



# The Edinburgh DMR Breakfast



# **IP Access device**

***also known as a “Hot Spot”***

**Where do I get one ?**

**How does it go together ?**



# **IP Access device also known as a “Hot Spot”**

**You will need a computer.....**

**Could be a single board computer**

**Raspberry Pi,**

**Bannana Pi**

**Orange Pi**

**Nano Pi**

**Odroid**

**Windows PC**

**Android device**



**IP Access device  
also known as a “Hot Spot”**

**You will need a Modem.....**

**MMDVM board**

**DV-Mega**

**All in one device**

**Open Spot**

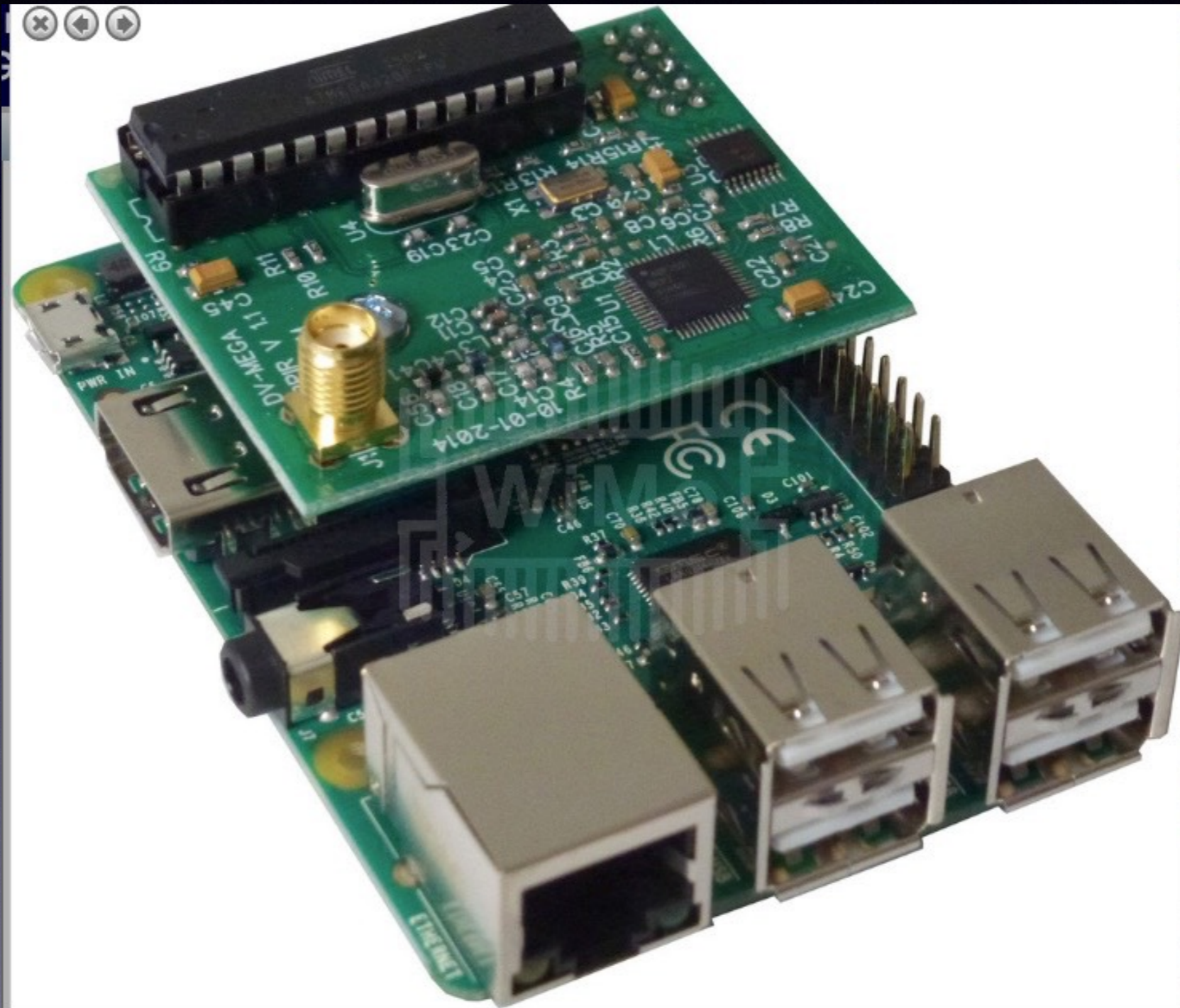


# MMDVM\_HS\_Hat & Raspberry Pi Zero





# DV-Mega & Raspberry Pi Model A or B +



DVMEGA-UHF on Raspberry-Pi



# DV-Mega & Bluestack





# Shark RF Openspot





**Where do I get one ?**

**How does it go together ?**



**IP Access device  
also known as a “Hot Spot”**

**Where do I get one ?**

*Ebay, DV-Mega, Combitronics NL  
Martin Lynch, WiMo,*

**How does it go together ?**

*Connect the boards, insert the card*

*It really is “Plug and pray ! “*



# Download the image & flash the SD card

## How hard can that be ?

The screenshot shows the balenaEtcher website interface. At the top, there is a navigation bar with the balena logo and the text "An open source project by balena". Below this, the main heading "balenaEtcher" is displayed. To the right of the heading are links for "Forums", "Mailing list", "Changelog", and "Etcher Pro".

The central part of the interface is a dark grey panel with three main steps in a horizontal flow:

- Select image**: A blue button with a white plus icon. Below it, the text "img, iso, zip, and many more" is visible.
- USB Mass Storage Media**: A grey button with a USB drive icon. Below it, the text "Change" and "15.72 GB" are visible.
- Flash!**: A grey button with a lightning bolt icon.

At the bottom of the panel, there is a footer with the balena logo, the text "balenaEtcher is an open source project by balena", and the version number "1.5.51".



