


<b>Issue Date:</b>	13/06/2022	<b>Prepared by:</b>	Chris Zylstra
<b>Rev. Date:</b>	13/06/222	<b>Owned by:</b>	R&D

## How to Operate R&D Pumpdown Testers

### Scope:


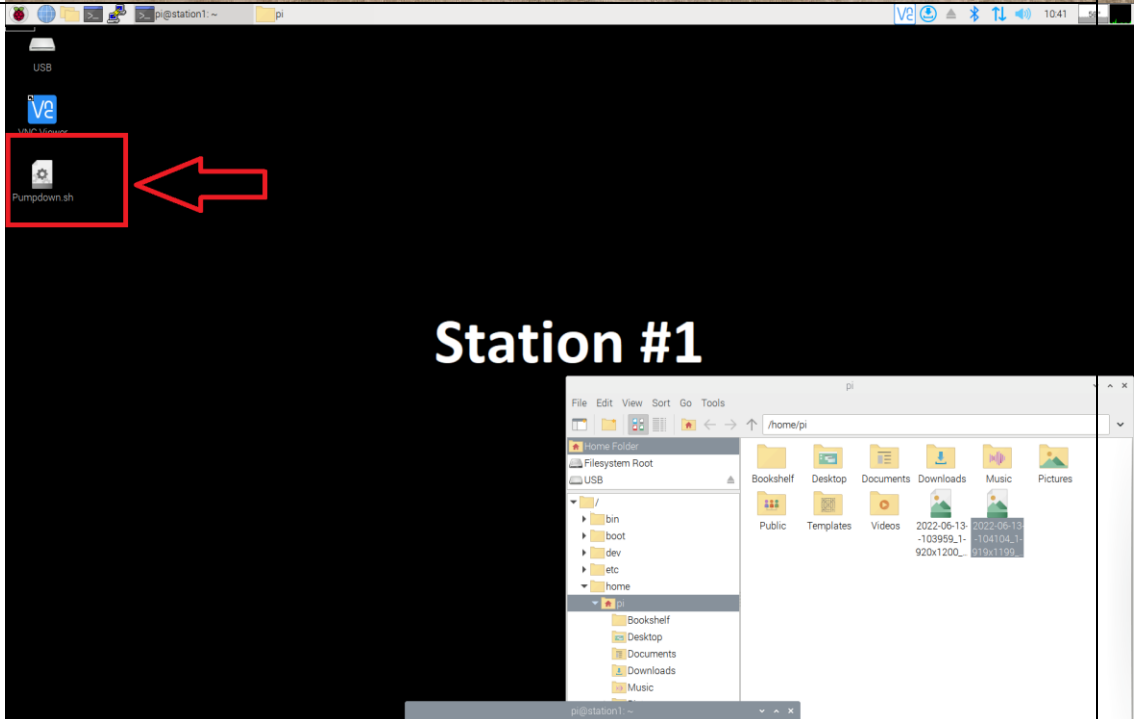
This document illustrates how to setup and use the pumpdown testers in the R&D pumpdown lab

### Basic Procedure:

STEP	Instruction	Notes & Images
1.	Mount dispenser on the metal backplate and place drip catch bin under dispenser.	

