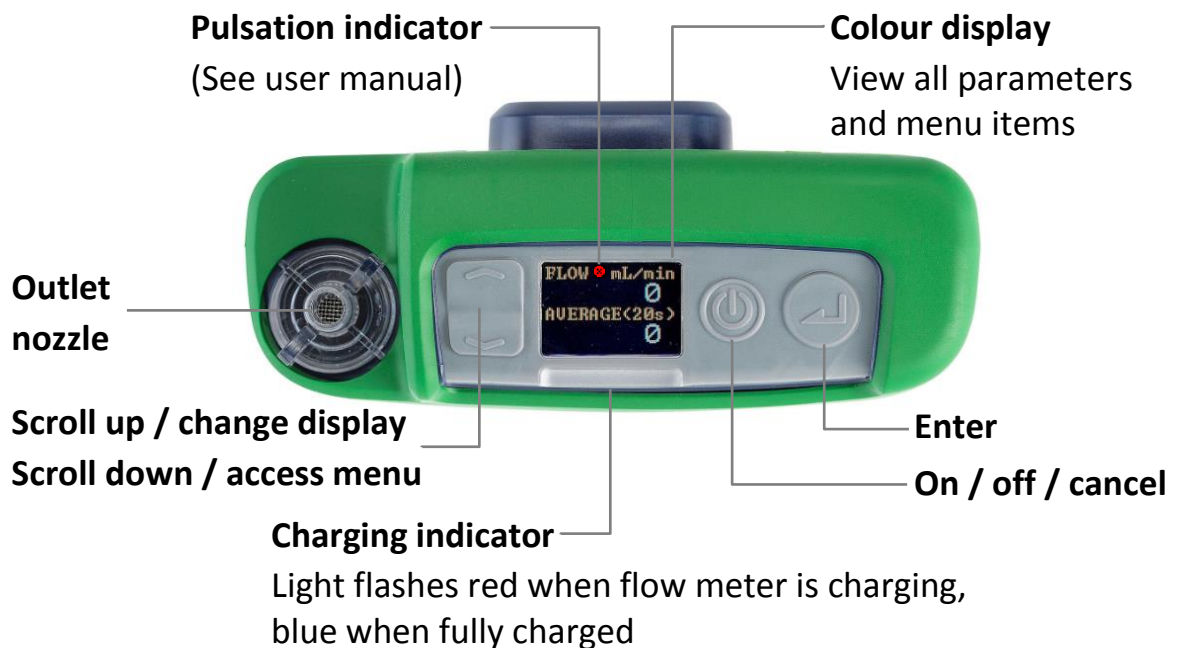


### Safety


For important safety information relating to detailed use of the Flow Detective, refer to user manual (HB4087) available for download at [www.casellasolutions.com](http://www.casellasolutions.com).

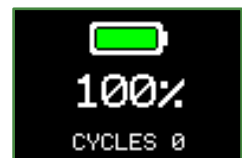
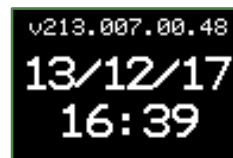
### Controls



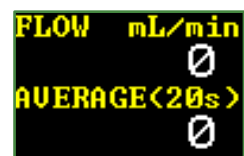
### Turn the Flow Detective on/off


#### To turn on:

On the top of the Flow Detective, press . The sequence on the right is displayed:




After displaying the battery charge percentage, the dashboard screen with instant and average flow is shown.



Press  to switch between the flow dashboard and the environmental dashboard, showing temperature and pressure.

### To turn off the flow meter:

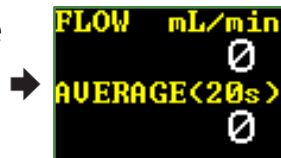
On the top of the flow meter, press and hold  until the countdown has finished and the screen goes blank.




## Settings Menu

This menu is used to alter settings such as averaging time, language and displayed units.




When on the flow dashboard





Press 

The menu will then be shown





Press  or  to highlight the menu item you want to alter, and then press .

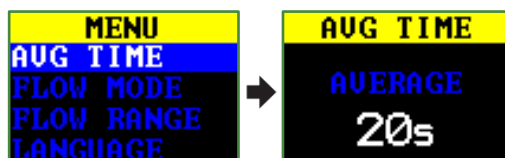
Press  or  to alter any of the settings.