# Download the image & flash the SD card

## How hard can that be ?

An open source project by  balena | [More products](#) ▾

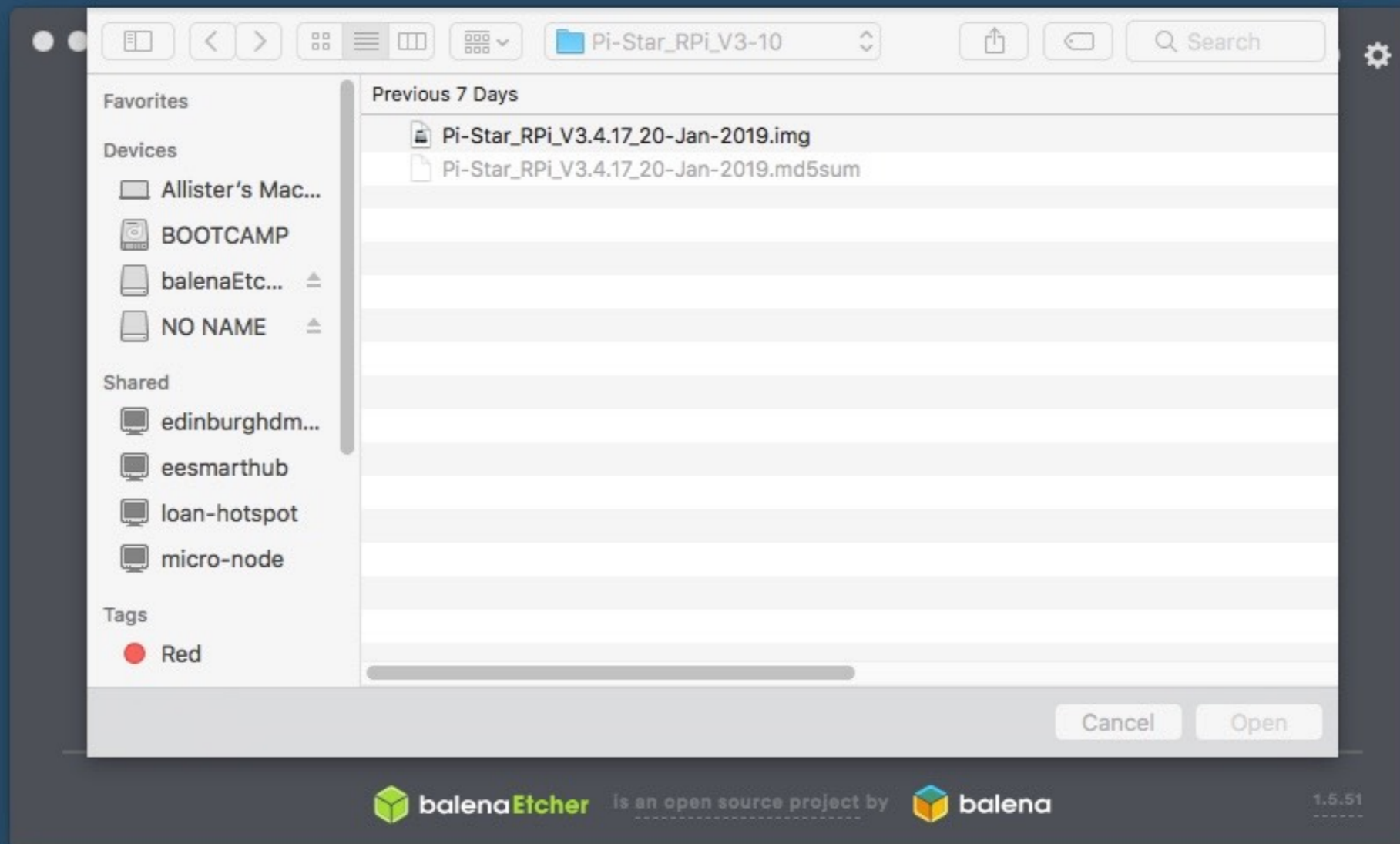


