

How do I setup a Raspberry Pi?

If you would like to setup a Raspberry Pi to run QRUQSP code, the following steps will walk you through downloading an SD image and configuring your Raspberry Pi.

Step 1 of 17 - Equipment Required

In order to monitor Weather Sensors in your area, you will need a Raspberry Pi and RTL-SDR dongle.

You can order the Raspberry Pi kit from amazon.ca: <https://www.amazon.ca/CanaKit-Raspberry-Starter-Premium-Black/dp/B07BD56DW5>

We recommend the RTL-SDR from rtl-sdr.com, they come in a metal case which helps reduce interference. You can purchase from their website at <https://www.rtl-sdr.com/buy-rtl-sdr-dvb-t-dongles/>

You can also order a nooelec from amazon.ca: <https://www.amazon.ca/digital-Stick-RTL-SDR-Receiver-RTL2832U/dp/B00CM3LNMM>

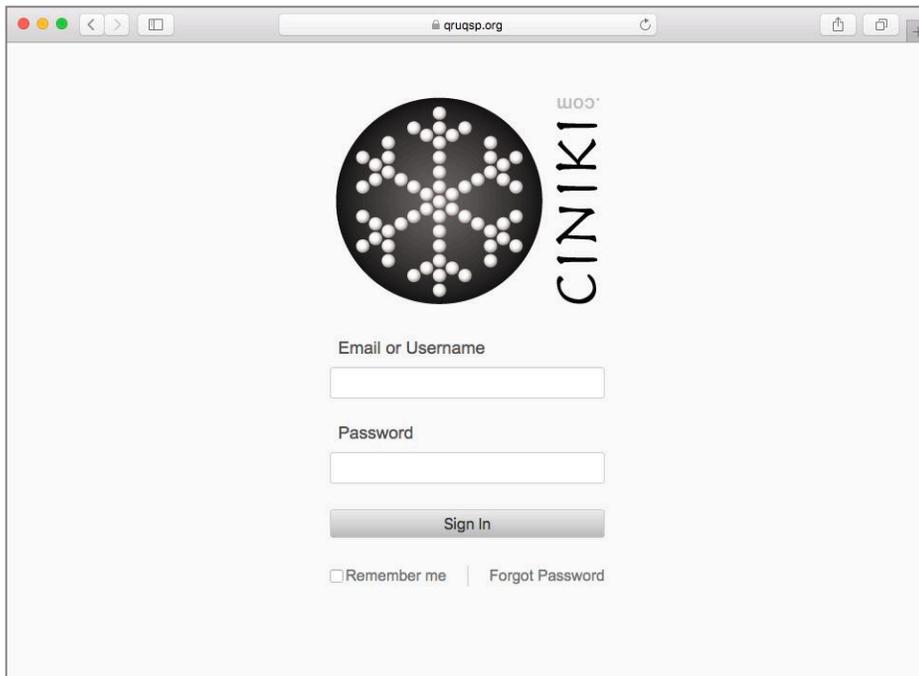
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Step 2 of 17 - Login to QRUQSP.org

Open your browser and go to <https://qrupart.org/manager>

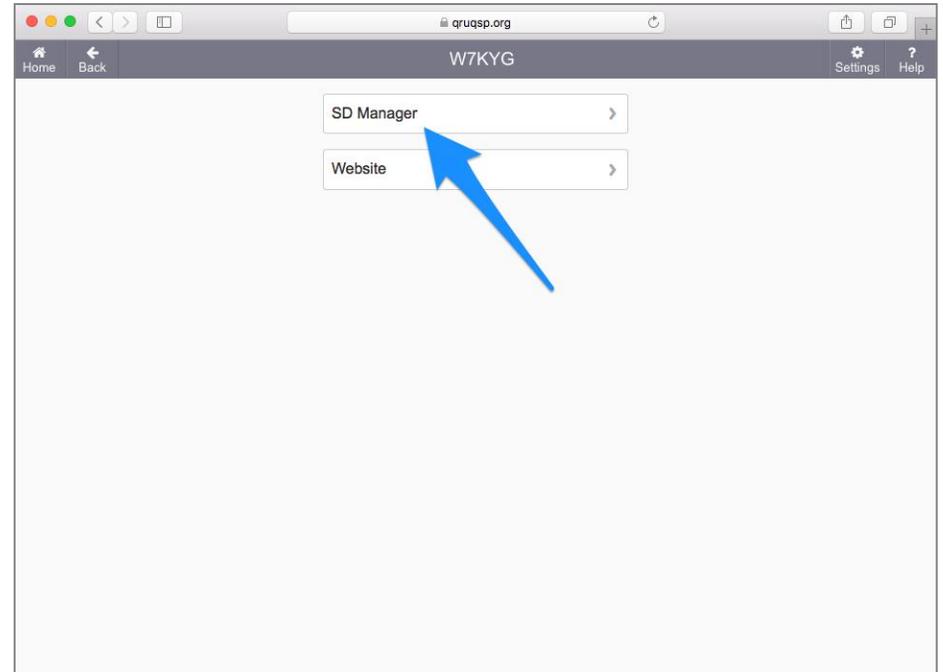
Enter your username (callsign) and password. If you do not have an account, please contact us at <https://qrupart.org/contact>

