio Society Inc.) JOTA station which will be serving the Scouts and Guides at the Boree Regatta - located at Kurnell, Botany Bay, just south of the Sydney Airport.

Appendix C – The ZL-IPSC3 DMR Core

Appendix C - Part 0 – Introduction/Overview

The newly established ZL-IPSC3 DMR Core currently (at the time of writing) has one repeater ZL1OZ connected and a number of hotspots. It is understood that the existing ZL-IPSC2 repeater network does not allow RadiolDs outside of those issued for New Zealand (commencing with country code 530) to connect onto their infrastructure. Therefore, we encourage New Zealand JOTA station outside the coverage of ZL1OZ to utilise hotspots connected to the new ZL-IPSC3 infrastructure.

For 2026, VKDMR and ZL-IPSC3 will be interconnected, sharing TG30 as a common JOTA calling channel and TG31-39 as JOTA QSO talkgroups. This has been done to benefit both ZL and VK JOTA stations, in particular when overseas stations may not yet be operational due to the timezone differences and we hope that this interconnect will be utilised extensively for the mutual benefit of both VK and ZL JOTA stations.

While similar to the VKDMR setup described in Part A, we have replicated this information here and modified accordingly to reflect the ZL-IPSC3 configuration for the benefit of ZL-IPSC3 JOTA stations.

Activity on the ZL-IPSC3 DMR Core Network is best monitored using the web-based dashboards at:

<https://zl.ipsc3.net/dashboard/hotspots> (for hotspots)

<https://zl.ipsc3.net/dashboard/connections> (for repeaters)

<https://zl.ipsc3.net/dashboard/radios> (for last heard stations)

Notes:

- 1. For JOTA 2026 - TG30-39 will be enabled on Friday 16th October and disabled on Monday 19th October.**
- 2. TG30-39 will be established on both VKDMR and ZL-IPSC3 DMR Core and cross-linked.**
- 3. TG30 will be a common VK/ZL JOTA Calling Channel. It will have an extended timeout of somewhere between 30 and 60 minutes, which will be subject to modification over the weekend depending on network performance.**
- 4. TG31-39 are JOTA QSO Talkgroups and will have an extended timeout in the order of 15 minutes, which will be subject to modification over the weekend depending on network performance.**
- 5. The ZL IPSC2 group do not allow non- ZL callsigns (RadiolDs) on their network – as such the link to the new ZL-IPSC3 Core will predominately enable contact with ZL JOTA stations using hotspots.**
- 6. The VKDMR Working Group and ZL-IPSC3 Network Management will be analysing the usage of these talkgroups with a view to how JOTA will be supported in future years. This is clearly a case of ‘Use it or lose it!’**
- 7. Given the extended timeouts identified in 3 and 4 above, it is strongly recommended to TG400 (disconnect) on departing any TG**
- 8. On IPSC3 based networks - use TG400 (not TG4000) for talkgroup disconnect.**

Appendix C – Part 1 – Radio Codeplug configuration

For repeater operation, it is recommended that the following Talkgroups (TG) be programmed in radios for use with JOTA:

Timeslot 1 (TS1)

TG9 (local repeater chat only – no network routing)

TG30 (VK/ZL JOTA Calling Channel)

TG31-39 (VK & ZL JOTA Chat Channels)

TG3801-3804 (VK/ZL DMR Chat Channels) – note that 3801-3804 are now cross-linked to VK BrandMeister TGs 5051-5054

TG9990 (Parrot)

TG400 (Disconnect)

Timeslot 2 (TS2)

TG530 (ZL Call Channel)

TG400 (Disconnect)

For DUPLEX hotspot operation, it is recommended that the following Talkgroups (TG) be programmed in radios for use with JOTA:

Timeslot 1 (TS1)

TG30 (VK/ZL JOTA Calling Channel)

TG31-39 (VK & ZL JOTA Chat Channels)

TG3801-3804 (VK/ZL DMR Chat Channels) – note that 3801-3804 are now cross-linked to VK BrandMeister TGs 5051-5054

TG777 (Optional – refer below)

TG9990 (Parrot)

TG400 (Disconnect)

Timeslot 2 (TS2)

TG530 (ZL Call Channel)

TG400 (Disconnect)

For SIMPLEX hotspot operation, it is recommended that the following Talkgroups (TG) be programmed in radios for use with JOTA:

Timeslot 2 (TS2) (default TS for simplex hotspots)

TG30 (VK/ZL JOTA Calling Channel)

TG31-39 (VK & ZL JOTA Chat Channels)

TG3801-3804 (VK/ZL DMR Chat Channels) – note that 3801-3804 are now cross-linked to VK BrandMeister TGs 5051-5054

TG9990 (Parrot)

TG400 (Disconnect)

TG530 (ZL Call Channel)

TG777 (Optional – refer below)

Appendix C - Part 2 – Hotspot Configuration

Duplex Hotspot configuration

It is recommended the duplex hotspots are configured in accordance with the [NZART bandplan \(Rev June 2026\)](#). Operators may take guidance from the frequencies used by others that can be found on the [ZL-IPRSC3 Hotspot dashboard](#).