[Forums](#)

[Mailing list](#)

[Changelog](#)

[Etcher Pro](#)





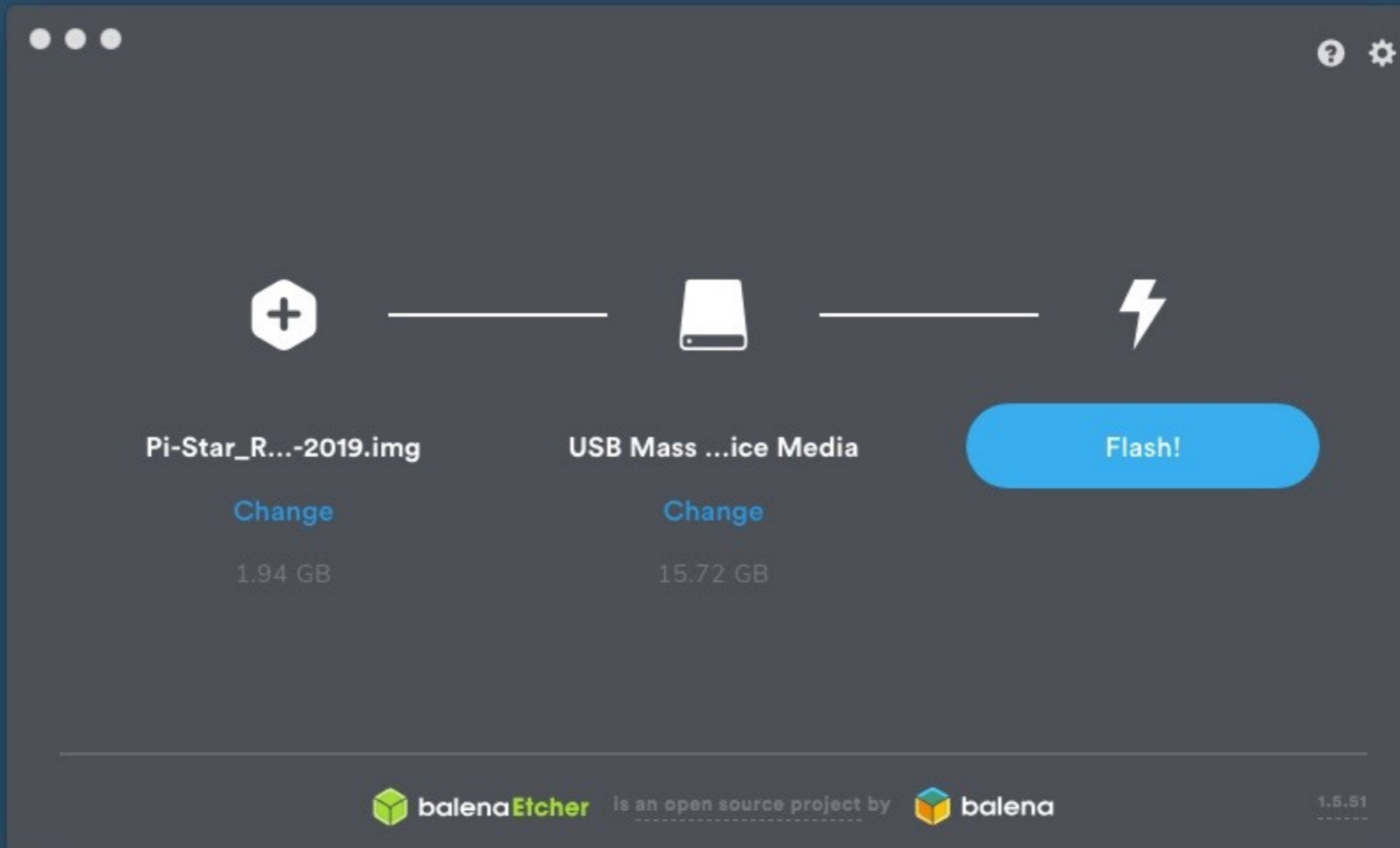
# Download the image & flash the SD card