Click on Sign In once you've entered your username and password.



Step 3 of 17 - Click on SD Manager

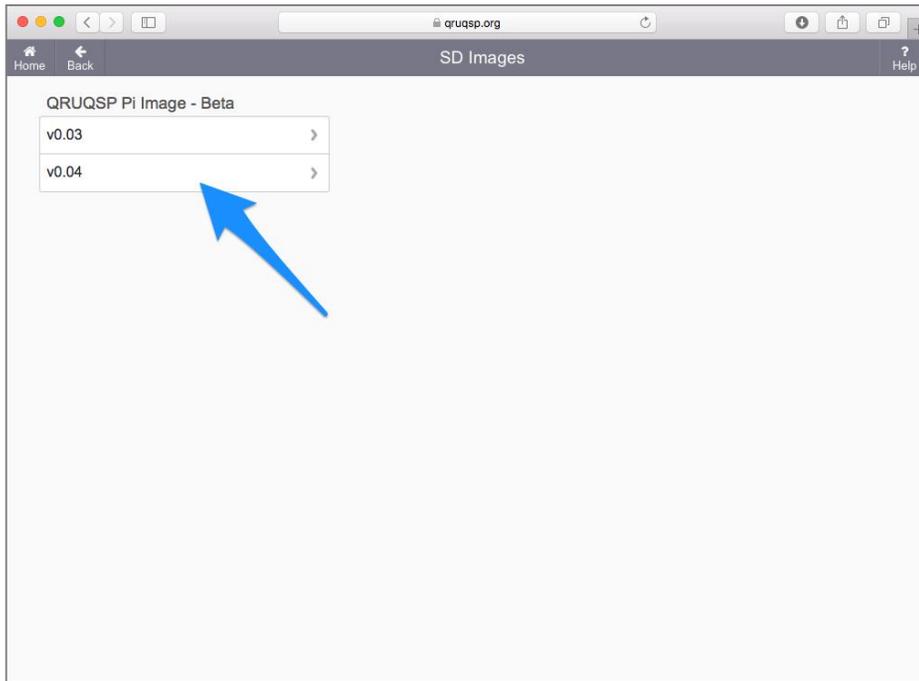
Open the SD Manager module by clicking on the SD Manager main menu item.



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Step 4 of 17 - Select Latest SD Image

Select the highest version of SD Image available



Step 5 of 17 - Enter your Wi-Fi Settings

Enter your Wi-Fi SSID (Wi-Fi Name) and the Wi-Fi password.

