

Wales Digital Radio Group DMR Access using the new system

Setting up the Anytone DMR Radio with a hotspot running Pi-Star software

Vs 1.9 Written by Granville White MW7FRN - © 2024

Use this guide at your own risk, flashing hotspots can be a precarious operation, I accept no responsibility for any loss.
If you don't understand setting up the radio and hotspot get someone who does to do it for you.

I am assuming your hotspot and radio is already set up and working, so this guide will explain how to migrate from Brandmeister TG-2356 to the WDRG XLX 042 D System using the DMRGateway on the Pi-Star web interface (Website) anything else is beyond the scope of this guide

FIRST THINGS FIRST

Update the Hotspot files

Open your hotspot control panel, with pi-star type <http://pi-star.local> OR <http://pi-star/> OR <http://192.168.nnn.nnn> into the browsers address bar and enter your user name and password, default is...

User: pi-star

Password: raspberry

Where <http://192.168.nnn.nnn> - Replace nnn with digits

If <http://pi-star.local> or <http://pi-star/> does not bring up the Pi-Star interface in your browser then you will need to access your router web interface to obtain the IP address of your hotspot, refer to your router documents on how to do this.

Click **Admin** wait for the Page/Menu to change

Dashboard | Admin | Configuration

Then Click **Update** from the Menu

Dashboard | Admin | Live Logs | Power | Update | Configuration

Let the update run and when it says finished click **Configuration** to continue...

Pi-Star:4.1.8 / Dashboard: 20240307

Pi-Star Digital Voice - Configuration

Dashboard | Admin | Expert | Calibrate | Power | Update | Backup/Restore | Factory Reset

When the Configuration page renders Click/Select **Expert** from the Menu

Pi-Star:4.1.8 / Dashboard:20240307

Pi-Star Digital Voice - Expert Editors

Dashboard | Admin | Update | Upgrade | Backup/Restore | Configuration

Quick Edit: DStarRepeater | ircDDBGateway | TimeServer | MMDVMHost | DMR GW | YSF GW | P25 GW | NXDN GW | DAPNET GW
Full Edit: DMR GW | PiStar-Remote | WiFi | BM API | DAPNET API | System Cron | RSSI Dat **Tools:** CSS Tool | FW | SSH Access

Now Click/Select FW (**FW**) from the Menu

Click/Select your Hotspot Modem Type (refer to your hotspot documents)

Select Modem:

then click the **Upgrade Modem** button to continue

Next if you have not done so recently update your BM API, go to your [Brandmeister self service](#) website, click on your profile image at the top of the page and **Click/Select** your **Profile settings** and update your API or create a new Version 2 API Key, use a different one for each hotspot or device

Security Settings

API Keys

Click the API Keys button on your Brandmeister self service account to create or update your API Key.

BM api keys example
Make sure you copy the key as it only appears once.

BLACK HOTSPOT	API key	2024-04-19 08:16:31	2124-04-19 09:16:31	Revoke
zumspot	API key	2024-04-16 17:00:33	2124-04-16 18:00:33	Revoke

Once you have created or updated your key to a Version 2 API return to the hotspot menu and Click/Select the BM API button **| BM API |** and update the API Key on the Hotspot, Cut&Paste your key from Brandmeister into your Pi-Star software.

Pi-Star:4.1.8 / Dashboard:20240307

Pi-Star Digital Voice - Expert Editors

Dashboard | Admin | Update | Upgrade | Backup/Restore | Configuration

Quick Edit: DStarRepeater | ircDDBGateway | TimeServer | MMDVMHost | DMR GW | YSF GW | P25 GW | NXDN GW | DAPNET GW

Full Edit: DMR GW | PiStar-Remote | WIFI | BM API | DAPNET API | System Cron | RSSI Dat

Tools: CSS Tool | FW | SSH Access

Apply Changes

Cut & Paste your key into the apikey box and **Apply Changes**

Upgrade Pi-Star to latest version

You may also want to run an Upgrade **| Upgrade |** to make sure you are running the latest Pi-Star software.

Just click the upgrade button to update the software.



Anytone 878/578 CPS with Hotspot

Hotspot DMR Settings:

NOTE:

I have not been able to get the V1 Zumspot to work, but these setting do work on my Pi-Star MMDVM hotspot with a Pi Zero Vs 2 with 32 GB Memory, so if you know how to set the Talk group 6 on your Anytone radio [TG-6 is not listed on the Brandmeister Talk Group list (cvs)] then jump straight in and try the settings below, otherwise read on!

