

APRS Setup on BrandMeister DMR

Now with DMR becoming more and more popular and DMR branching out to link to other communication networks to give us cross mode communications it is fantastic to now see DMR linked to APRS. [1]

DMR users now have access to the APRS system where DMR users can have their position shown on APRS, APRS users can see where DMR users are located in real time [2].

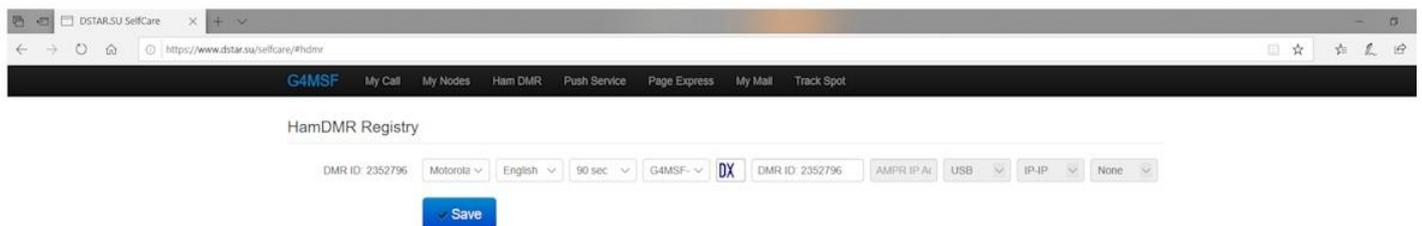
DMR users position can now be seen on the internet using the web site found at www.aprs.fi where APRS stations can be seen, plotted and data from APRS can be searched going by many months.

What's even more marvellous is that not only can DMR users send short text messages between other DMR users, but now you can also send and receive text messages from APRS users world wide. [3]

1. To You must first set up a self help account at: <https://brandmeister.network/?page=login> where you can set up your call sign/DMR ID so that it can be used on APRS.

2. To have real time tracking on DMR your radio must be able to have a GPS integrated in to it, it is not something you can add later to the likes of an MD380. Though some Motorola radios can have a fixed position programmed in to them, but they can not do real time tracking. Your next step is to set up the APRS configuration on this following WEB site - <http://www.dstar.su/> and make the changes found in the image below.

You will need to make an account and sign in, once signed in you can go to **Self Care** <https://www.dstar.su/selfcare/> and click on **Ham DMR** in the top status bar in black to take you to the page below where you can set up your call sign and what icon is used for your call sign on APRS.



Now in your Motorola radio programming software;

Now set the parameters in the CPS for your Motorola Radio.

General:

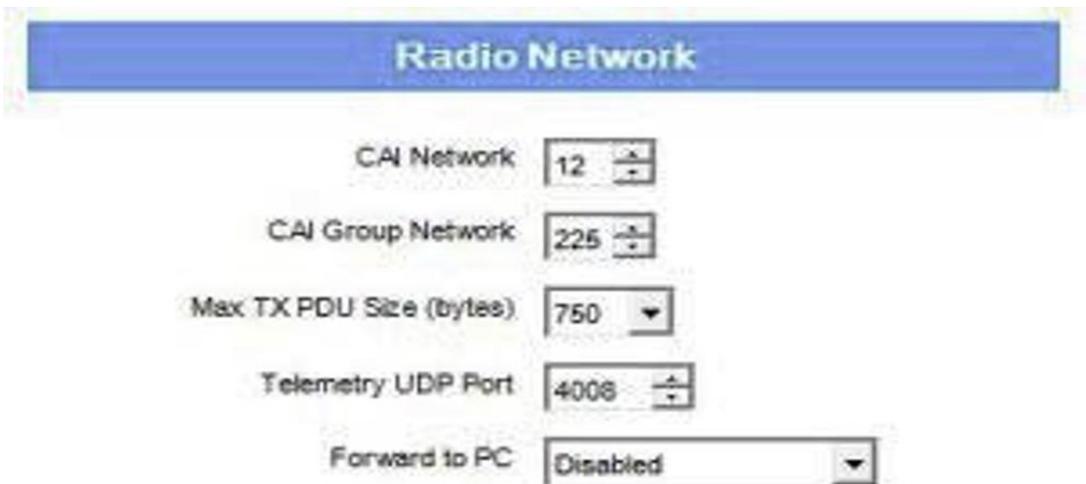
– GPS: On



The screenshot shows the 'General Settings' page. At the top, there is a blue header with the text 'General Settings'. Below the header, there are several navigation links: [Top](#), [CMD](#), [Audio Profile](#), [Microphone](#), [Battery Saver](#), [Alerts](#), [Over-the-Air Programming](#), [Persistent LRRF](#), [Lone Worker](#), [Power Up](#), [Password and Lock](#), [Front Programming Password](#), [Delete All](#), and [5 Tone Radio ID](#). The main content area includes a 'Radio Name' field with the value 'Motorola'. Below this is a 'Welcome Image' section showing a Motorola logo with a 'Select...' button and a 'Remove' button. Further down, there is a 'Radio ID' field with the value 'YOUR ID' and a 'GPS' checkbox that is checked.

Network:

– CAI Network: 12



The screenshot shows the 'Radio Network' page. At the top, there is a blue header with the text 'Radio Network'. Below the header, there are several configuration fields: 'CAI Network' with a value of 12, 'CAI Group Network' with a value of 225, 'Max TX PDU Size (bytes)' with a value of 750, 'Telemetry UDP Port' with a value of 4008, and 'Forward to PC' with a value of Disabled.

Services:

- ARS Radio ID: 272999 <see **NOTE 1** below, 272999 is the BM Irish APRS server>
- TMS Radio ID: 272999

The screenshot shows a configuration page titled "Services" with the following fields:

ARS Radio ID	272999
ARS IP	0.0.0.0
ARS UDP Port	4005
TMS Radio ID	272999
TMS IP	0.0.0.0
TMS UDP Port	4007
User Defined UDP Port 1	Disabled
User Defined UDP Port 2	Disabled
User Defined UDP Port 3	Disabled
XCMP Server ID	
XCMP Server IP	0.0.0.0

The following settings need to be changed with in each channel that you wish to beacon your location.
Channel Settings:

- **ARS: On System/Site Change**
- **IP Site Connect: On**
- **GPS Revert: Selected**
- **Data Call Confirmed: On**

Now that you have set all the parameters, upload the code plug to your radio. You can now head on over to <http://www.aprs.fi/> and enter you call sign to view your location.

3. DMR messages must follow a fixed format in order for messages to go through to APRS. The format being CALL SIGN (in capitals) text of message, example: G4MSF-3 this is a test message.

The text 'this is a test message' will be sent to G4MSF-3, where G4MSF-3 is the call sign of the APRS station you wish to send the message to.

The message should be sent to ID 272999 where 272999 is set in your digital contacts as a private contact. (See **note 1 below about the ID number**)

To send a message from APRS to DMR the format is like any other APRS message where the text you send it sent to the specific call sign, but the specific call sign must be set up on your self-help page found in 1. above.

Regards,
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MB7UXX (APRS)

Note 1.

(from BM News Letter on the 4th Feb. 2019 -

<https://news.brandmeister.network/gps-5057-destination/>) On the 1st of march we will phase out the GPS destination 5057.

If this is the destination ID you are currently using in your codeplug, please update it as soon as possible using the instructions below.

You will need to replace the GPS destination with the first 3 digits of any active BrandMeister Master Server ID (ie: 204 for Netherlands, 208 for France, 310 for USA, etc.) followed by 999.

For example, the following destinations are valid for GPS destinations: 204999 (because there are masters 2041 and 2042), 208999 (because there is a 2082 master), 310999 (because there are masters 3101,3102, 3103, 3108), etc.

The first 3 digits of the GPS destination does not have to match those of the BrandMeister master server where your repeater or hotspot is connected to. For example, you can use GPS destination ID 208999 even if the repeater you use is connected to master 2042.

How to choose the GPS destination ID for your code plug? If the country where you operate has a BrandMeister server, the most logical choice is to use the first 3 digit of your country's master ID and add 999 (for example 262999 if you are in Germany). If your country doesn't have a master server, use the first digits of the one closest from your location.

Now those of us setting up a Motorola radio for use on DMR/APRS.

The MD range of radios also has to be set up, but I do not have access to one to see how the GPS settings are used, perhaps someone could write to me and give these details to be added to this article.