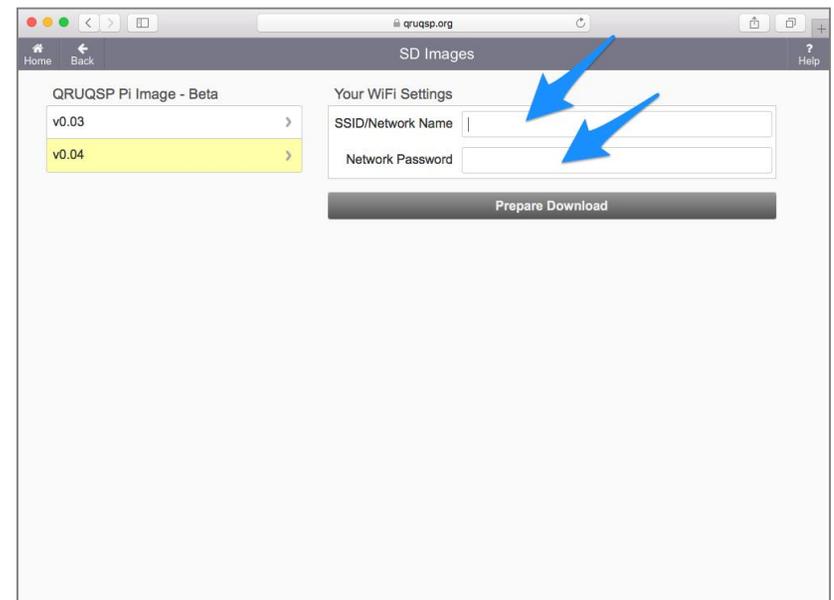
NOTE: If your Wi-Fi router supports both 2.4GHz (2G) and 5.8 GHz (5G) then be sure to use your 2G network and not your 5G network because Raspberry Pi only supports 2.4 GHz on all currently models including the Pi 3.

This will enable the Pi to immediately join your Wi-Fi network without the need to add a keyboard and monitor. If you are going to use the network port on your Pi you can skip entering this information.

This information is only stored temporarily in memory on our server while you download the SD Image.

We do not store your Wi-Fi SSID and Wi-Fi Password on our server.

Click the Prepare Download button to get your customized SD Image.

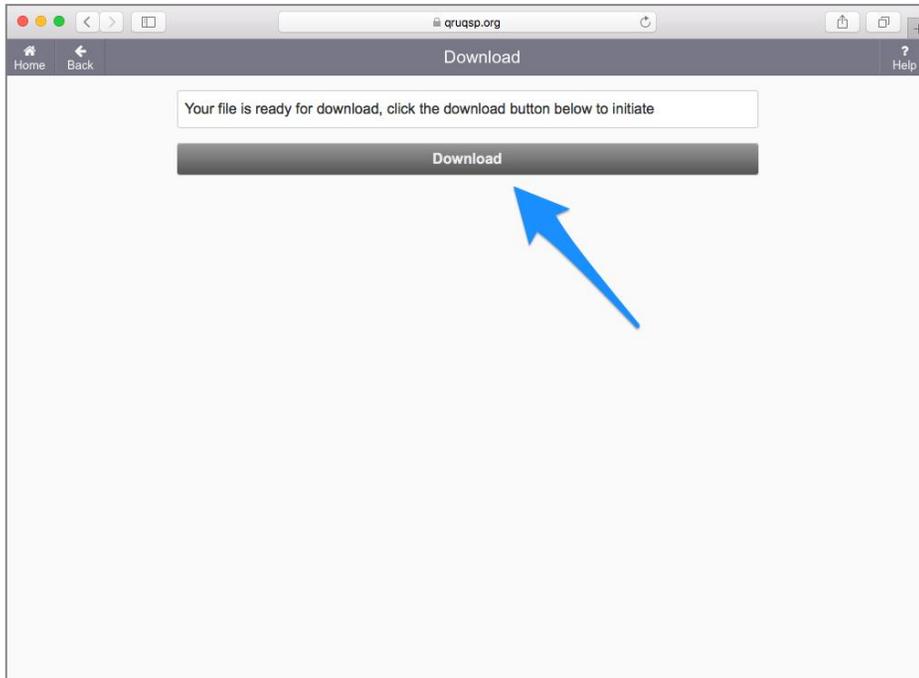


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Step 6 of 17 - Download the image

Once the system has prepared the image for you, click on the Download button.

