Series 4 Portable Salt & Conductivity Meter Manual

SALCON II

EDT directION
ELECTROCHEMISTRY PRODUCTS

SETTING UP

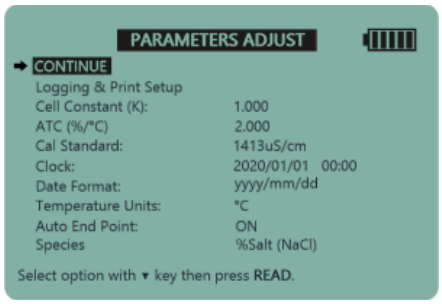
BATTERY INSTALLATION:

Remove the battery cover by loosening the retaining cross head screw. Please note this screw has a retainer and will therefore remain with the cover to prevent loss.

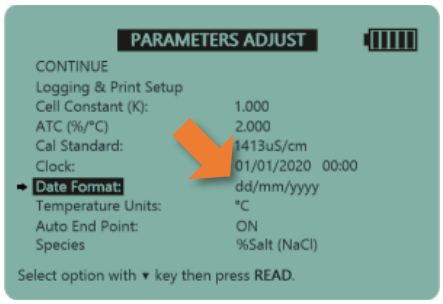
Once open unpack the 4 AA Batteries supplied and insert ensuring the polarity is correct for each battery. Replace the cover.

SETTING THE DATE & TIME:

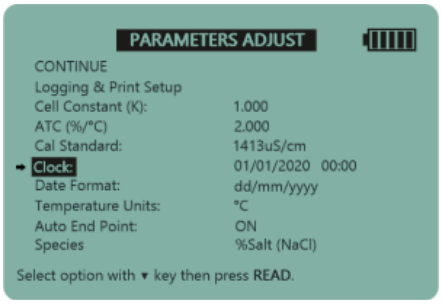
Switch the unit on using the **power** button.



Press the **right arrow** key to enter the Parameters Adjust screen.

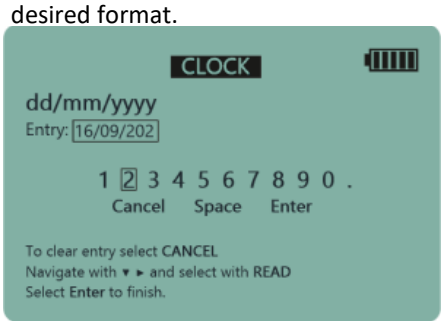


Scroll down to the Date Format option and press **READ** until you reach the desired format.



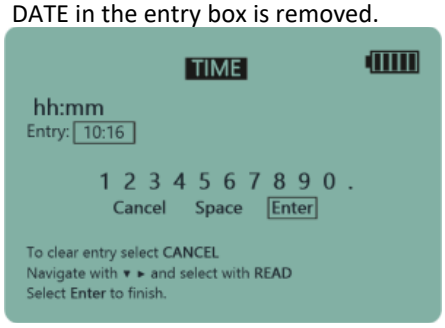
Scroll down to the Clock option using the **down arrow key** and press **READ**.

Select CANCEL using the **down arrow** key and press **READ** until the current DATE in the entry box is removed.



Select the current date digit by selecting the correct number and pressing **READ**.

When the entry box contains the correct date, select ENTER and press **READ**.



Repeat the steps above to enter the correct time and then press **READ**.

Press **READ** to return to Salt Concentration mode.

CALIBRATION AND MEASUREMENT

SALT CONCENTRATION CALIBRATION:

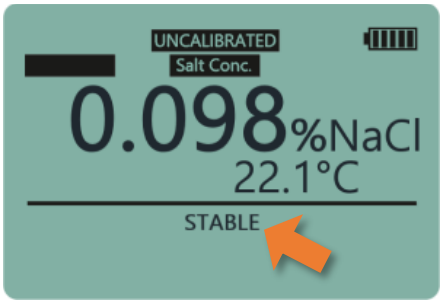
Accurate Salt measurement requires that you do not cross contaminate standards and samples. Before using the rugged probe ensure it is rinsed with deionised water and blotted dry. Repeat this procedure when transferring between all standards and samples.

Connect the conductivity cell into the Mini DIN Connector on the top rear of the instrument and follow the below instructions:

Switch on the meter, you are now in Salt Concentration Mode.

Press **CAL** to start a calibration.

