IP Access device

Now I have built it, how do I configure it?

By

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We will be talking about Pi-Star controlled IP Access devices.

DMR Masters/Servers (Networks)

Security (Hotspot passwords)

BrandMeister API Interface

DMR Gateway

DMR Masters/Servers (Networks)

Town:	Edinburgh	
Country:	Scotland	
URL:	https://www.qrz.com/db/mm0hjx	○ Auto ● Manual
Radio/Modem Type:	DV-Mega Raspberry Pi Hat (GPIO) - Dual Band ▼	
Node Type:	○ Private ● Public	
APRS Host:	london.aprs2.net ▼	
System Time Zone:	Europe/London ▼	
Dashboard Language:	english_uk ▼	

Apply Changes

DMR Configuration

Setting	Value
DMR Master:	BM_United_Kingdom_2341 ▼
Hotspot Security:	DMR+_IPSC2-Mexico
BrandMeister Network:	DMR+_IPSC2-Naples
DMR ESSID:	DMR+_IPSC2-NewYork
DMR Colour Code:	DMR+_IPSC2-NewZealan
DMR EmbeddedLCOnly:	DMR+_IPSC2-OE-DMO
DMR DumpTAData:	DMR+_IPSC2-OE-DMO-HAMNET
	DMR+_IPSC2-OZARK
	DMR+_IPSC2-PL260-DMO
	DMR+_IPSC2-PL260-RPT
	DMR+_IPSC2-PhoenixF
	DMR+_IPSC2-Portugal
	DMR+_IPSC2-QUADNET
Setting	DMR+_IPSC2-Romania
Dashboard Access:	DMR+_IPSC2-SWEDEN-
ircDDBGateway Remote:	DMR+_IPSC2-SWISS
SSH Access:	DMR+_IPSC2-SWISS-DMO
Auto AP:	DMR+_IPSC2-Scotland
uPNP:	DMR+_IPSC2-TUSCANY
	DMR+_IPSC2-USA-MN2
	DMR+_IPSC2-VKHOTSPOT

| Edit Repeater (BrandMeister Selfcare)

Note: Reboot Required if changed

Wireless Configuration

Common Servers to use:

BrandMeister

BM_United_Kingdom_2341

BM_Netherlands_2042

DMR+/Phoenix

DMR+_IPSC2-Scotland

DMR+_IPSC2-PhoenixF

Security (Hotspot passwords)

Q. Do I need a password on my hotspot?

A. No, But a password on your hotspots protects your DMR-ID from being used by anyone else on a cloned hotspot. Note: BrandMeister Network only.

Security (Hotspot passwords)

BrandMeister Selfcare

Turn "On" Hotspot Security, enter password and click "Save".

Security (Hotspot passwords)

Pi-Star / DMR Configuration

Setting	Value
DMR Master:	DMRGateway ▼
BrandMeister Master:	BM_United_Kingdom_2341 ▼
BM Hotspot Security:	
BrandMeister Network ESSID:	2354209 None ▼
BrandMeister Network Enable:	🔴
BrandMeister Network:	Repeater Information | Edit Repeater (BrandMeister Selfcare)
DMR+ Master:	DMR+_IPSC2-PhoenixF ▼
DMR+ Network:	Options= StartRef=4000;RelinkTime=60;UserLink=1;
DMR+ Network ESSID:	2354209 None ▼
DMR+ Network Enable:	🔴
XLX Master:	XLX_950 ▼
XLX Startup Module:	Default ▼
XLX Master Enable:	⚪
DMR Colour Code:	1 ▼
DMR EmbeddedLCOnly:	🔴
DMR DumpTAData:	🔴

Apply Changes

Enter the password and click "Apply Changes".