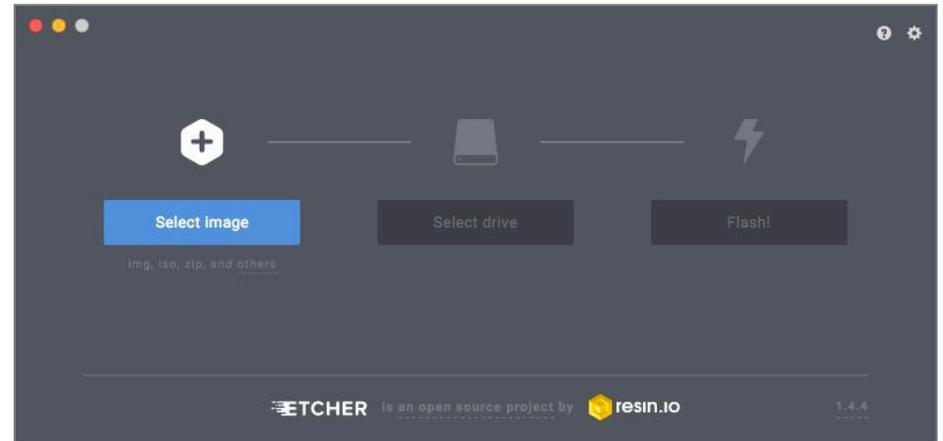
The download will take a while, the file is over 3GB in size.



Step 7 of 17 - Open Etcher Program

We recommend the program Etcher for writing SD cards. You can use any program you are familiar with.

Etcher is available for download at: <https://etcher.io/>

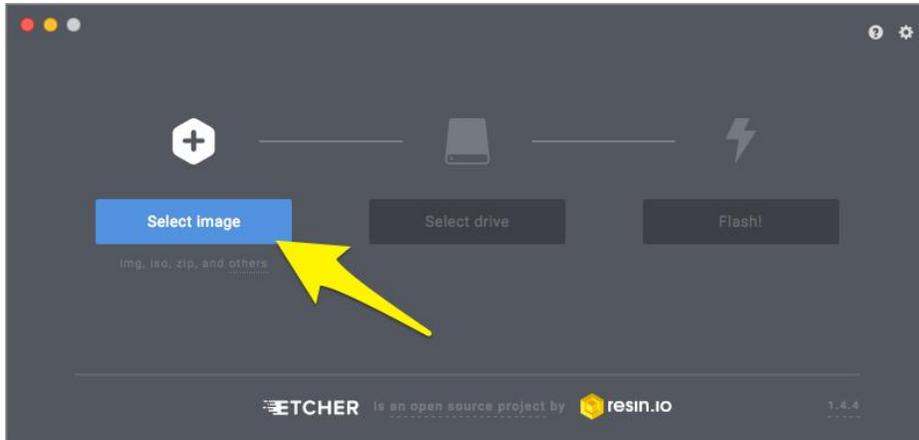


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Step 8 of 17 - Select SD Image

Click on Select Image to select the image to write from your computer.

The downloaded QRUQSP image should be in your Downloads folder.



Step 9 of 17 - Select SD Card

Insert your SD card into the SD reader on your computer.

If your computer has a built in SD reader, insert the micro SD card into the SD card adapter and then insert into the SD reader.

If your computer does not have built in SD reader, you'll need to use a USB SD reader.

Click on Select drive to select your SD Card Reader.

****CAUTION****

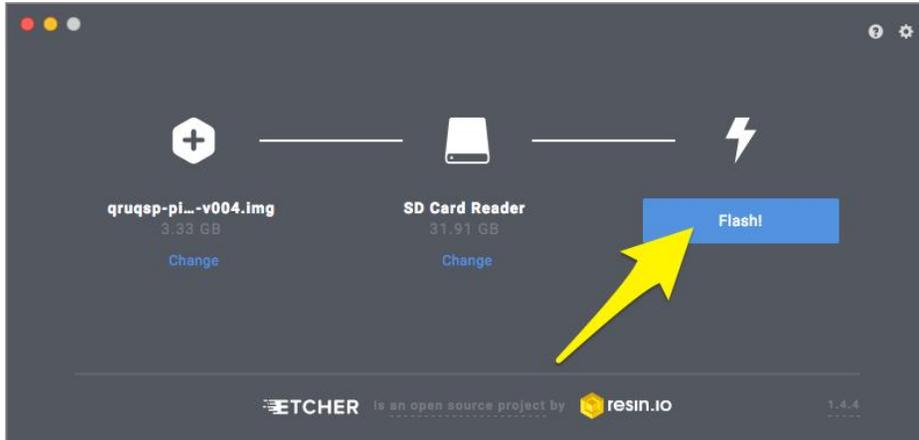
Make sure you select the correct drive, selecting the wrong drive can result in erasing your computers internal drive!



