

Calibration theory

Simple calibration

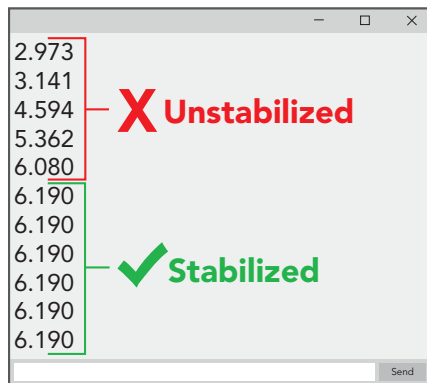
UART mode

Continuous readings

Advanced calibration

I²C mode

Continuously request readings



The most important part of calibration is watching the readings during the calibration process.

It's easiest to calibrate the device in its default state (UART mode, with continuous readings enabled).

Switching the device to I²C mode after calibration **will not** affect the stored calibration. If the device must be calibrated in I²C mode be sure to **continuously request readings** so you can see the output from the probe.

Calibration order

If this is your first time calibrating the EZO™ pH circuit, we recommend that you follow this calibration order.



1 Mid point



2 Low point



3 High point

Single, Two point, or Three point calibration

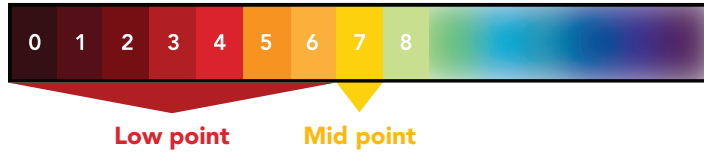
No calibration



Single point calibration



Two point calibration



Two point calibration will provide high accuracy between **7.00** and the second point calibrated against, such as a **4.00**.

Three point calibration

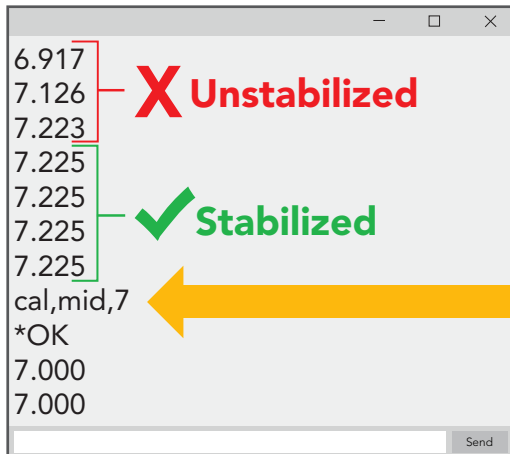
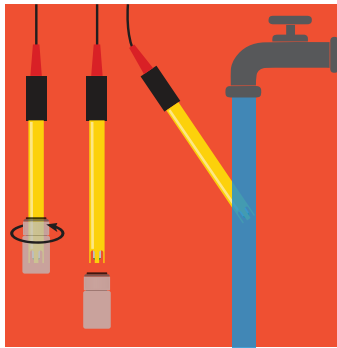


Three point calibration will provide high accuracy over the full pH range. Three point calibration at **4.00**, **7.00** and **10.00** should be considered the standard.

The first calibration point must be the Mid point (pH 7.00)

Mid point calibration

Remove the soaker bottle and rinse off the pH probe. Remove the top of the pH **7.00** calibration solution pouch. Place the pH probe inside the pouch and let the probe sit in the calibration solution until the readings stabilize (*small movement from one reading to the next is normal*).



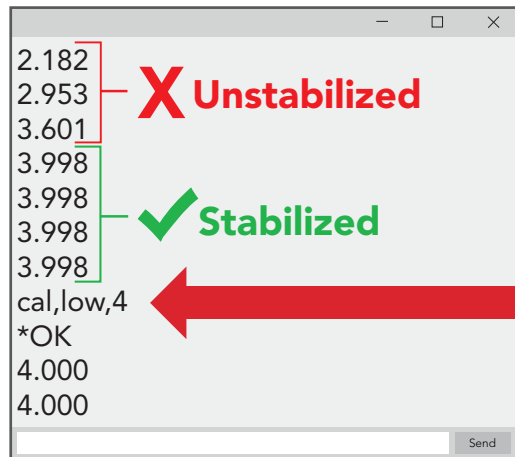
Once the readings have stabilized, issue the Mid point calibration command. **"cal,mid,7"**

After 20 mins, the calibration solution inside an open pouch is no longer considered accurate.

Dispose of the unused solution, after calibration.

Low point calibration

- Rinse off the probe before calibrating to the low point.
- Open the pouch of pH **4.00** calibration solution, and place probe inside the pouch.
- Wait for readings to stabilize (1 – 2 minutes).



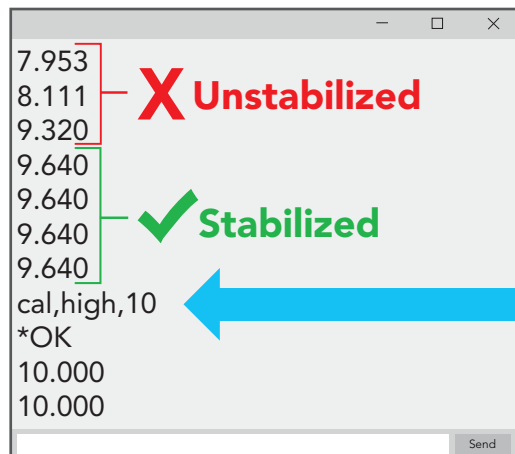
Once the readings have stabilized, issue the Low point calibration command. **"cal,low,4"**

After 20 mins, the calibration solution inside an open pouch is no longer considered accurate.

Dispose of the unused solution, after calibration.

High point calibration

- Rinse off the probe before calibrating to the high point.
- Open the pouch of pH **10.00** calibration solution, and place probe inside the pouch.
- Wait for readings to stabilize (1 – 2 minutes).



Once the readings have stabilized, issue the High point calibration command. **"cal,high,10"**

After 20 mins, the calibration solution inside an open pouch is no longer considered accurate.

Dispose of the unused solution, after calibration.



Issuing the cal,mid command after the EZO™ pH circuit has been calibrated, will clear the other calibration points. Full calibration will have to be redone.



The EZO™ pH circuits default temperature compensation is set to 25° C. If the temperature of the calibration solution is +/- 2° C from 25° C, consider setting the temperature compensation first. **Temperature changes of < 2° C are insignificant.**