DMR-MARC CANADA
IPSC2-CAN-TRBO

CONNECTION INSTRUCTIONS FOR PI-STAR AND OPENSPOT

A publicly available IPSC2 server is now available for licensed amateurs who have an MMDVM client device and wish to have access directly into the DMR-MARC Canada/Can-Trbo system. If you would like to connect your MMDVM repeater to our network, please contact us (these settings will work for testing, but please contact us if you intend to do a permanent connection).

Please respect the following rules:

- This guide assumes you have basic understanding of DMR principles, programming and have a properly configured device. The full set up of your hotspot is not within the scope of this document. If you need help, ask!

- As with every DMR device it is extremely important to ensure your DMR ID is set correctly to YOUR number. https://www.radioid.net/ You do not need an additional ID or RPTR ID number for a hotspot, use your personal ID number.

- Never operate two or more hotspots at the same time on the same frequency or on a repeater frequency, this can create a serious audio looping issue and render the server useless. We cannot stress the importance of this!

- Openspot users should be sure to put Local 9 in your Rx group for all channels in your hotspot zone for device announcements.

- Please do not use unsupported talkgroups. If you do, they will not pass through the server. This activity adversely affects the other users. The current list of talkgroups supported by the server can be found by going to ipsc2.can-trbo.ca and selecting Matrix on the left. Please pay attention to what talkgroup uses which timeslot.

- By using the system you agree not to cross-connect any other talkgroups, modes, or systems into the server without express permission of the DMR-MARC Canada Trustee's.

Openspot Connection Instructions

1- Click on **Connectors** Tab

2- Switch active connector to **Homebrew/MMDVM**

3- Protocol select **MMDVM**

4- Server select **IPSC2-CAN-TRBO (207.35.36.178)**

5- Ensure your callsign, ID, location are entered correctly and that you are using a frequency that will not interfere with other amateur radio operations.

6- Near the bottom of the connectors page you will see MMDVM Options for DMRPlus, select the **Use DMRPlus Options** check box.

7- You can enter up to 5 static talkgroups in the appropriate boxes

8- By default, any talkgroup you enter is assigned to Time Slot 1, so for talkgroups using Time Slot 2, like any of the Canadian Provincial talkgroups, click the Advanced Mode check box at the bottom right corner of the page, and under Raw Options you will see your talkgroup entries.

9- StartRef=;RelinkTime=;UserLink=0;**TS1_1=3029;TS1_2=3181**; notice how by default the talkgroups you entered above are showing as TS1, simply change TS**1** to TS**2** (TS2_1=3029) and scroll up the page and hit the Save button. If you don't enter any talkgroups, you won't hear any traffic unless you PTT and activate the dynamic timer, however as soon as that short timer disappears, audio won't be routed to your device, so it is extremely important to ensure you specify your talkgroups.

Pi-Star Connection Settings

1- From your Pi-Star's home page, click on **Configuration** near the top right corner.

2- Ensure your general configuration settings are set correctly (Callsign, Frequency, Radio ID, & Location)

3- Select **DMR+_IPSC2-CAN-TRBO** as your DMR Master.

4- Under DMR+ Network Options, use the options line to enter what talkgroups you want to your hotspot. You can copy and paste and modify our example as a starting point.   **TS1_1=302;TS2_1=3029;TS2_2=3181;**
If you don't enter any talkgroups, you won't hear any traffic unless you PTT and activate the dynamic timer, however as soon as that short timer disappears, audio won't be routed to your device, so it is extremely important to ensure you specify your talkgroups.

