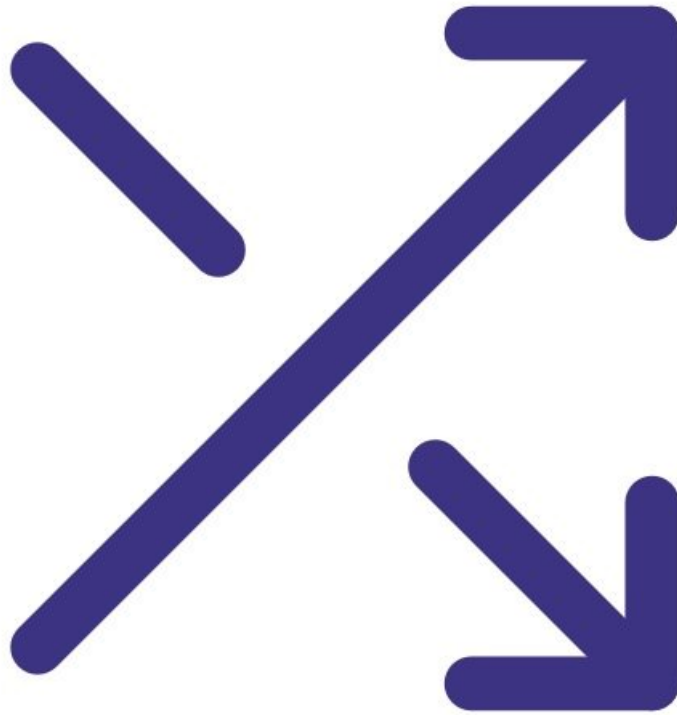


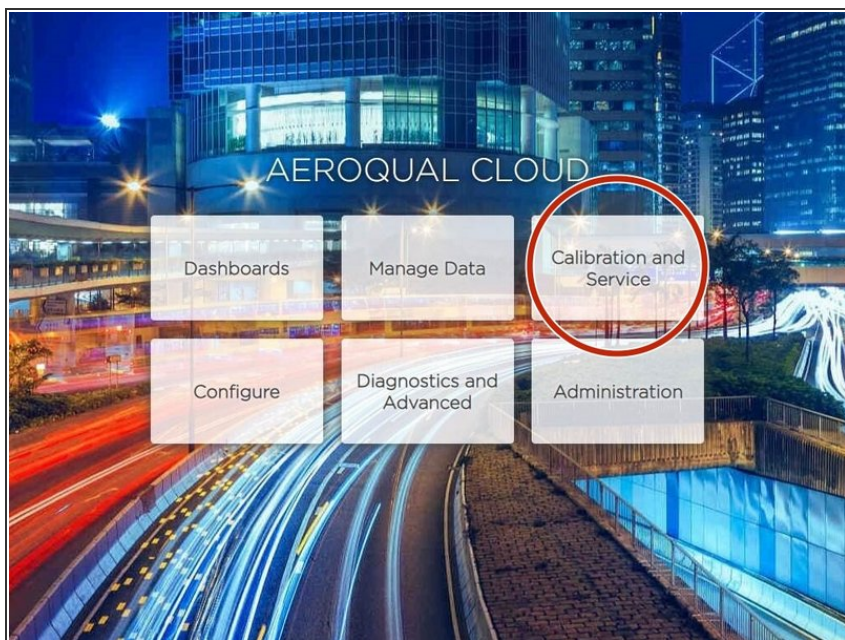


# Adjust offset and gain

Written By: Tanya Taylor



## Step 1 — Enter Calibration and Service app



- Your monitor's software allows you to adjust the offset and gain from two places: **Manual Entry** and **Calibration**.
- Both are accessed by entering the **Calibration and Service** app from your Aeroqual Connect or Aeroqual Cloud home screen.