No 'static' talkgroups – the new IPSC3 core ignores this hotspot setting (option).

Operators may wish to consider the use of the new TG777 'Scan' function described below – if so, included TG777 on TS1 in your radio programming in section A1 above.

Configure hotspot OPTIONS with "SCANINCLUDE=30,530,505" – this will allow you to listen (scan) to all three calling channels using TG777. If you don't want all – consider "SCANINCLUDE=530" – this means that only 530 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG (e.g. TG30 VK/ZL JOTA calling) with ease, alternatively use "SCANINCLUDE=30" – this means that only TG30 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG (e.g. TG505 VK calling) with ease. Using TG777 in this manner assists in not having to 'kerchunk' TGs to activate them to listen for 'calling' traffic (you know – the old 'listen before you transmit' requirement...). More on this functionality can be found [HERE](#).

Simplex Hotspot configuration

It is recommended the simplex hotspots are configured in accordance with the [NZART bandplan \(Rev June 2026\)](#). Operators may take guidance from the frequencies used by others that can be found on the [ZL-IPRSC3 Hotspot dashboard](#).

No 'static' talkgroups – the new IPSC3 core ignores this hotspot setting (option).

Operators may wish to consider the use of the new TG777 'Scan' function described below – if so, included TG777 on TS2 in your radio programming in section A1 above.

Configure hotspot OPTIONS with "SCANINCLUDE=30,530,505" – this will allow you to listen (scan) to all three calling channels using TG777. If you don't want all – consider "SCANINCLUDE=530" – this means that only 530 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG (e.g. TG30 VK/ZL JOTA calling) with ease, alternatively use "SCANINCLUDE=30" – this means that only TG30 will be on the TG777 scan list (effectively being 'static') when you activate TG777 but allowing you to TG400 (Disconnect) and call up another TG (e.g. TG505 VK calling) with ease. Using TG777 in this manner assists in not having to 'kerchunk' TGs to activate them to listen for 'calling' traffic (you know – the old 'listen before you transmit' requirement...). More on this functionality can be found [HERE](#).

Appendix C - Part 3 - Operator Etiquette

SGARS encourages appropriate and considerate operator etiquette – remember, we are demonstrating proficient operating skills to potential future operators (and in some cases, the general public). To this end, we encourage the following:

1. Utilise TG30 as the PRIMARY VK/ZL JOTA Calling Channel. (Reasoning: This keeps available TG505 and TG530 for other amateur radio operators using the VKDMR and ZL-IPSC3 DMR Core networks but not involved in JOTA).
2. Once a contact has been established, move from TG30 to one of the TG31-39 Chat channels to have your QSOs. (Reasoning: This keeps TG30 available for the next 'CQ JOTA/CQ Jamboree Call').
3. Further to 2, IF AND ONLY IF none of TG31-39 are available, once a contact has been established – move to one of TG3801-3804 chat channels to have your QSOs. (Reasoning: (a) Only if TG31-39 are in use are we now triggering cross-system links (b) refer 5 below). Note: TG3801-3804 are three way linked – ZL-IPSC3, VKDMR and VK BrandMeister.
4. If in 1 TG30 is busy AND TG505 is not, consider using TG505 to make your CQ JOTA/CQ Jamboree call into VK, remembering that most stations will be listening on TG30 for these calls. Once a contact is established, vacate TG505 as soon as possible by moving to a TG per guidance in 2 and 3. (Reasoning: Minimising the disruption to the VK DMR National Calling Frequency imposed by JOTA and keeping the VKDMR network available for other amateur use).
5. If in 1 TG30 is busy AND TG530 is not, consider using TG530 to make your CQ JOTA/CQ Jamboree call within New Zealand, remembering that most stations will be listening on TG30 for these calls. Once a contact is established, vacate TG530 as soon as possible by moving to a TG per guidance in 2 and 3. (Reasoning: Minimising the disruption to the ZL-IPSC3 DMR National Calling Frequency imposed by JOTA and keeping the ZL-IPSC3 DMR network available for other amateur use). Note: this is not an option for VK JOTA stations as TG530 only permits 530-prefixed IDs to initiate transmissions.
6. In all cases, once a QSO is complete on any Talkgroup, please TG400 (Disconnect) for the benefit of all.
7. Please leave a 3 second gap between overs – in particular if you are jumping onto a calling channel as the previous stations move to another TG (QSY). This allows for IP network propagation and repeater timers to operate and to give the moving stations the clear time to trigger their ends to change TGs (QSY) – especially those that may be using simplex hotspots.
8. The radio programming has included the recommendation of TG9 for repeater use – if you make contact with another JOTA station on the same repeater – then it is recommended to move the QSO to TG9 to minimise ZL-IPSC3 network traffic.

Following the above guidance maximises the opportunity for the VKDMR and ZL-IPSC3 DMR Core networks to be utilised effectively and efficiently to support JOTA across VK and ZL – establishing and maintaining contacts for Scouts and Guides (the primary purpose of JOTA) and given them the best chance of a great 'on air' experience, whilst also allowing non-JOTA traffic to still utilise the VKDMR and ZL-IPSC3 networks.