BrandMeister API Interface

Q. What is an API Interface?

A. API (Application Programming Interface) allows settings in BrandMeister Selfcare to be controlled by Pi-Star.

Active BrandMeister Connections

BrandMeister Master	Default Ref	Timeout(s)	Active Ref	Static TGs	Dynamic TGs
BM United Kingdom 2341	REF0	0(s)	REF4405	TG235444	None

BrandMeister Manager

Tools		Active Ref	Link / Unlink	Action
Drop QSO	Drop All Dynamic	REF4405 ▼	○ Link ⦿ UnLink	Modify Reflector

Static Talkgroup	Slot	Add / Remove	Action
	○ TS1 ⦿ TS2	⦿ Add ○ Delete	Modify Static

Features such as:

Add/Remove Static Talkgroups, Drop QSO, Drop Dynamic Talkgroups

& Link or Unlink Reflectors.

BrandMeister API Interface

BrandMeister Selfcare
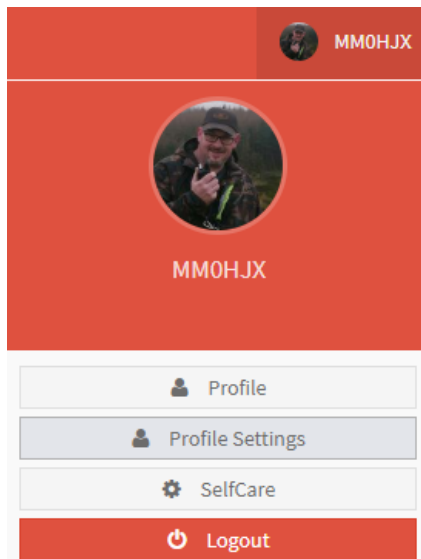
In your BrandMeister account, click on your "Callsign" and then on "Profile Settings".

Create API Key by clicking API Key button and follow the on screen instructions.

Copy and Paste into Pi-Star.

BrandMeister API Interface

Pi-Star

Click on "Configuration", then "Expert" followed by "BM API"

Paste the API Key and Apply Changes.

DMR Gateway

DMR Gateway allows for multiple DMR Networks to run side by side on the same hotspot.

DMR Gateway

Basic DMR Gateway Configuration

DMR Configuration

Setting	Value
DMR Master:	DMRGateway ▼
BrandMeister Master:	BM_United_Kingdom_2341 ▼
BM Hotspot Security:	
BrandMeister Network ESSID:	2354209 None ▼
BrandMeister Network Enable:	🔴
BrandMeister Network:	Repeater Information | Edit Repeater (BrandMeister Selfcare)
DMR+ Master:	DMR+_IPSC2-PhoenixF ▼
DMR+ Network:	Options=StartRef=4000;RelinkTime=60;UserLink=1;
DMR+ Network ESSID:	2354209 None ▼
DMR+ Network Enable:	🔴
XLX Master:	XLX_950 ▼
XLX Startup Module:	Default ▼
XLX Master Enable:	⚪
DMR Colour Code:	1 ▼
DMR EmbeddedLCOnly:	🔴
DMR DumpTAData:	🔴

Apply Changes

DMR Gateway

BrandMeister and DMR+ Masters can be different from this example.

Startup Reflector for DMR+ can be 4450 (Scotland).

Just change StartRef=4000 to StartRef=4450 or which reflector you choose.

RelinkTime=60 (mins) before defaulting to StartRef after no activity (RF input).

DMR Gateway

The radio will need a slight change to the codeplug.

Add TG8 (Group call) to your contacts in the radio codeplug.

Add a new hotspot channel "TG8 DMR+"

DMR Gateway

Operation

BrandMeister will work as normal, TG9 for the BM Reflectors.

DMR+ will use TG8 for the DMR+ Reflectors on the hotspot.

DMR+ Reflectors can be changed as normal but you have to prefix the commands with the number "8".

Private Dial:

85000 = Status

84000 = Unlink

84450 = Scotland

84400 = UK Wide

Final thoughts

Experimenting and getting hands on with your hotspot is a valuable learning tool and can be very rewarding when things work or learning from mistakes when made.

Share your thoughts and ask questions. Get people involved and talking...