## Step 2 — View all sensors

<div> <span>Calibration and Service</span> <span>Instrument</span> <span>Sales &amp; Support Demo AQY (AQY Demo-001)</span> <span>Journal</span> <span>Tanya</span> </div>										
Normal operation										
Calibration										
History										
Manual Entry										
Manual service mode <span>Start</span>										
Calibration parameters										
	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m³	PM2.5 µg/m³	TEMP °C	RH %	DP °C	
Gain	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Offset	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	
a	1.100		2.550							
b			1.870							
Real time measurements <span>Last 5 readings</span>										
Time	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m³	PM2.5 µg/m³	TEMP °C	RH %	DP °C	Inlet
1:21 p.m.	-6.9	22.7	27.0	25.1	0.4	0.3	16.77	71.6	11.6	Sample
1:20 p.m.	-5.2	24.0	26.6	25.5	0.3	0.2	16.89	72.5	11.9	Sample
1:19 p.m.	-4.5	25.3	27.1	26.0	0.4	0.4	16.88	72.8	12.0	Sample
1:18 p.m.	-4.9	25.7	27.8	25.9	0.4	0.3	16.87	72.3	11.9	Sample
1:17 p.m.	-4.3	25.6	27.1	25.5	0.3	0.3	16.88	72.1	11.8	Sample
Average	-5.2	24.7	27.1	25.6	0.4	0.3	16.86	72.3	11.8	
Std Dev	0.9	1.1	0.4	0.3	0.1	0.0	0.04	0.4	0.1	

- The **Manual Entry** area displays offsets and gains for all your configured sensors.
- These are displayed in a **Calibration parameters** table, along with any additional calibration parameters such as the **a** value.
- ❗ The **a** value is associated with the NO2 channel (if you have the Ox/O3 system).

## Step 3 — Change offset or gain

Calibration parameters									
	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>	TEMP °C	RH %	DP °C
Gain	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000
Offset	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
a	1.100		2.550						
b			1.870						
Save changes? <span>Cancel</span> <span>Save</span>									
Real time measurements <span>Last 5 rea</span>									
Time	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>	TEMP °C	RH %	DP °C
1:30 p.m.	-3.4	26.0	26.8	25.3	0.4	0.4	16.30	73.1	11.5
1:29 p.m.	-4.4	26.3	27.9	25.7	0.4	0.3	16.30	73.2	11.5
1:28 p.m.	-5.6	25.5	28.3	25.7	0.5	0.4	16.30	73.2	11.5
1:27 p.m.	-6.0	24.3	27.6	25.5	0.4	0.4	16.29	72.5	11.3
1:26 p.m.	-6.9	23.8	27.9	25.3	0.3	0.2	16.36	72.2	11.3
Average	-5.3	25.2	27.7	25.5	0.4	0.3	16.31	72.9	11.4
Std Dev	1.2	1.0	0.5	0.2	0.1	0.1	0.02	0.4	0.1

$$\text{New offset} = \text{current offset} + (\text{gas reading} / \text{gain})$$

- To change the offset, gain or **a** value for a particular sensor, simply click the cell to select the current value.
- Type in your new value and when the **Save** button appears, select it.
- ❗ If you're using the **Manual Entry** area to upload offset adjustments, you need to manually calculate your new offset using the equation shown before making any changes.

## Step 4 — View measurements

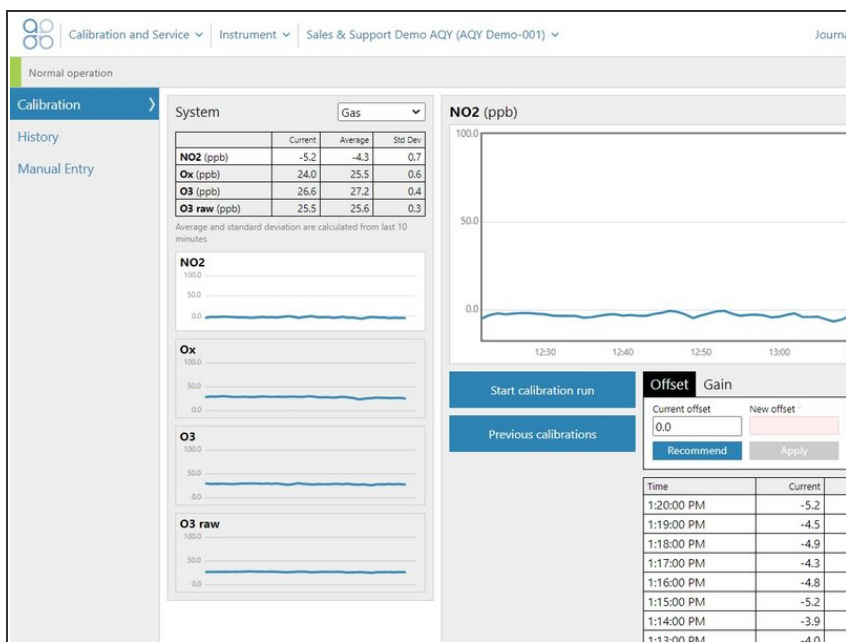
parameters								
NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m³	PM2.5 µg/m³	TEMP °C	RH %	DP °C
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
		2.550						
		1.870						