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Step 10 of 17 - Flash SD Card

Click on Flash! to start the process, this will take several minutes.



Step 11 of 17 - Remove SD Card

Once the Flash! process is completed, you can remove the SD card from your computer.



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Step 12 of 17 - Insert SD card in Pi

If you haven't already assembled your Raspberry Pi, do this now and insert the RTL-SDR with antenna.

Once assembled, insert the SD card into the pi and plug in the power.

If you have a HDMI monitor and/or keyboard and mouse you can also plug those into the Pi before powering on. These are optional and not required.

Step 13 of 17 - Find the IP Address of your Pi

You now need to figure out what IP Address your Pi was assigned on your network so you can connect to it. For this you'll need to login to your WiFi router and access the DHCP lists.

Unfortunately all routers are different and we are unable to provide specific instructions. If you have difficulty with this, you can contact your internet provider and they will be able to provide instructions for your WiFi router.

If you have added an HDMI monitor & keyboard to your Pi, you can login using the username pi and password raspberry and then type the command "ifconfig" and hit enter. This will return your network interfaces and their IP Addresses.

Once you find your IP address, write it down you will need this to login to your Pi.

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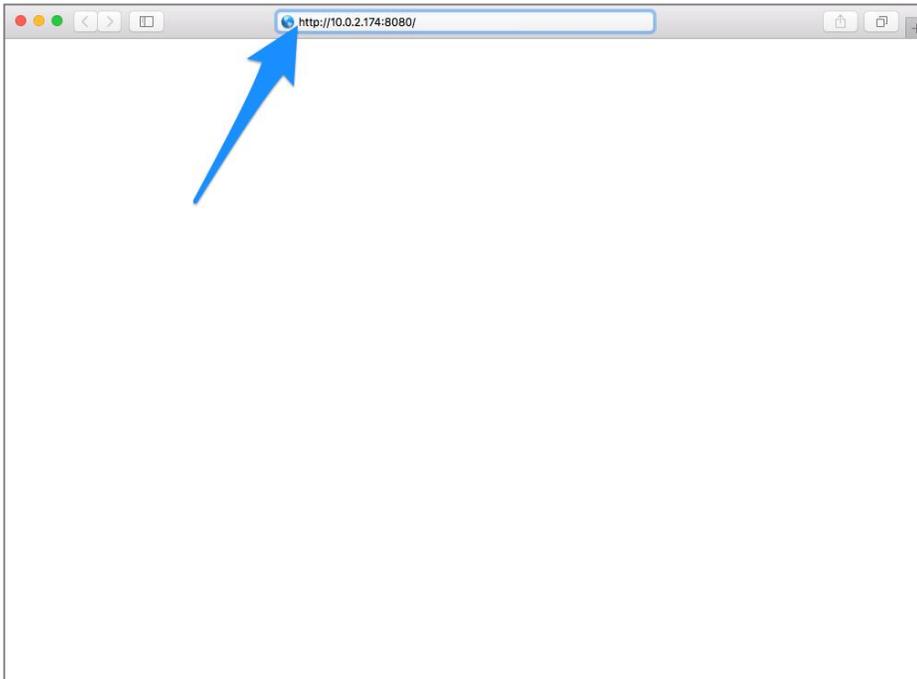
Step 14 of 17 - Connect to your Raspberry Pi

Once you have the IP address of your Pi, in your web browser go to the address below, entering your IP address.