## How hard can that be ?

An open source project by  balena | [More products](#) ▾



[Forums](#) [Mailing list](#) [Changelog](#) [Etcher Pro](#)



The screenshot shows the balenaEtcher application window. At the top, there are window control buttons (three dots) and help/settings icons (question mark and gear). The main interface features a workflow diagram with three steps: 1. A plus sign icon representing the source image, labeled 'Pi-Star\_R...-2019.img' with a 'Change' link and '1.94 GB' size. 2. A USB drive icon representing the target media, labeled 'USB Mass ...ice Media' with a 'Change' link and '15.72 GB' size. 3. A lightning bolt icon representing the flashing process, with a large blue 'Flash!' button. At the bottom, the footer includes the balenaEtcher logo, the text 'is an open source project by balena', and the version number '1.5.51'.



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## How hard can that be ?

An open source project by  balena | [More products](#) 

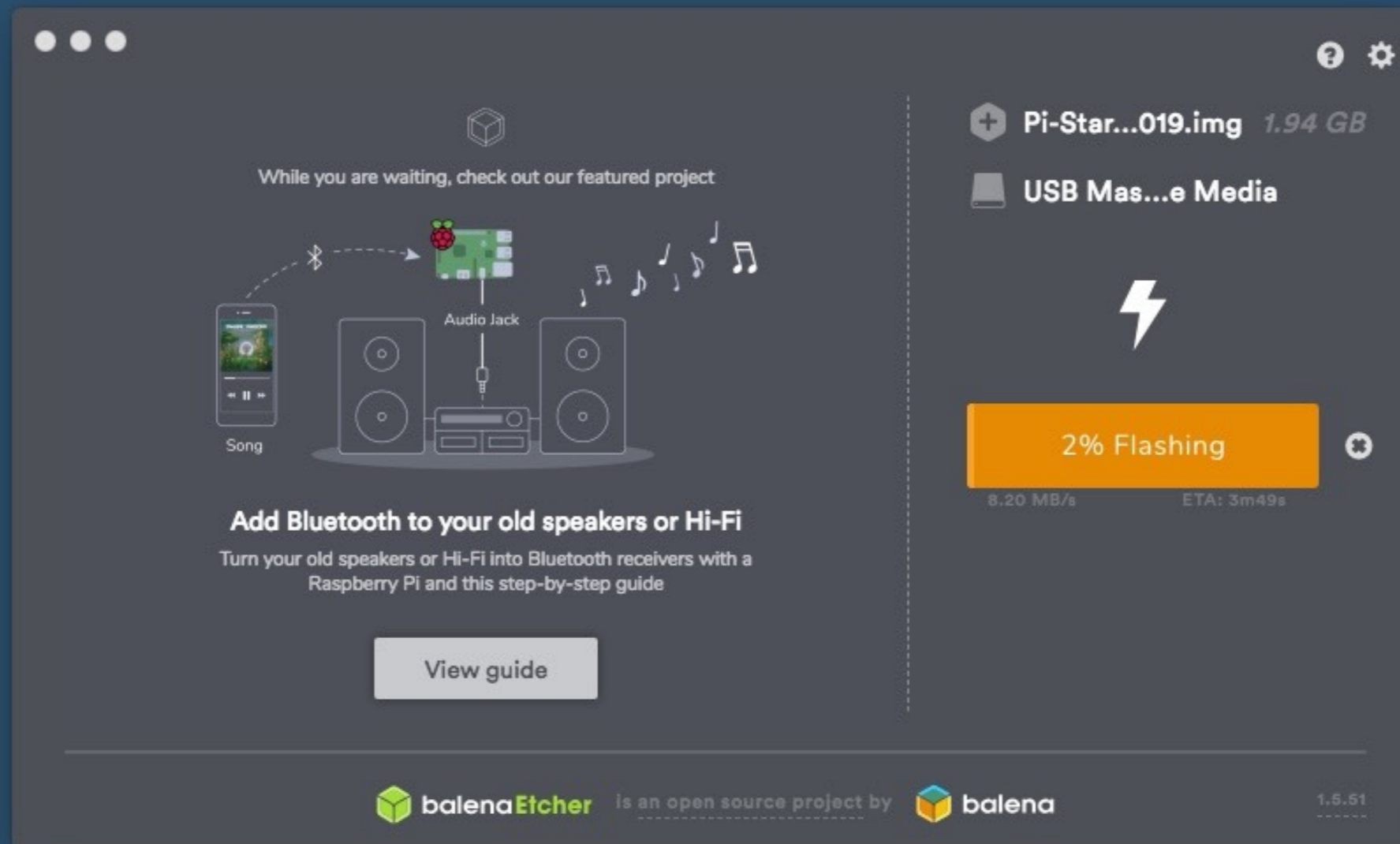


[Forums](#)

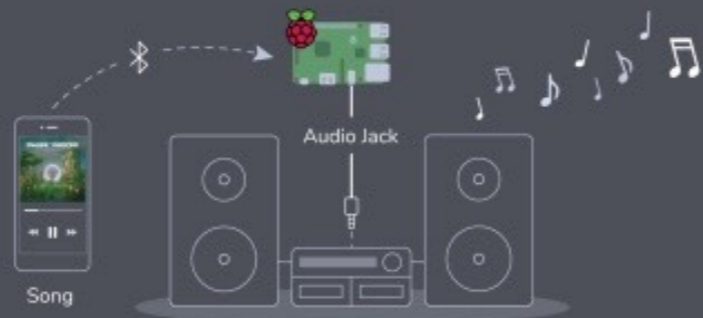
[Mailing list](#)

[Changelog](#)

[Etcher Pro](#)



While you are waiting, check out our featured project



**Add Bluetooth to your old speakers or Hi-Fi**  
Turn your old speakers or Hi-Fi into Bluetooth receivers with a Raspberry Pi and this step-by-step guide

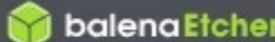

[View guide](#)

**Pi-Star...019.img** 1.94 GB

**USB Mas...e Media**

**2% Flashing**

8.20 MB/s ETA: 3m49s

 balenaEtcher is an open source project by  balena

1.5.51



# Download the image & flash the SD card

## How hard can that be ?

An open source project by  balena | [More products](#) 