measurements								
NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m³	PM2.5 µg/m³	TEMP °C	RH %	
4.3	25.4	27.0	25.9	0.4	0.4	16.33	70.6	
3.8	25.1	26.2	25.5	0.7	0.6	16.26	69.4	
3.6	25.2	26.2	25.5	0.6	0.5	16.44	69.5	
4.5	25.1	27.0	25.9	0.4	0.4	16.50	69.6	10.9 Sample
5.4	24.7	27.4	25.9	0.4	0.3	16.50	69.6	10.9 Sample
4.3	25.1	26.8	25.7	0.5	0.4	16.41	69.8	10.9
0.6	0.2	0.5	0.2	0.1	0.1	0.10	0.4	0.1

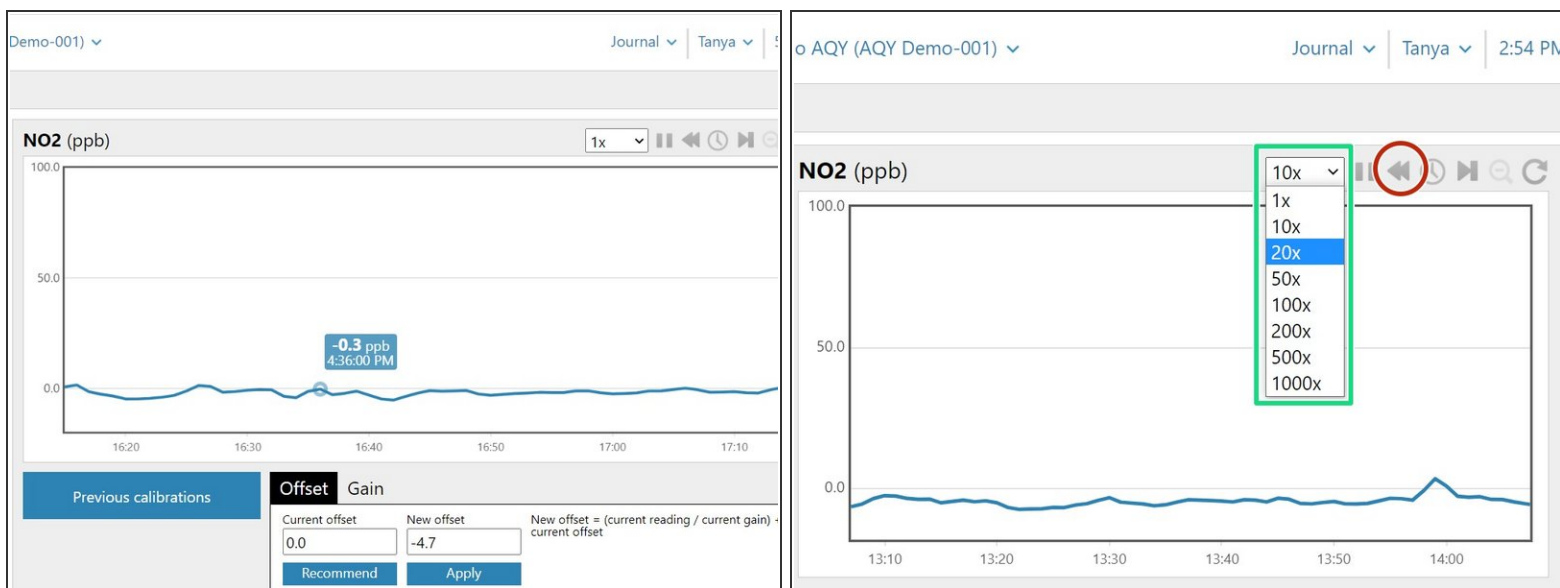
- The **Manual Entry** area also shows real-time measurements for all your configured sensors, as well their average and standard deviation.
- To show more or less readings, and therefore alter the associated average and standard deviation, select a different display option from the drop-down.