Press  to enter/save a setting or move between values, and press  to go back without saving changes.

Some of the items that can be changed in the settings menu are:

Averaging time (1s- 60s), Flow Mode (Standard or Actual), Flow Range (Low or Normal), Language, Temperature Units, Pressure Units, Flow Units, Time and Date. For example, to set the averaging time:

1. Navigate to **AVG TIME** by pressing  from the dashboard screen, and then press . Averaging time can be set between 1 second and 60 seconds.



2. Press  or  to change the averaging time as required, and then press . Press  to return to the flow display.

For a full description of the settings menu please refer to the handbook (HB4087).

## Manual Pump Calibration

Manual pump calibration is to use the Flow Detective with a standard pump and uses the display of the Flow Detective to read the flow.

1. Assemble the sample train. The sample train consists of the air sampling pump, air sampling head with a filter as well as the necessary tubing. The pump should not be calibrated by itself, the sample train as a whole is used to ensure the whole system is leak free, including having the filter already inserted in the sampling head. This all needs connecting to the flowmeter as shown below.



2. Ensure the connections are secure and that there is no damage or splits in the connecting tubes.
3. Switch the sampling pump on and navigate to the correct location for calibration on the pump – see the instructions for the air sampling pump for more information.
4. With the sampling pump running adjust the flow on the pump until the desired flow is shown on the Flow Detective.

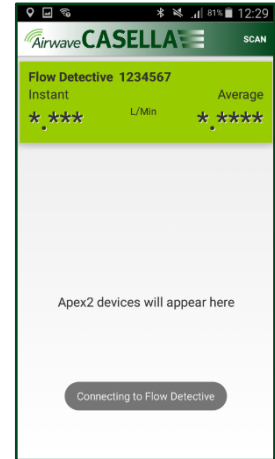
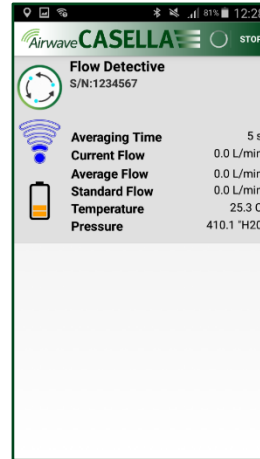
```
FLOW mL/min
2114
AVERAGE<4s>
2113
```

5. Once the flow is stable and at the desired flow, make a note of the average flow value.

## Wireless Calibration Using Airwave

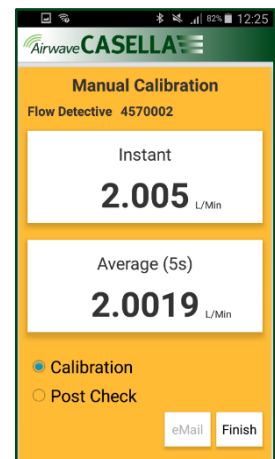
Airwave is a free to download App for iOS and Android and is available from Google Play and Apple App Store. Once installed, it allows wireless Bluetooth connection to the Flow Detective Plus from your mobile device.

1. Open Airwave on your mobile device. Any Flow Detective (Plus model only) in range that is switched on will be displayed. Select the Flow Detective on both displays shown to enter manual calibration mode.

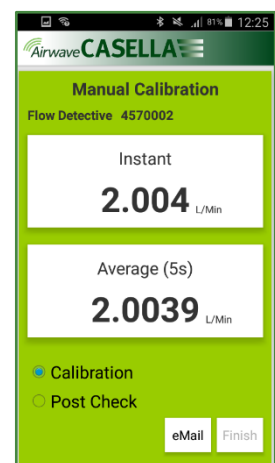


The manual calibration screen will then be displayed. If the calibration required is before sampling select **Calibration**, then adjust the flow on the pump until the desired steady level is reached. Press **Finish** to stop calibration.

*It is also possible to perform a 'Post check' after sampling to check the deviation of flow. The process is the same as step 2, except the pump flow rate is checked but not adjusted.*



2. The background on the Airwave screen will go green to show calibration is complete. Press **eMail** to email calibration data using your mobile device's email client. The content of the email will reflect if is a 'calibration' or a 'post check'.
3. Press 'back' on your mobile device to repeat calibration for other pumps.



**Note:** For calibration of Apex2 pumps, the above process can be further automated, refer to user manual HB4087 for details.