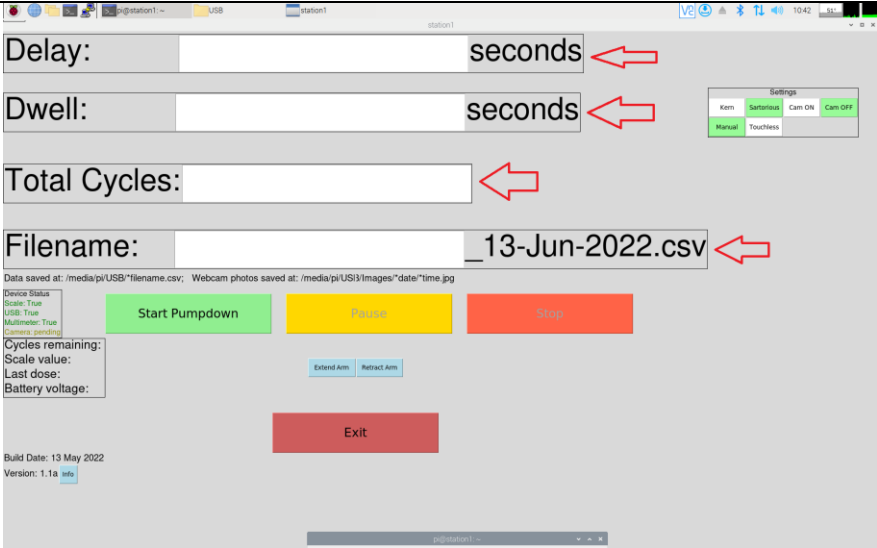
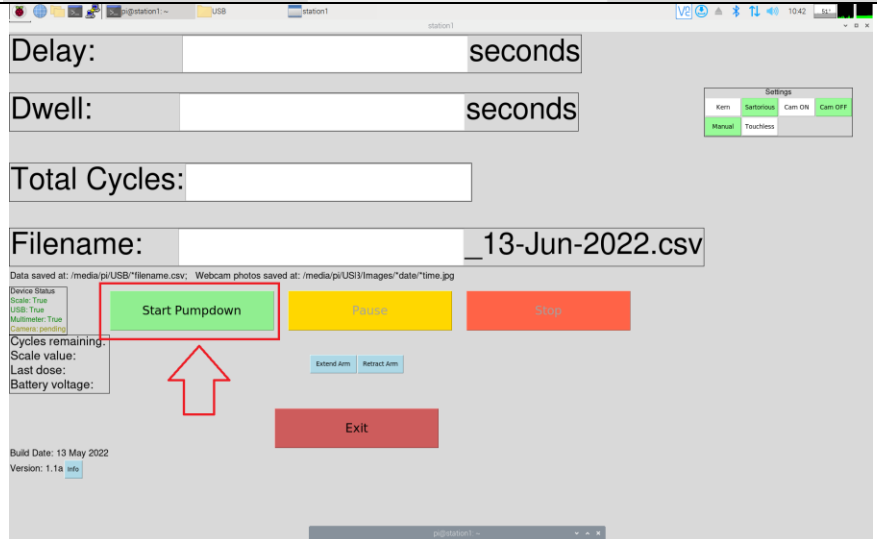
## WORK INSTRUCTION#: WI-0229

<b>Issue Date:</b>	13/06/2022	<b>Prepared by:</b>	Chris Zylstra
<b>Rev. Date:</b>	13/06/222	<b>Owned by:</b>	R&D

2.	Ensure the weight scale is powered on.	
3.	Double click "Pumpdown.sh" on the desktop of the computer.	 <p style="text-align: center; font-size: 24pt; font-weight: bold;">Station #1</p>

## WORK INSTRUCTION#: WI-0229

<b>Issue Date:</b>	13/06/2022	<b>Prepared by:</b>	Chris Zylstra
<b>Rev. Date:</b>	13/06/222	<b>Owned by:</b>	R&D

4.	Enter parameters into boxes: Delay, Dwell, Total Cycles, Filename.	
5.	Click Start to lock in settings and initiate the pumpdown test.	