## Step 5 — Focus on single gas



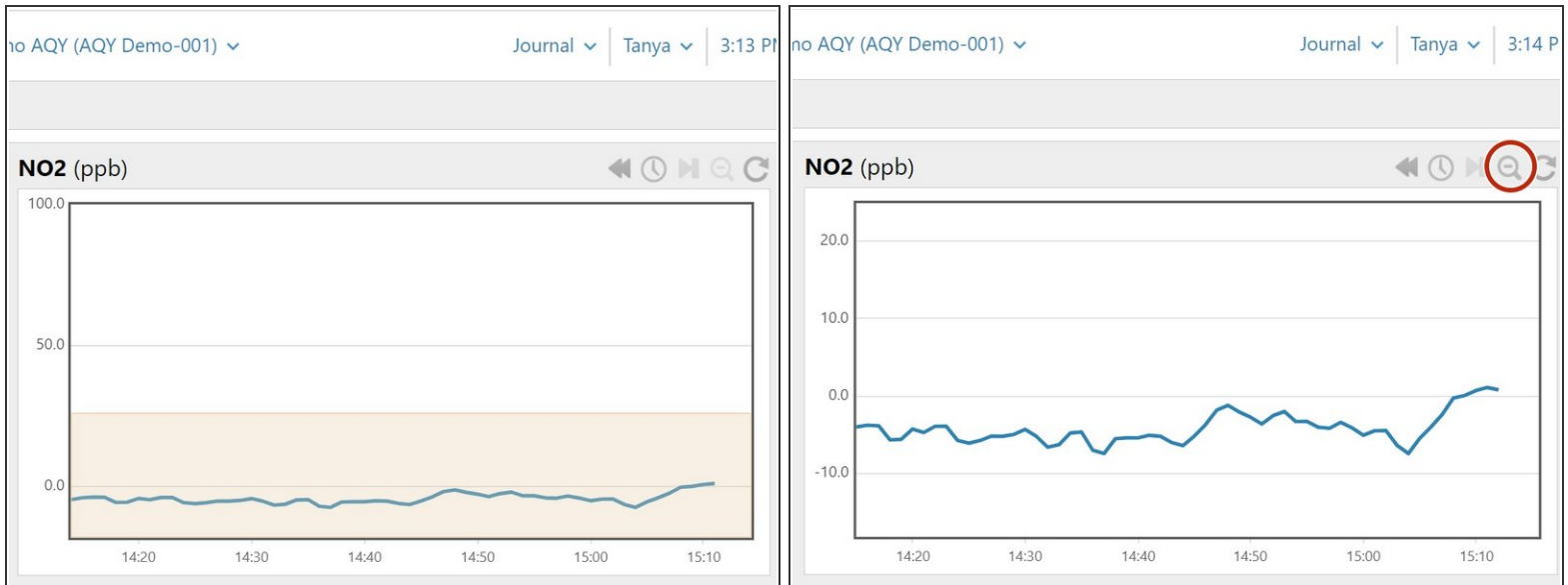
- The **Calibration** area of the **Calibration and Service** app allows you to focus on a single gas channel while that gas is being calibrated.
- Select **Gas** from the drop-down list in the **System** panel.
- Click the channel of interest from the list of gas modules.

## Step 6 — View response in line graph



- View the response of the gas in a real-time line graph. By default, the graph shows the last 60 readings.
- Hover your cursor over any point in the line to view the measurement recorded for that minute.
- To see historical measurements, click the **Rewind** icon on the graph's toolbar.
-  Any data highlighted green or yellow is data recorded during a calibration run (zero data is green and span data is yellow).
- To speed up the rate at which the graph returns to the current time, select a higher value from the drop-down.