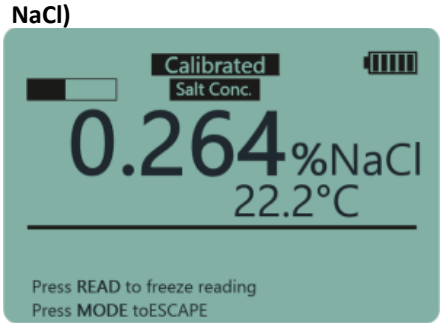
Insert the probe into the SALCON standard (swirl if required) and press **READ**.



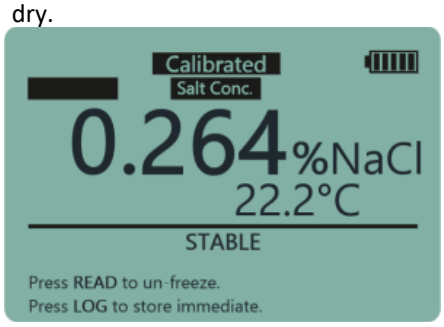
When stable the meter will set itself to the calibration value. (**0.06%Cl or 0.1% NaCl)**

Remove the cell from the solution. Rinse with de-ionised water and blot dry.

To measure a sample, press **READ** and then insert the probe into the sample.



Once the probe is in the sample press **READ.**



The auto end-point will freeze the display when it is stable.

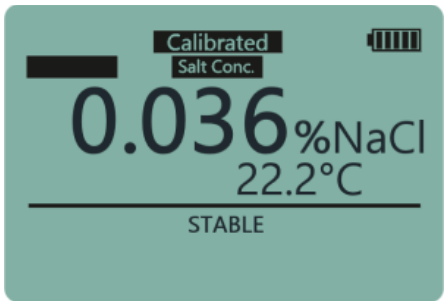
SUBTRACTING A BLANK:

Many samples including the measurements of Chloride in Aggregates require that the sample be washed with tap/local water until the Chloride level is below a specified target concentration. This local water has a conductivity which must be subtracted from the sample result to get an accurate Chloride concentration.

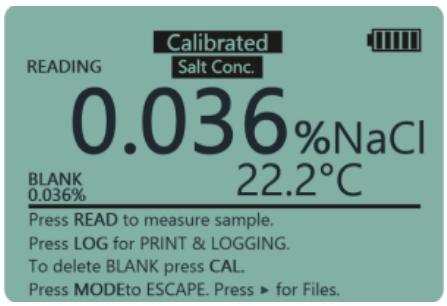
This applies to all samples which are diluted, washed, or prepared with water. Even distilled water can have an inherent conductivity that affects the final result. This should therefore be subtracted.

In the measure sample screen. Press **CAL** to subtract a BLANK.

Insert the probe in the BLANK and press **READ.**



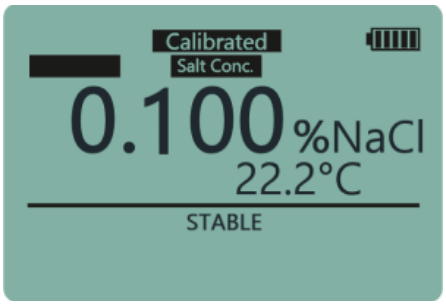
The auto end-point will freeze the display when it is stable.



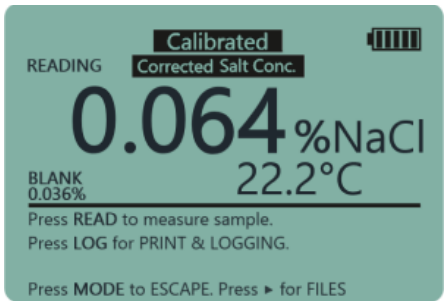
The BLANK will be displayed in the bottom left of the main display.

Remove the cell from the BLANK and press **READ** to measure a sample.

Insert the probe into the sample and press **READ.**

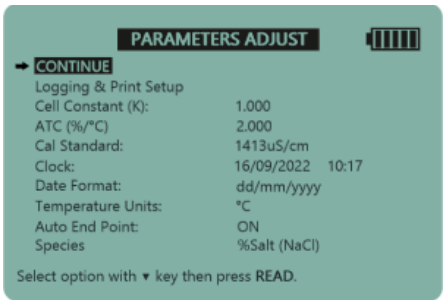


The auto end-point will freeze the display when it is stable.

