

MOTOTRBO radio using APRS and SMS in BrandMeister network

This example shows the settings for BrandMeister 262 Germany, in other countries it may be necessary to use another server. In Germany for APRS and messaging the address is 262999.


Note that the CPS has expert view enabled. I used CPS 13.5 EMEA to create this example.

First have a look at the general settings, to enable GPS. Depending on the GPS hardware of your radio it may be useful having a look if all satellite systems are enabled. For my DP4801e only GPS was enabled, and adding GLONASS improved time to fix quite a bit in some situations.

General Settings

[Home](#) [Alerts](#) [Over-the-Air Programming](#) [Persistent LRRP Requests](#) [Lone Worker](#) [Power Up](#) [Password and Lock](#)

Radio Name

Welcome Image 

Radio ID

GPS

GNSS

Now go to General / Persistent LRRP Request and set it like this, to make APRS transmission more reliable. It is a kind of cache to store the settings sent from the server to your radio.

General Settings

[Home](#) [Over-the-Air Programming](#) [Persistent LRRP Requests](#) [Lone Worker](#) [Power Up](#)

Persistent LRRP Requests

Save

Delete

The next step is doing some network settings. Navigate to the network page and set the stuff like shown below. I do not want to go into detail, just note that that the three occurrences of 262999 may need to be adjusted to your master servers address. Not all here entered settings are necessary for APRS, but I set them to be prepared for future use, and some are needed for text messaging TMS/SMS.

Network

[work](#) [Services](#) [Control Station](#) [IP Site Connect](#) [Bluetooth](#) [Bluetooth Serial Port Profile Data Ro](#)

Radio Network

CAI Network	<input type="text" value="12"/>
CAI Group Network	<input type="text" value="225"/>
Protected Mode Control Station	<input type="checkbox"/>
Max TX PDU Size (bytes)	<input type="text" value="1500"/>
Telemetry UDP Port	<input type="text" value="4008"/>
Forward to PC	<input type="text" value="Disabled"/>

Services

ARS Radio ID	<input type="text" value="262999"/>
ARS IP	13.4.3.87
ARS UDP Port	<input type="text" value="4005"/>
TMS Radio ID	<input type="text" value="262999"/>
TMS IP	13.4.3.87
TMS UDP Port	<input type="text" value="4007"/>
User Defined UDP Port 1	<input type="text" value="Disabled"/>
User Defined UDP Port 2	<input type="text" value="Disabled"/>
User Defined UDP Port 3	<input type="text" value="Disabled"/>
XCMP Server ID	<input type="text" value="262999"/>
XCMP Server IP	13.4.3.87
Battery Management Server ID	<input type="text" value=""/>
Battery Management Server IP	0.0.0.0

The next settings need to be made in each single channel that wants to use messaging and APRS. So you may face now some work to be done, depending on the size of your codeplug 😊

These items from the common part of the channel data are important:

Phone System Sys1

ARS On System/Site Change

Enhanced GPS

Window Size 8

Privacy

Privacy Alias Privacy Key1

RAS Alias None

Option Board

Option Board Trunking

Lone Worker

Allow Talkaround

IP Site Connect

Per-Site RSSI Threshold (dBm) -108

Messaging Delay (ms) 60

Compressed UDP Data Header DMR Standard

Text Message Type Proprietary

Over-the-Air Battery Management

And here the stuff from the channels TX section:

RSSI Threshold (dBm) -124

GPS Revert Selected

Private Call Confirmed

Data Call Confirmed

Location Data Delivery Mode Follow Data Call Confirmed

Enhanced Channel Access

CSBK Data

Not to forget about the BrandMeister dashboard settings! Log into your dashboard account at <https://brandmeister.network> and adjust your settings for all affected personal IDs, similar to this example:

The screenshot shows the BrandMeister dashboard with a sidebar on the left containing navigation items like 'User Dashboard', 'Last Heard', 'Repeaters', 'Hotspots', 'Masters', 'Alerts', 'Data Visualisation', 'BM Wiki', 'Services', 'Hose line', 'Extended Routing', 'Extended Routing (Old version)', 'SelfCare', 'Hotspot', and 'My hotspots'. The main content area is titled 'SelfCare' and displays settings for two IDs: 2628055 (DK5RAS) and 2628086 (DK5RAS). Each ID's settings include a 'Brand' dropdown set to 'Motorola', a 'Language' dropdown set to 'English', an 'APRS Interval' dropdown set to '60 sec', and an 'APRS Callsign' dropdown set to 'DK5RAS-7'. The 'APRS Icon' is set to a star icon, and the 'APRS Text' field contains 'DMR Ralph Z15/B01'. At the bottom of each settings section are two buttons: 'Save changes for ID 2628055' (blue) and 'Restore defaults' (red).

Now you should be ready to go. Set your radio to a BrandMeister repeater or hotspot, wait for a GPS fix and watch your data showing on <http://aprs.fi>!

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