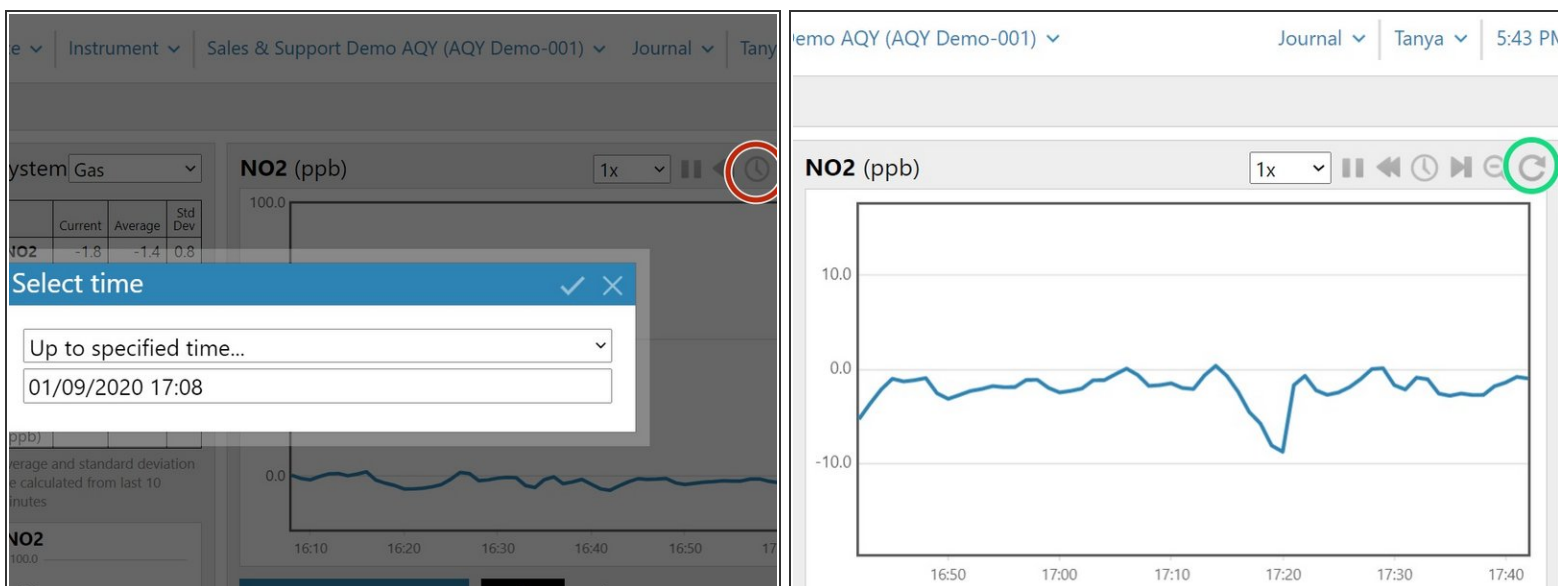
## Step 7 — Zoom in



- To decrease the increments on the Y axis (and therefore magnify your graph), click and drag your mouse over the area you want to magnify.
- To zoom back out, click the **Zoom out** icon on the toolbar.

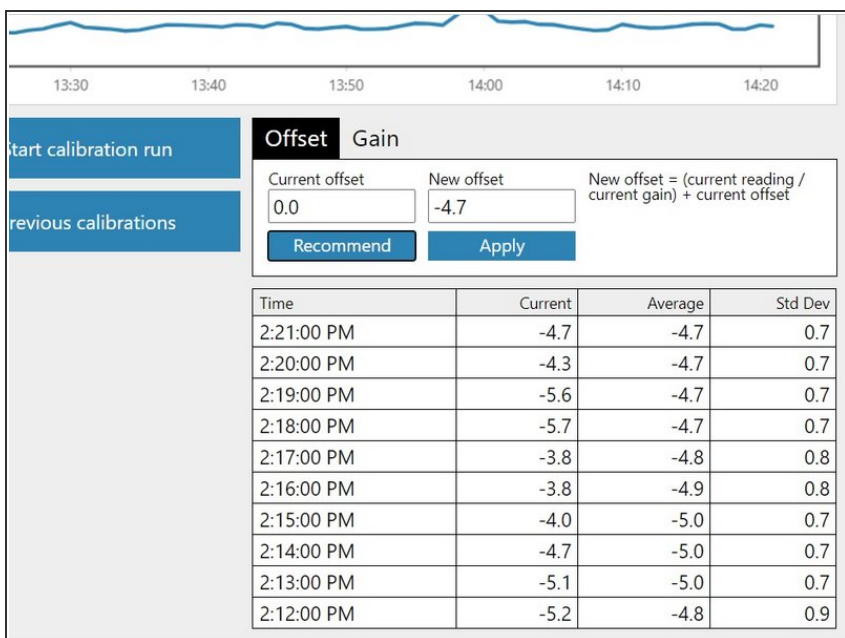


## Step 8 — Change end date




- To change the end date and time for measurements on the chart, click the **Select time** icon and select a date and time.
- To reset the graph back to its default configuration at any time, click **Reset** in the toolbar.

## Step 9 — Change offset or gain



- Click the **Recommend** button to calculate the offset or gain for your selected gas.
- Click the **Apply** button to apply the calculated offset or gain.
- When the confirmation message appears, select the tick in the title bar.

- 
-  The **Calibration** area also includes a table that shows the average and standard deviation for the last 10 measurements.
- 

For further support, contact [Technical Support](#).