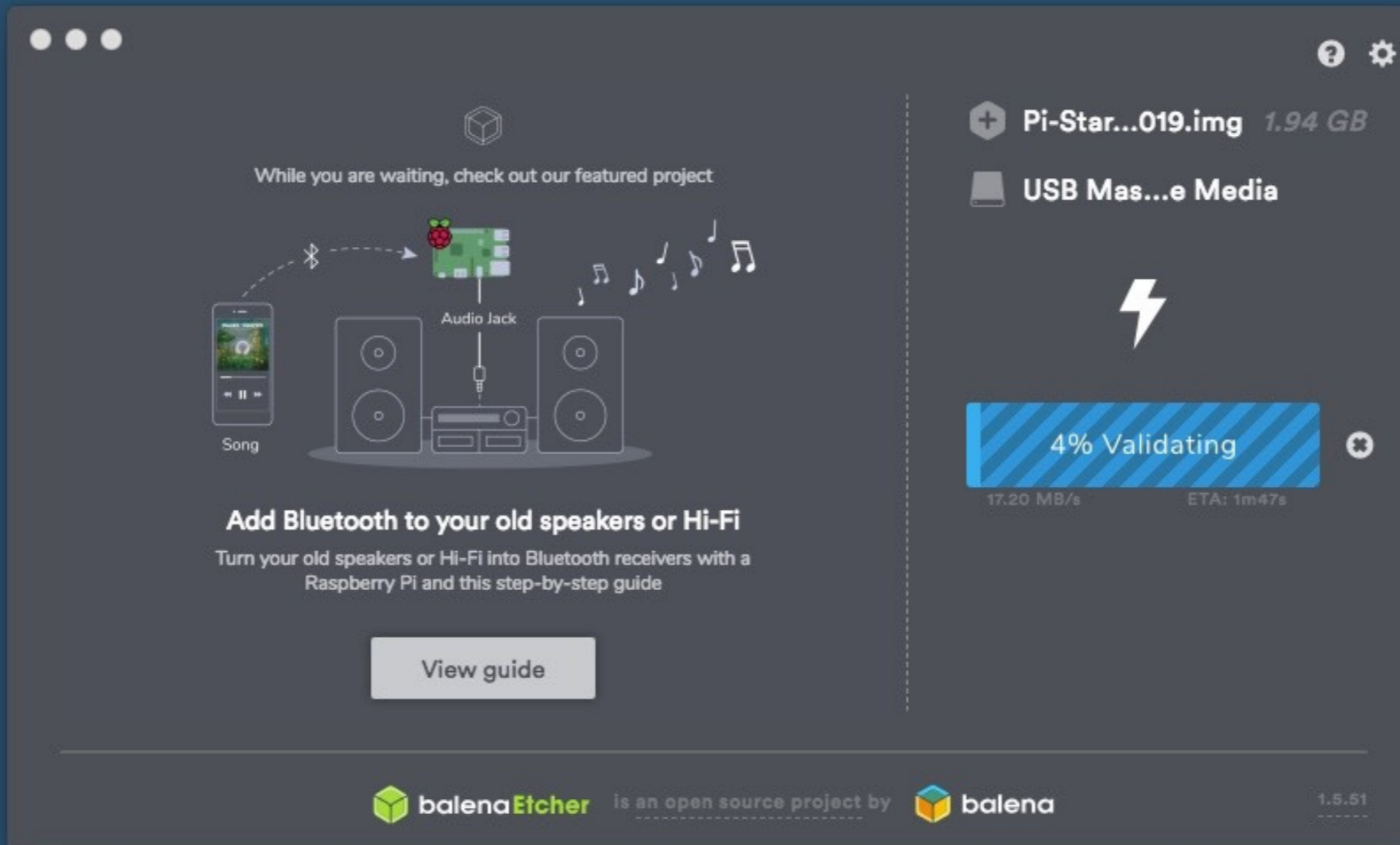
 balenaEtcher

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[Etcher Pro](#)



The screenshot shows the balenaEtcher application window. On the left, there is a featured project card titled "Add Bluetooth to your old speakers or Hi-Fi" with a "View guide" button. On the right, the main interface shows a project named "Pi-Star...019.img" (1.94 GB) being validated. A progress bar indicates "4% Validating" at a speed of 17.20 MB/s, with an estimated time to complete (ETA) of 1m47s. A lightning bolt icon is visible above the progress bar. The bottom of the window features the balenaEtcher logo, the text "is an open source project by balena", and the version number "1.5.51".