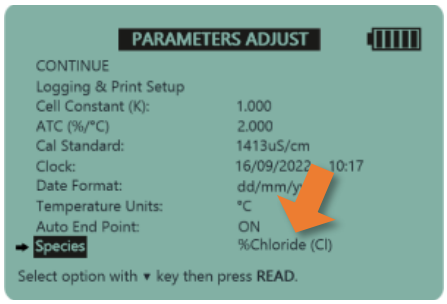


The displayed result is the CORRECTED SALT CONCENTRATION.

CHANGING FROM %Salt (NaCl) TO %Chloride (Cl):



Press the **right arrow key** to enter the Parameters Adjust screen.

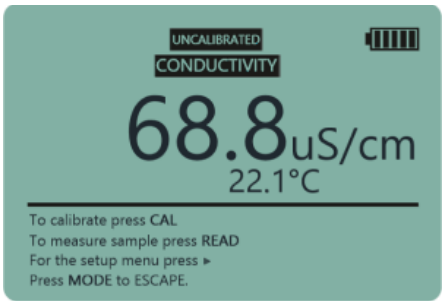


Scroll down to 'Species' and press **READ** to toggle between NaCl and Cl.

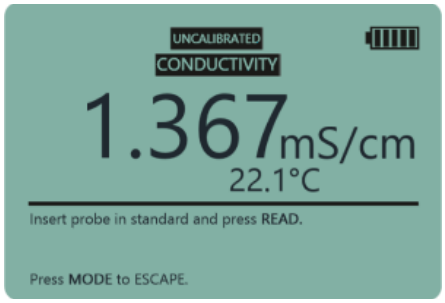
Scroll back to 'CONTINUE' and press **READ.**

CONDUCTIVITY CALIBRATION:

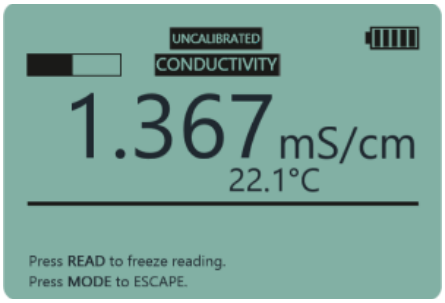
Accurate conductivity measurement requires that you do not cross contaminate standards and samples. Before using the Conductivity probe ensure it is rinsed with deionised water and blotted dry. Repeat this procedure when transferring between al standards and samples.



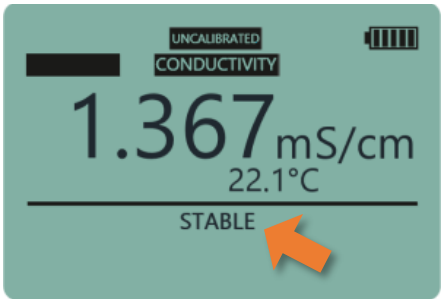
Switch on the meter and press **MODE** until you are in Conductivity Mode.



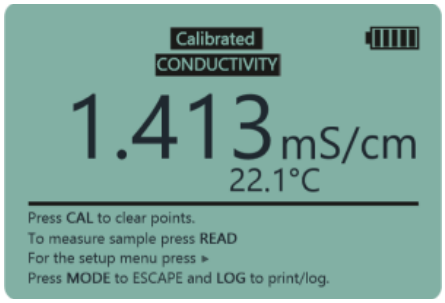
Press **CAL** to start a calibration.



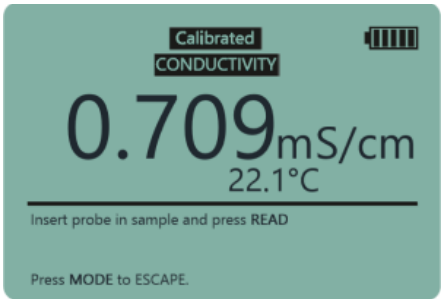
Insert the probe into the solution (swirl if required) and press **READ**.



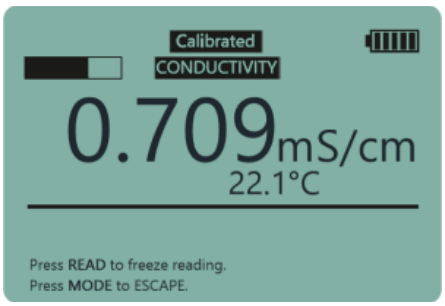
When stable the meter will set itself to the calibration value.



