



# Introduction to Digital Mobile Radio (DMR)

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## Digital Mobile Radio (DMR)

- Digital Mobile Radio is a technology that use 12.5 kHz channel spacing and Time Division Multiple Access (TDMA) which is allows more than one use to use a frequency because of time slots.
- Similarly when you have a room of computers everyone is still able to use the frequencies and traffic is routed to and from it's appropriate destination. Instead of using IP addresses your radio has an ID number associated with your call sign, this unique call sign will route all traffic you want to hear to your radio.

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## How does all this work?

- An RF signal from an HT or Mobile radio connects to an RF hotspot.
- The RF hotspot is connected to the internet and allows a radio to connect to a network of other radios.
- A unique radio ID lets the radios communicate with a group call or a private call. (The group call is like talking to a group of people while a private call is point to point.)





## Raspberry Pi, MMDVM “Hotspot”

- Open Spot
- DV Mega
- RF Finder
- Raspberry Pi with an MMDVM board
- All different brands, different vendors, but they all serve the same purpose.



# RadiID.net

- Before you begin to configure any of the hotspots or software make sure you register your call sign with the RadiID.net website so you can receive your DMR ID number.
- You will need this ID number in order for you to create your code plug for your radio.
- What's a code plug? That's the file that contains all of your talk groups and ID numbers you wish to communicate with.

# Multi-mode (MMDVM)

- D-Star
- DMR
- YSF
- P25
- NXDN

Hostname: pi-stardv Pi-Star 4.1.4 / Dashboard: 20210316

## Pi-Star Digital Voice Dashboard for KC9ASC

Dashboard | Admin | Configuration

Modes Enabled	
D-Star	DMR
YSF	P25
YSF XMode	NXDN
DMR XMode	POCSAG

Network Status	
D-Star Net	DMR Net
YSF Net	P25 Net
YSF2DMR	NXDN Net
YSF2NXDN	YSF2P25
DMR2NXDN	DMR2YSF

Radio Info	
Trx	
Tx	446.100000 MHz
Rx	449.100000 MHz
FW	HS_Hat:v1.4.7
TCXO	14.7456 MHz

DMR Repeater	
DMR ID	3113386
DMR CC	1
TS1	enabled
TS2	enabled

DMR Master	
	107.191.99.14

Gateway Activity							
Time (EDT)	Mode	Callsign	Target	Src	Dur(s)	Loss	BER

Local RF Activity							
Time (EDT)	Mode	Callsign	Target	Src	Dur(s)	BER	RSSI

Pi-Star / Pi-Star Dashboard, © Andy Taylor (MW0MWZ) 2014-2021.  
ircDDBGateway Dashboard by Hans-J. Barthen (DLSD1),  
MMDVMDash developed by Kim Huebel (DG9VH),  
Need help? [Click here](#) for the Facebook Group  
or [Click here](#) to join the Support Forum  
Get your copy of Pi-Star from [here](#).

# DMR Networks

- Brandmeister
- TGIF
- K4USD
- DMR MARC