`http://A.B.C.D:8080/`

Depending on the IP Addressing of your network, this may look like

`http://192.168.0.105:8080/` or `http://10.0.2.123:8080/`

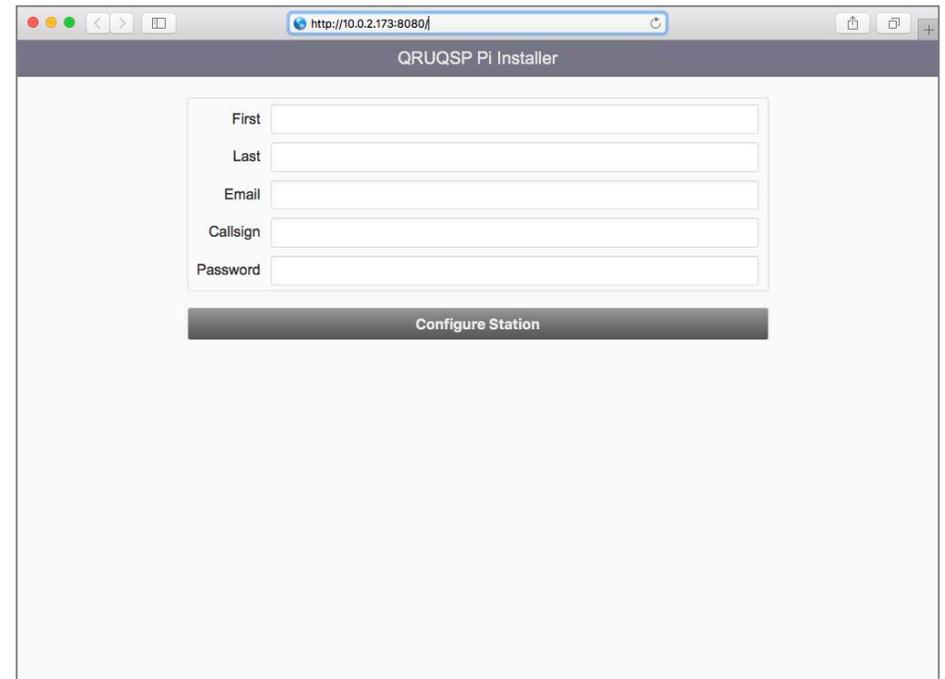


Step 15 of 17 - Enter your details

You should now see a page with a form requesting some details about you. Enter your First & Last name, Email address, Callsign and Password.

The password can be anything of your choosing, it will be used to login to Pi web interface.

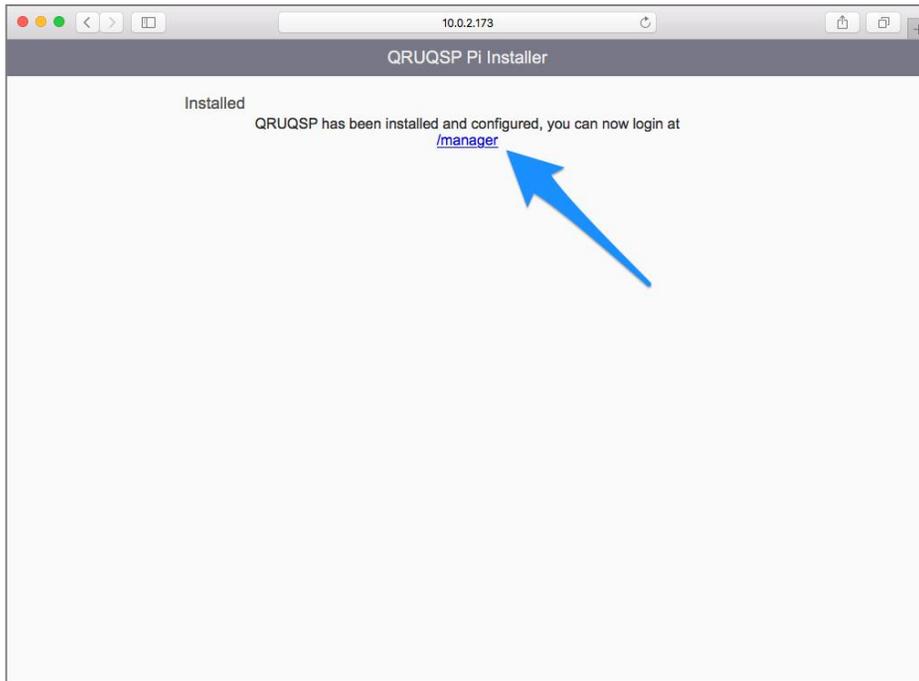
Once you have entered everything, click on Configure Station. This will take a couple of minutes to configure the system.



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Step 16 of 17 - Setup completed

Once the Pi has been configured, click on the Manager link to login.



Step 17 of 17 - Bookmark this page

At this time, it's recommended that you bookmark this page in your browser. This will allow you to easily return to your Raspberry Pi without remembering your ip address.

Once bookmarked, enter callsign and password. Your callsign is your username.

Click Remember me so you don't have to enter this each time you return.

Click on Sign In.

Now you can continue to the Configuring Weather Sensors tutorial.