From the menu Click/Select **Configuration** and scroll down to the DMR Configuration section

Dashboard | Admin | Configuration

DMR Configuration

Setting	Value
DMR Master:	DMRGateway ▾
BrandMeister Master:	BM_2341_United_Kingdom ▾
BM Hotspot Security:	*****
BrandMeister Network ESSID:	2340220 02 ▾
BrandMeister Network Enable:	<input checked="" type="checkbox"/>
BrandMeister Network:	Device Information Edit Device (BrandMeister Selfcare)
DMR+ Master:	DMR+_IPSC2-DVSPH-A ▾
DMR+ Network:	Options=
DMR+ Network ESSID:	2340220 None ▾
DMR+ Network Enable:	<input type="checkbox"/>
XLX Master:	XLX_042 ▾
XLX Startup Module:	D ▾
XLX Master Enable:	<input checked="" type="checkbox"/>
DMR Colour Code:	1 ▾
DMR EmbeddedLOnly:	<input checked="" type="checkbox"/>
DMR DumpTADData:	<input checked="" type="checkbox"/>

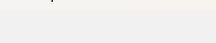
Apply Changes

Enter the details above into your DMR configuration and Click/Select Apply Changes



Read below to learn how to create a talk group that does not exist

ANYTONE CPS TALK GROUP SETTINGS

[illegible]

Talk Group Edit---1648

Name: WDRG-TG-6

Call Type: Group Call

TG/DMR ID: 6

Call Alert: None

OK Cancel Previous Next

You will need to create **Talk Group 6** in the Anytone CPS settings as it is not on the Brandmeister Digital Contact list.

Open your Anytone CPS and
in the left menu dialog box
Click/Select
Digital,
then
Click/Select
Contact/Talk Groups



CONTACT/TALK GROUPS

Once you have the Contact/Talk Groups dialog box open scroll to the end and click an empty row

No.	TG/DMR ID	Call Alert	Name	Call Type
1	1	None	TG1 Local	Group Call
2	2	None	TG2 Cluster	Group Call
3	8	None	TG8 Regional	Group Call
4	9	None	TG9 Local	Group Call
5	91	None	TG91 World-wide	Group Call

The screenshot shows a 'Contact/Talk Groups Edit' dialog box. The 'Name' field contains 'WDRG TG-6'. The 'Call Type' dropdown is set to 'Group Call'. The 'TG/DMR ID' field contains '6'. The 'Call Alert' dropdown is set to 'None'. At the bottom, there are four buttons: 'OK', 'Cancel', 'Previous', and 'Next'.

Enter the details as above and click **OK**

You have now created Talk Group 6 in the Anytone CPS software

1671	2709112	None	TG2709112 LX EMC	Group Call
1672	5059742	None	TG5059742 XRF740	Group Call
1673	6	None	WDRG TG-6	Group Call

So you should now be set to go, so just create a channel and insert the channel into a zone as normal, Save the code plug to the radio and let it reboot as normal, then navigate to WDRG-TG-6, on the radio and it will connect to the XLX 042 D reflector and issue an audio announcement and you should see your station on the WDRG [Reflector](#) and [voice](#) dashboard, if not check your settings **carefully** again

CREATE A CHANNEL AS BELOW AND INSERT CHANNEL INTO A ZONE

The screenshot shows the 'Channel Information Edit---3' window with the following settings:

- Channel Name:** WDRG
- Receive Frequency:** 438.80000
- Transmit Frequency:** 438.80000
- Correct Frequency[Hz]:** 0
- Channel Type:** D-Digital
- Transmit Power:** Low
- Band Width:** 12.5K
- TX Permit:** Always
- Scan List:** None
- APRS Report Type:** Digital
- Analog APRS PTT Mode:** Off
- Digital APRS PTT Mode:** Off
- Digital APRS Report Channel:** 1
- Exclude channel from roaming:** off
- DMR MODE:** DMO/simplex
- Analog APRS Report Freq:** 1
- PTT Prohibit:** ☐
- Talk Around(Simplex):** ☐
- APRS RX:** ☐
- Work Alone:** ☐
- DataACK Disable:** ☒
- Auto Scan:** ☐
- Digital Section:**
 - Contact:** WDRG-TG-6
 - Radio ID:** MW7FRN
 - Color Code:** 1
 - Slot:** Slot2
 - Receive Group List:** None
 - Digital Encryption:** Off
 - AES Digital Encryption:** Off
 - Multiple Key:** Off
 - Random Key:** Off
 - SMS Forbid:** Off
 - Send Talker Alias:** ☐
 - Call Confirmation:** ☐
 - Ranging:** ☐
 - Slot Suit:** ☐
 - SMS Confirmation:** ☐
- Analog Section:**
 - CTCSS/DCS Decode:** Off
 - CTCSS/DCS Encode:** Off
 - Squelch Mode:** Carrier
 - Optional Signal:** Off
 - DTMF ID:**
 - 2Tone ID:** 1
 - 5Tone ID:** 1
 - PTT ID:** Off
 - Reverse:** ☐
 - 2TONE Decode:** 1
 - Custom CTCSS:** 131.8
 - R5ToneBot:** 1
 - R5ToneEot:** 1

Buttons at the bottom: OK, Cancel, Previous, Next.

[WDRG XLX Gateway Reflector](#)

[Pi-Star Digital Voice Dashboard for MB6IPG](#)



<http://de9956.ddns.net:81/>

<http://walesdigitalham.ddns.net/>

Vs 1.9 - Written by [Granville White, MW7FRN](#) - [DMR 2340220](#) || © 01/05/2024