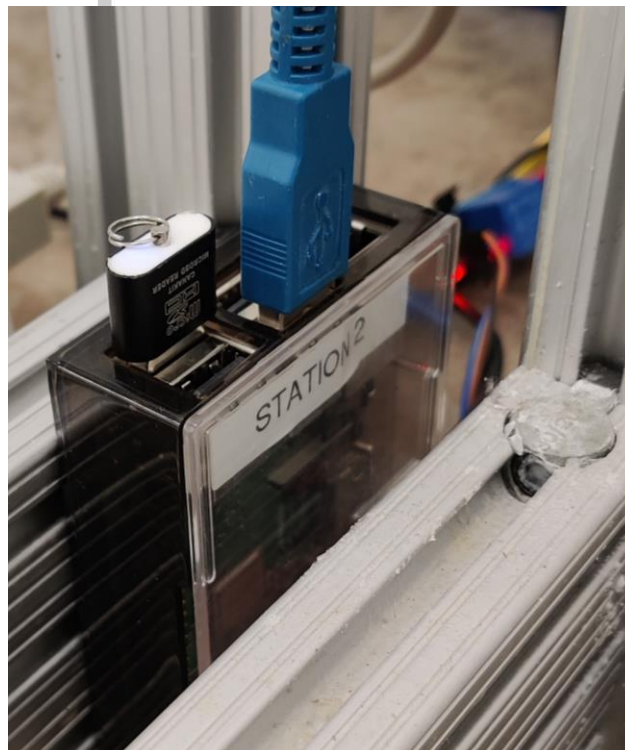
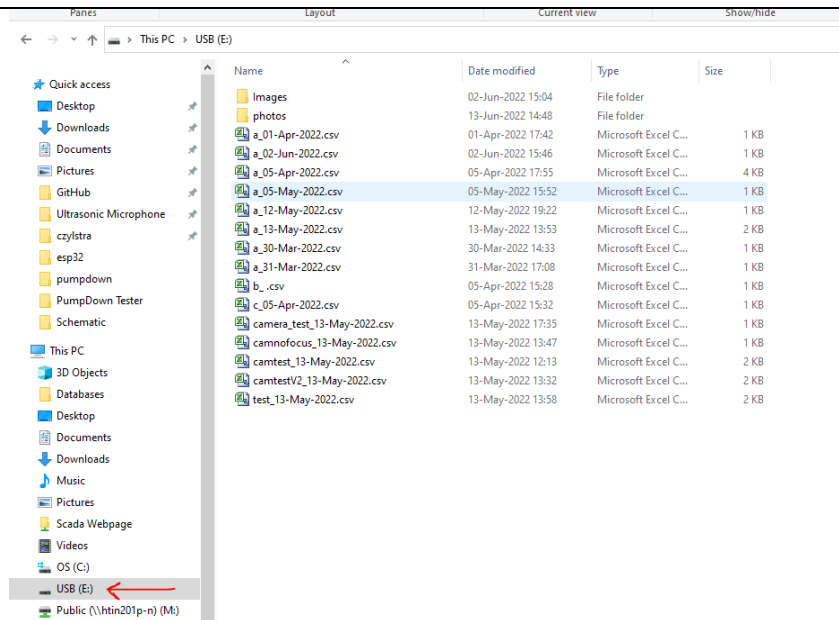
## WORK INSTRUCTION#: WI-0229

<b>Issue Date:</b>	13/06/2022	<b>Prepared by:</b>	Chris Zylstra
<b>Rev. Date:</b>	13/06/222	<b>Owned by:</b>	R&D

6.

When the test is finished (or *Stop* button clicked), remove the USB stick and copy the data to your computer.

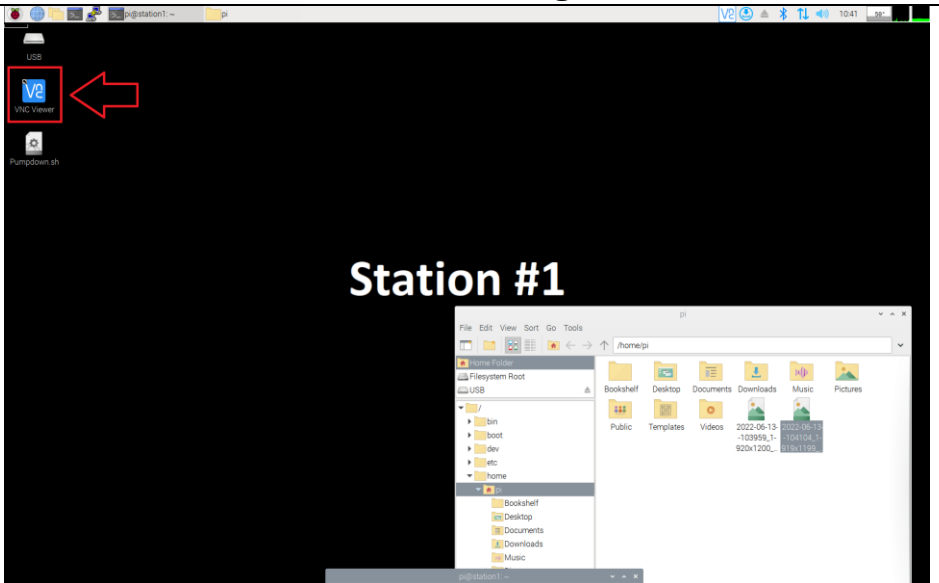
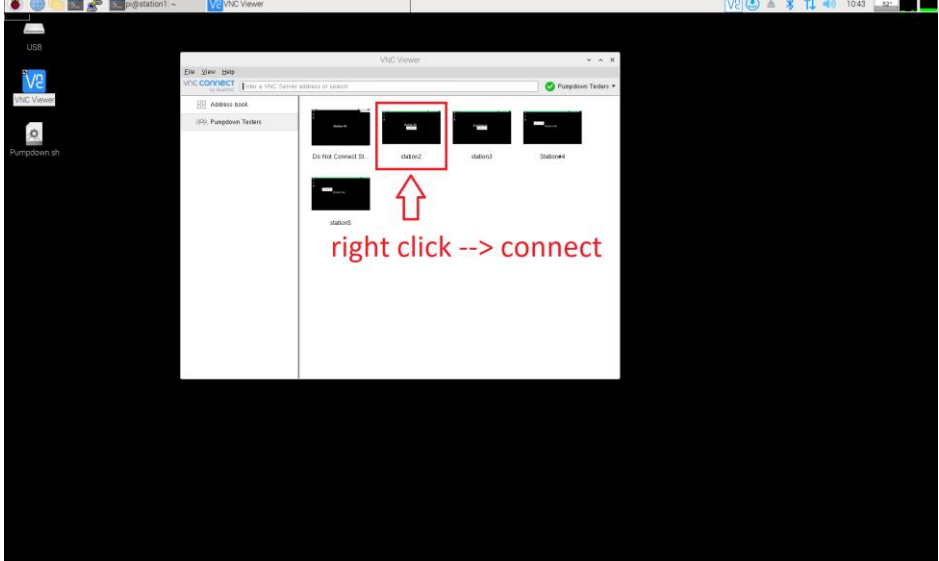
Data is always stored on the USB stick under **filename\_DD-MM-YYYY.csv**