# Download the image & flash the SD card

## How hard can that be ?

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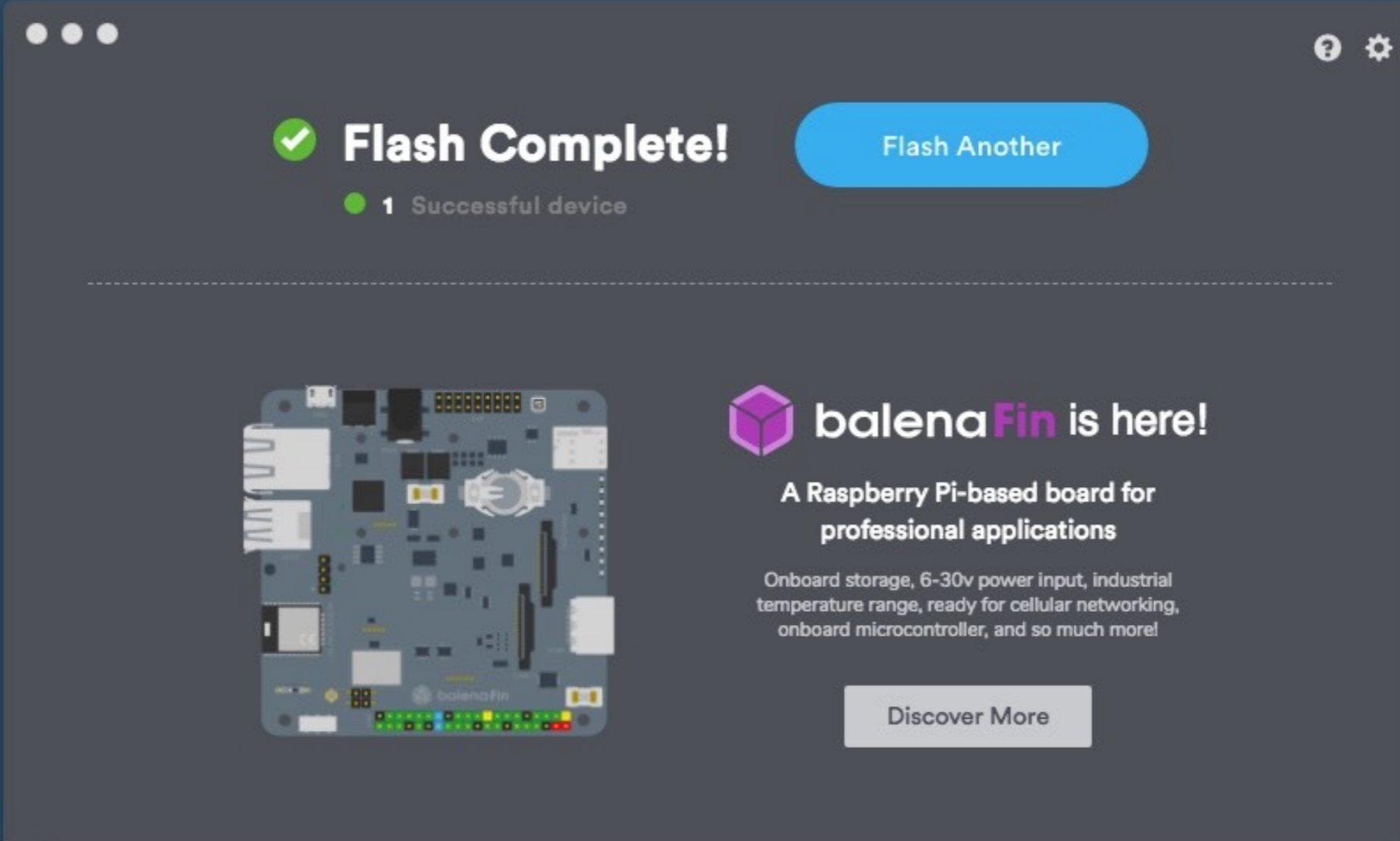
 **balena**Etcher

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✓ **Flash Complete!**

● 1 Successful device

[Flash Another](#)

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 **balena**Fin is here!

A Raspberry Pi-based board for professional applications

Onboard storage, 6-30v power input, industrial temperature range, ready for cellular networking, onboard microcontroller, and so much more!

[Discover More](#)



# Start the device and get the IP address

## How hard can that be ?

Home > My network

[Change settings](#) [Back](#)

You can see the volume of data that each device has sent and received next to the up and down arrows, since your device was last connected.

Use the **Filter** link to see different sets of devices - such as all connected or disconnected ones. You can also use the **Wireless connections** box to see all devices that are connected wirelessly.