5- Click **Apply Changes.**

General Configuration

Setting	Value	
Hostname:	pistar	Do not add suffixes such as .local
Node Callsign:	VE9MP	
CCS7/DMR ID:	3029001	
Radio Frequency:	147.435.000	MHz
Latitude:	47.0657	degrees (positive value for North, negative for South)
Longitude:	-67.6855	degrees (positive value for East, negative for West)
Town:	Grand Falls, NB	
Country:	Canada	
URL:	http://www.qrz.com/db/VE9MP	⦿ Auto ◯ Manual
Radio/Modem Type:	STM32-DVM / MMDVM_HS - Raspberry Pi Hat (GPIO) ▼	
Node Type:	⦿ Private ◯ Public	
System Time Zone:	America/Halifax ▼	
Dashboard Language:	english_uk ▼	

Apply Changes

DMR Configuration

Setting	Value
DMR Master:	DMR+_IPSC2-CAN-TRBO ▼
DMR+ Network:	Options=TS1_1=302;TS2_1=3029;TS2_2=3181;
DMR Colour Code:	1 ▼
DMR EmbeddedLCOnly:	
DMR DumpTAData:	

Apply Changes

Verifying Operation

1- On the internet, navigate to http://ipsc2.can-trbo.ca

2- Check that your device is connected in the Link Status screen, with the proper callsign, location, radio ID, and talkgroups in the appropriate time slot column.

3- PTT on your radio and your callsign should show active and green indicating it is receiving source audio from your hotspot as in the example in Figure 1.

IPSC2-CAN-TRBO

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STATUS	NR	REFLECTOR			CALL TS1		NET TS1	CALL TS2			NET TS2	
	1	TG 3029 (3029)						VE9GLN (3029004)			--> CC-CC (LID:29) (5)	

MONITOR

MATRIX

REMAP

LINK-STATUS

BRIDGE	NR	REPEATER	INFO	ID	TS1	TS1-INFO	TS2	TS2-INFO	REF	START	SYSTEM	HARDWARE
DONGLE	1	VE1UHF	Cornwall (23)	302003	302		3023 3027 3029 3181	3029 (3029004) VE9GLN	4641/60	4641	DMR+ WW	MMDVM
	2	VE3RSB	Burlington (30)	302012	302						DMR+ WW	MMDVM
	3	KB1MSR	Peabody, FN42mm (29)	3125391					4641/60	4641	DMR+ WW	MMDVM
SERVICE	4	KC1HBM	Scarborough, ME (22)	3123346			3181		4641/60	4641	DMR+ WW	MMDVM
	5	VA3WU	VA3WU (24)	3023518							DMR+ WW	MMDVM
SITE-INFO	6	VE1CYP	Bridgewater, N.S. (25)	3021026	302		3023 3029	3029 (3029004) VE9GLN	4641/60	4641	DMR+ WW	MMDVM
	7	VE1JBL	Tidnish Bridge, NS (26)	3021036			3021 3028 3029 3020	3029 (3029004) VE9GLN			DMR+ WW	MMDVM
	8	VE1WRG	Kentville, NS (25)	3021019	302		3023 3027 3029 3181	3029 (3029004) VE9GLN			DMR+ WW	MMDVM
	9	VE1ZX	Parrsboro, NS (27)	3021031			3029	3029 (3029004) VE9GLN			DMR+ WW	MMDVM
	10	VE3ZRD	Grimsby, Ont (27)	3020482							DMR+ WW	MMDVM
DMR+	11	VE4SGM	Winnipeg, EN19ku (27)	3020328							DMR+ WW	MMDVM
IPSC2	12	VE9GLN	Fredericton, NB (27)	3029003			3029 3181	3029 (3029004) VE9GLN			DMR+ WW	MMDVM
DG1HT	13	CAN-CORE	CAN-CORE (30)	100001	302 310 311 312		3021 3022 3023 3024 3025 ...	3029 (3029004) VE9GLN			DMR+ WW	CC-CC
DL5DI	14	NEW-ENGL	NEW-ENGL (30)	100002			3181				DMR+ WW	CC-CC
OE1KBC												

| InterLink:0 | cBridge:0 | Motorola:0 | Hytera:0 | MMDVM:2 | HOTSPOT:10 | Dongle:1 | Max User-DB:127020 | bMaster+:104.236.j74.109 | Starttime:2019-03-15 13:34:57 | ID:159622 |