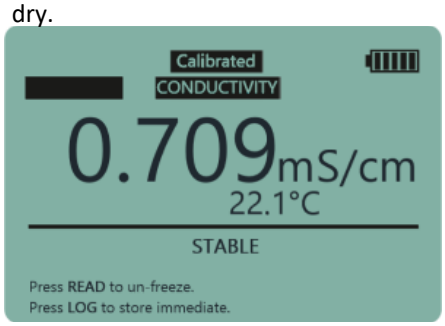
Remove the cell from the solution. Rinse with de-ionised water and blot dry.



To measure a sample, press **READ** and then insert the probe into the sample.



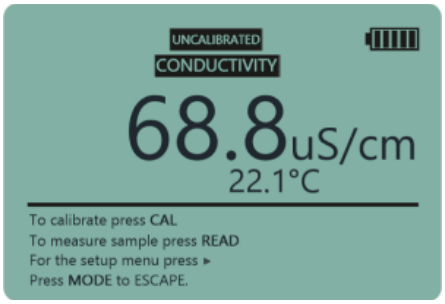
Once the probe is in the sample press **READ.**



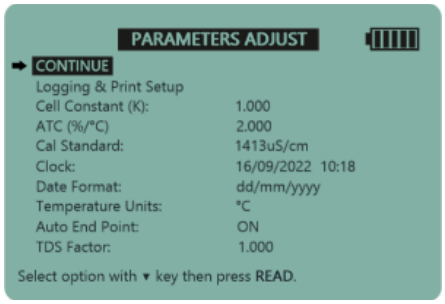
The auto end-point will freeze the display when it is stable.

USING DIFFERENT CALIBRATION STANDARDS:

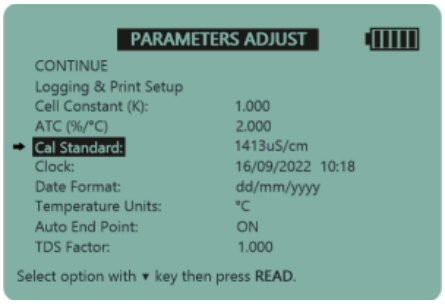
The **SALCON II** comes complete with a **SALCON** standard solution only.
This standard is automatically set up in the menu.
To change to a **12.88mS/cm** standard for example, do the following:



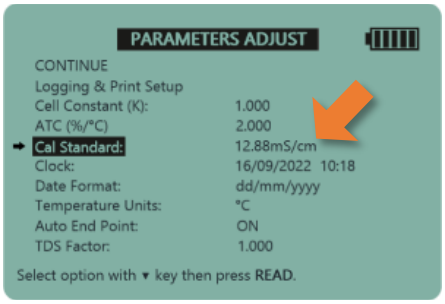
Switch on the meter and press **MODE** until you are in Conductivity Mode.



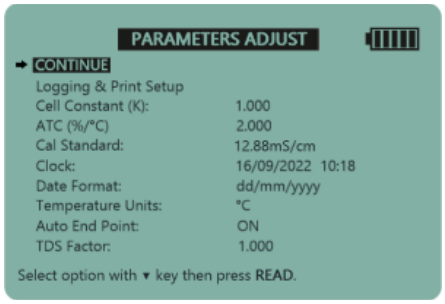
Press the **right arrow** key to enter the Parameters adjust screen.



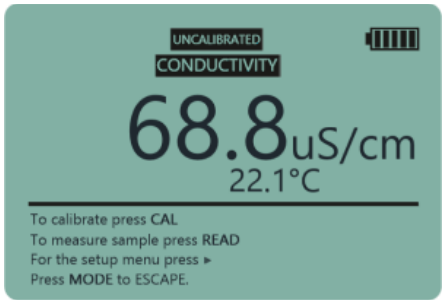
Scroll down to Cal Standard and press **READ.**



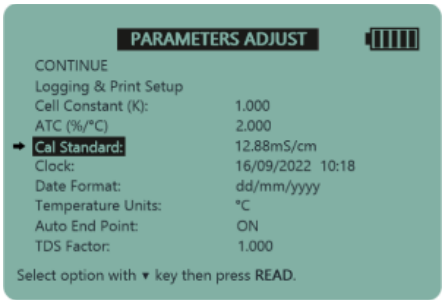
The instrument now selects the 12.88mS/cm Standard.