Sort by

Filter:

	pi-star	IP Address: 192.168.1.88 (DHCP)	0.1MB
	Port 1	MAC Address: B8:27:EB:29:1F:16	0.1MB




# Start the device and get the IP address

How hard can that be ?



The screenshot shows a network interface configuration for a device named 'pi-star' connected to 'Port 1'. The interface has an IP address of 192.168.1.88 (DHCP) and a MAC address of B8:27:EB:29:1F:16. The interface icon is a green square with a white question mark inside a square frame.

	<b>pi-star</b>	IP Address: 192.168.1.88 (DHCP)
	Port 1	MAC Address: B8:27:EB:29:1F:16



# Log in to the device and configure it.

## How hard can that be ?

Hostname: pi-star

Pi-Star:3.4.17 / Dashboard: 20190119

### Pi-Star Digital Voice Dashboard for M1ABC

Dashboard | Admin | Configuration

#### No Mode Defined...

I don't know what mode I am in, you probaly just need to configure me.

You will be re-directed to the configuration portal in 10 secs

In the mean time, you might want to register on the support page here: <https://www.facebook.com/groups/pistarusergroup/> or the Support forum here: <https://forum.pistar.uk/>

Pi-Star / Pi-Star Dashboard, © Andy Taylor (MW0MWZ) 2014-2019.  
ircDDBGateway Dashboard by Hans-J. Barthen (DL5DI),  
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.



# Log in to the device and configure it.

## How hard can that be ?

Hostname: pi-star Pi-Star:3.4.17 / Dashboard: 20190119

### Pi-Star Digital Voice Dashboard for M1ABC

[Dashboard](#) | [Admin](#) | [Configuration](#)

**Log in to 192.168.1.88:80**  
Your password will be sent unencrypted.

Remember this password

[Cancel](#)   [Log In](#)

Pi-Star / Pi-Star Dashboard, © Andy Taylor (MW0MWZ) 2014-2019.  
ircDDBGateway Dashboard by Hans-J. Barthen (DL5DI),  
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.](#)



# Log in to the device and configure it.

## Your there, now what !

Pi-Star:3.4.17 / Dashboard: 20190119

### Pi-Star Digital Voice - Configuration

[Dashboard](#) | [Admin](#) | [Expert](#) | [Power](#) | [Update](#) | [Backup/Restore](#) | [Factory Reset](#)

#### Gateway Hardware Information

Hostname	Kernel	Platform	CPU Load	CPU Temp
pi-star	4.9.35-v7+	Pi 3 Model B (1GB) - Sony, UK	0.05 / 0.09 / 0.05	39.7°C / 103.5°F

#### Control Software

Setting	Value
<b>Controller Software:</b>	<input type="radio"/> DStarRepeater <input checked="" type="radio"/> MMDVMHost (DV-Mega Minimum Firmware 3.07 Required)
<b>Controller Mode:</b>	<input checked="" type="radio"/> Simplex Node <input type="radio"/> Duplex Repeater (or Half-Duplex on Hotspots)

#### General Configuration

Setting	Value
<b>Hostname:</b>	<input type="text" value="pi-star"/> Do not add suffixes such as .local
<b>Node Callsign:</b>	<input type="text" value="M1ABC"/>
<b>Radio Frequency:</b>	<input type="text" value="438.800.000"/> MHz
<b>Latitude:</b>	<input type="text" value="50.00"/> degrees (positive value for North, negative for South)
<b>Longitude:</b>	<input type="text" value="-3.00"/> degrees (positive value for East, negative for West)
<b>Town:</b>	<input type="text" value="Town, LOC4TOR"/>
<b>Country:</b>	<input type="text" value="Country"/>
<b>URL:</b>	<input type="text" value="http://www.mw0mwz.co.uk/pi-star/"/> <input type="radio"/> Auto <input checked="" type="radio"/> Manual
<b>Radio/Modem Type:</b>	<input type="text" value="--"/>
<b>Node Type:</b>	<input checked="" type="radio"/> Private <input type="radio"/> Public
<b>System Time Zone:</b>	<input type="text" value="Europe/London"/>



**Log in to the device and configure it.  
Your there, now what !**

**IP Access device**

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

**By**

**Carl MM0HJX**