NXDN Hotspot Setup

By
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Hotspot setup

NXDN radios will work directly with Pi-Star hotspots. It is very straight forward to setup and allows connectivity to NXCore reflectors and other NXDN networks.

A few things to note before starting. DVMega's currently don't support NXDN (September 2019). I am using a cheap Chinese MMDVM on a Pi-Zero. The firmware on the MMDVM board I'm using is v1.4.17 for NXDN to work correctly. It is also worth mentioning that DMR2NXDN cannot be configured to run on the same hotspot at the same time. Request an NXDN Id from nxdn@radioid.net. This is usually the last 5 digits of your DMR ID.

Radio Info	
Trx	Listening
Tx	438.662500 MHz
Rx	438.662500 MHz
FW	HS_Hat:v1.4.17
TCXO	14.7456 MHz

The configuration is very simple. First step is to enable the mode in Pi-Star configuration see below.

MMDVMHost Configuration

Setting		Value		
DMR Mode:	⬜	RF Hangtime: 20	Net Hangtime: 20	
D-Star Mode:	⬜	RF Hangtime: 20	Net Hangtime: 20	
YSF Mode:	⬜	RF Hangtime: 20	Net Hangtime: 20	
P25 Mode:	⬜	RF Hangtime: 20	Net Hangtime: 20	
NXDN Mode:	🔴	RF Hangtime: 20	Net Hangtime: 20	
YSF2DMR:	⬜			
YSF2NXDN:	⬜			
YSF2P25:	⬜			
DMR2YSF:	⬜	Uses 7 prefix on DMRGateway		
DMR2NXDN:	⬜	Uses 7 prefix on DMRGateway		
POCSAG:	⬜	POCSAG Paging Features		
MMDVM Display Type:	Nextion ▼	Port: /dev/ttyUSB0 ▼	Nextion Layout: ON7LDS L3 HS ▼	

Apply Changes

Click "Apply Changes" an enter your details below.

General Configuration

Setting	Value	
Hostname:	hotspot2	Do not add suffixes such as .local
Node Callsign:	MM0HJX	
NXDN ID:	5 ▮	
Radio Frequency:	438.662.500	MHz
Latitude:	55.885352	degrees (positive value for North, negative for South)
Longitude:	-3.304647	degrees (positive value for East, negative for West)
Town:	Edinburgh	
Country:	Scotland	
URL:	https://www.qrz.com/db/mm0hjx	○ Auto ● Manual
Radio/Modem Type:	STM32-DVM / MMDVM_HS - Raspberry Pi Hat (GPIO) ▼	
Node Type:	○ Private ● Public	
APRS Host:	euro.aprs2.net ▼	
System Time Zone:	Europe/London ▼	
Dashboard Language:	english_uk ▼	

Apply Changes

Click "Apply Changes" press enter and then edit the Startup Host information.

NXDN Configuration

Setting	Value
NXDN Startup Host:	31672 - nxdn-31672.pistar.uk ▼
NXDN RAN:	1

Apply Changes

The drop down menu gives you a selection of all NXDN reflectors and NXDN networks available using Pi-Star.

Apply the changes and your about done with Pi-Star configuration. Once Pi-Star has rebooted have a look on the dashboard, in the bottom left your should have a box indicating what NXDN Network you are connected to.

NXDN Radio	
RAN	1
NXDN Network	
Linked to: TG31672	

Notes on using your NXDN radio on a Pi-Star hotspot

You can program your radio with many different NXDN reflectors a list which is updated hourly is on the Pi-Star website https://www.pistar.uk/nxdn_reflectors.php

NXDN Number	Description	TG Direct	DMR2NXDN via DMRGateway
505	VKCore, 505	TG 505	TG 7000505
530	New Zealand, 530	TG 530	TG 7000530
1200	Florida, 1200	TG 1200	TG 7001200
5057	VK7 TAS, 5057	TG 5057	TG 7005057
50599	BM NXCore bridge, 50599	TG 50599	TG 7050599
10200	North America, 10200	TG 10200	TG 7010200
26810	Portuguese speaking test, 10268	TG 26810	TG 7026810
10301	Spanish speaking, 10301	TG 10301	TG 7010301
10302	NXDN 10302 Multimode BM 21461 EA Spain	TG 10302	TG 7010302
10303	Italian speaking, 10303	TG 10303	TG 7010303
10304	REM-ADER Spain Group, 10304	TG 10304	TG 7010304
10400	Pacific, 10400	TG 10400	TG 7010400
20000	Europe, German speaking, 20000	TG 20000	TG 7020000
25000	CT NXCore, 25000	TG 25000	TG 7025000
25641	Russia NXDN Net, 25641	TG 25641	TG 7025641
28299	America-Ragchew, 28299	TG 28299	TG 7028299
30639	NorCal-Bridge / Multimode-NXDN, 30639	TG 30639	TG 7030639
31010	Alabama-Link, 31010	TG 31010	TG 7031010
31088	Colorado HD, 31088	TG 31088	TG 7031088

"TG Direct" column is for NXDN radios. Example TG505 will access the VK Core via a NXDN radio. Changing reflectors is done by changing the channel and pressing the PTT for a second or so, a confirmation message "Connected to…" will be heard confirming your linked. To talk stay on the same channel and press the PTT and start chatting.

Once connected to a reflector it will stay connected until you disconnect or change reflector.

I hope you find the information on this page useful.

73 Carl MM0HJX