Issue Date:	13/06/2022	Prepared by:	Chris Zylstra
Rev. Date:	13/06/2022	Owned by:	R&D

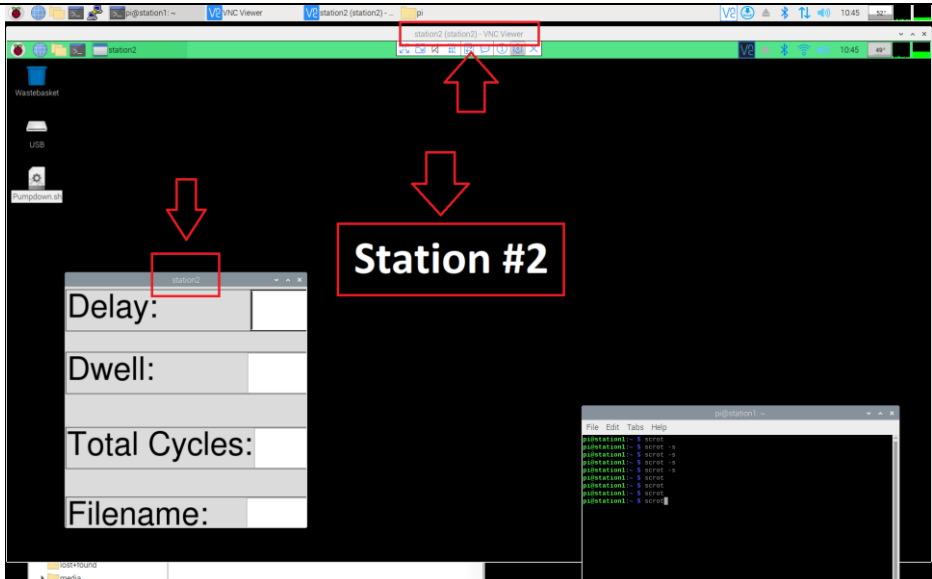
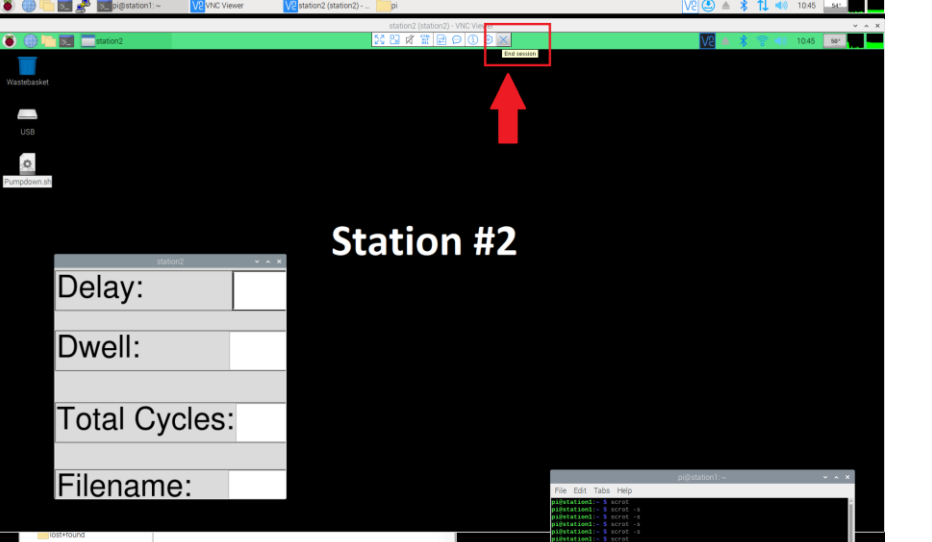
## Remote connecting to Testers:

Pumpdown Testers #2-5 do not have a direct display for each of them. They are connected by remote desktop to Station 1. Follow the instructions to connect to other stations:

STEP	Instruction	Notes & Images
1.	The screen is connected to Station 1, which is the host computer for all the other pumpdowns. Click VNC Viewer Icon on Desktop to open other stations.	
2.	Right click and choose <i>Connect</i> to remote into another station.	

## WORK INSTRUCTION#: WI-0229

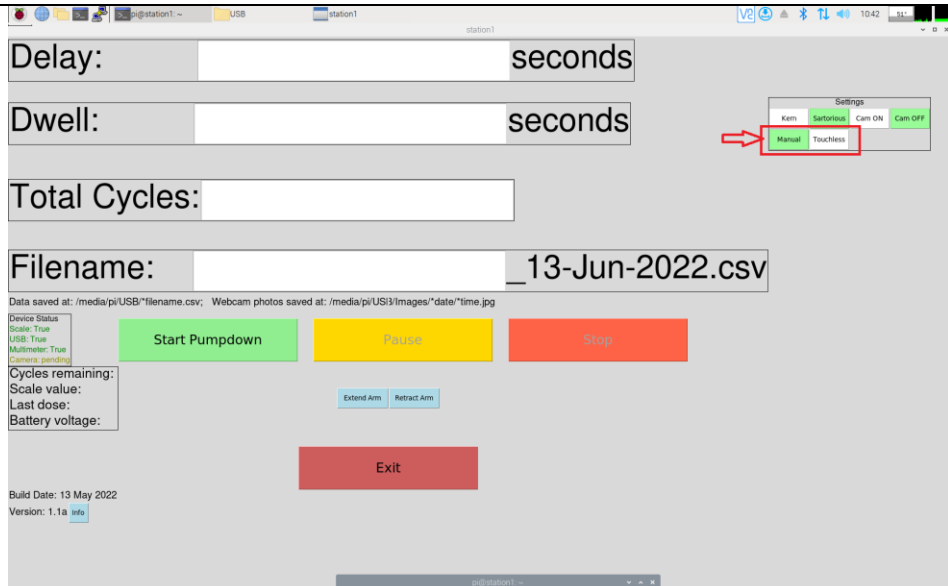
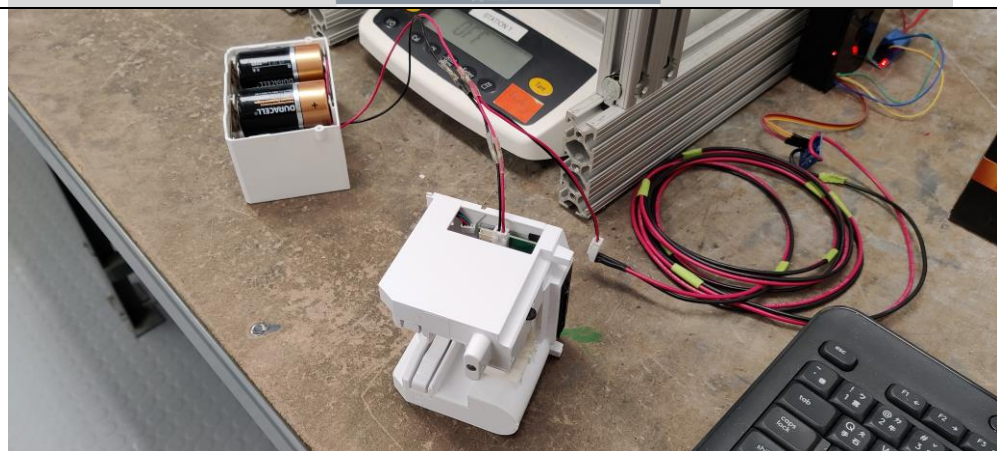
<b>Issue Date:</b>	13/06/2022	<b>Prepared by:</b>	Chris Zylstra
<b>Rev. Date:</b>	13/06/2022	<b>Owned by:</b>	R&D

3.	Observe the desktop background or the title bar of the pumpdown program to realize what station you are connected to.	
4.	Continue with <b>Basic Procedure</b> while connected to alternate stations.	
5.	Click the Blue X at the top bar to return to Station 1. Note that this will not stop the pumpdown running on remote station.	



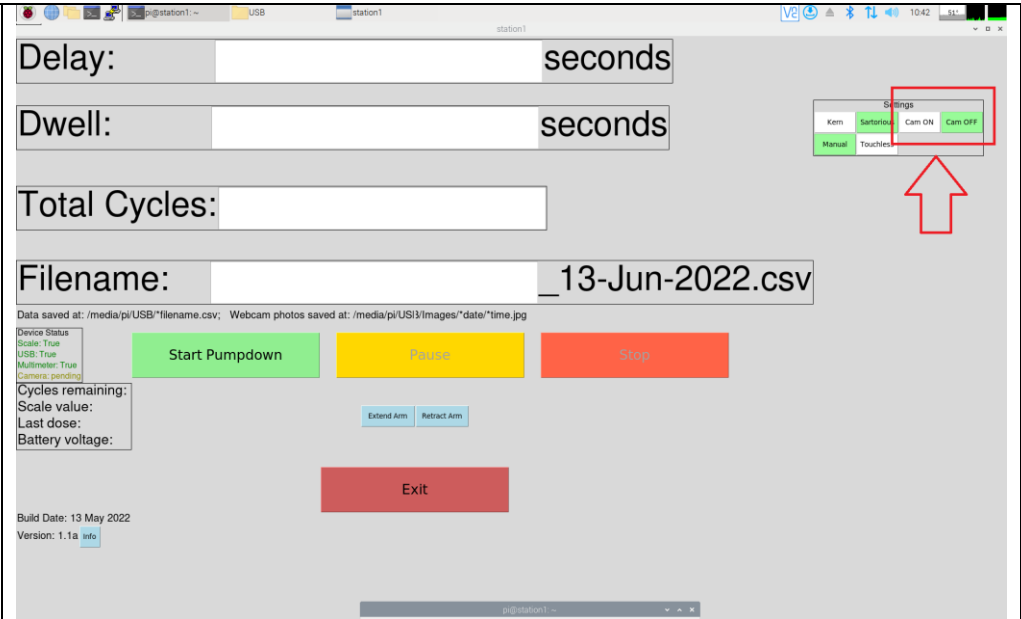
Issue Date:	13/06/2022	Prepared by:	Chris Zylstra
Rev. Date:	13/06/222	Owned by:	R&D

## Using advanced features:

STEP	Instruction	Notes & Images
A1.	If testing a Touchless dispenser, select the Touchless toggle button. This swaps the delay/dwell value in software. (alternatively: swap the input delay/dwell values)	
B1.	Stations 1-2 are outfitted with the hardware required to measure the battery voltage on the Touchless dispenser. Use a battery box with two outputs.	
B2.	Connect one output to the dispenser, and the other output to the measurement wire before starting the pumpdown. Battery voltage will be recorded after each dispense in the file.	

# WORK INSTRUCTION#: WI-0229

Issue Date:	13/06/2022	Prepared by:	Chris Zylstra
Rev. Date:	13/06/222	Owned by:	R&D

C1.	Station 1 is outfitted with a webcam for time lapse. Select the <i>Cam ON</i> toggle button before starting the pumpdown to enable the camera.	
C2.	Photos are stored on the same USB stick as the pumpdown data at /Images/*Date/*time.jpg	