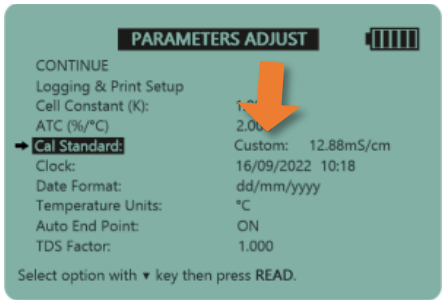
Scroll back up to CONTINUE and press **READ.**



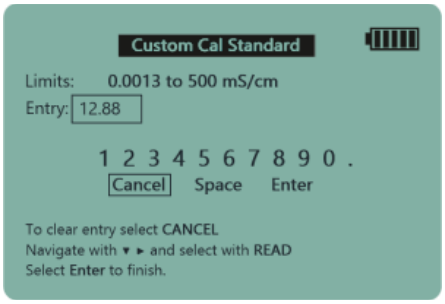
Calibrate as above but using the 12.88mS/cm Standard Solution.



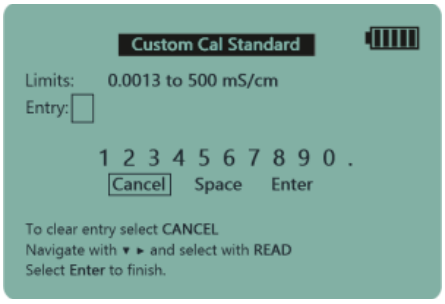
To select a different standard, scroll down to Cal Standard in setup.



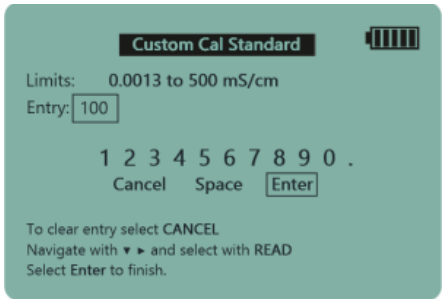
Press **READ** until the 'Custom Standard' option appears.



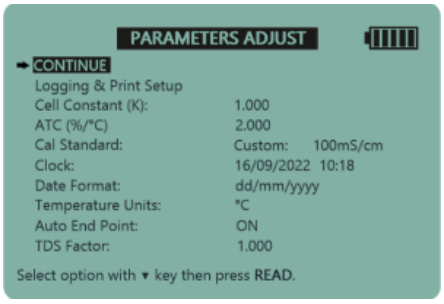
Then press the **right arrow** key to enter the Custom Cal Standard screen.



Remove the current entry by selecting CANCEL and pressing **READ.**



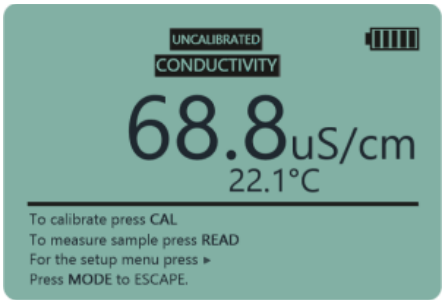
Input the custom value then select ENTER and press **READ.**



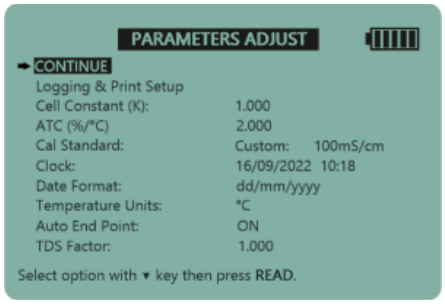
Scroll to CONTINUE and press **READ.** You may now calibrate.

USING CONDUCTIVITY CELLS WITH DIFFERENT CELL CONSTANTS (K-Values):

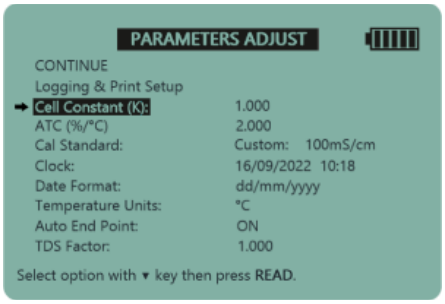
The instrument default is set at K=1. The actual cell constant is calculated during calibration however some applications require the input of a cell constant as the calibration. The most common cell constants for specialist applications are K=0.1 and K=10. To set a cell constant:



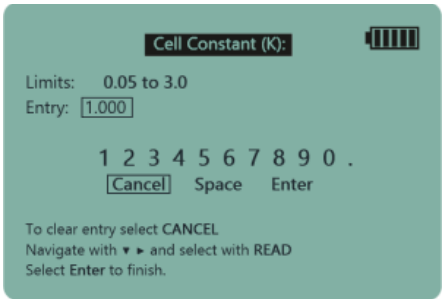
Press **MODE** until you are in Conductivity Mode.



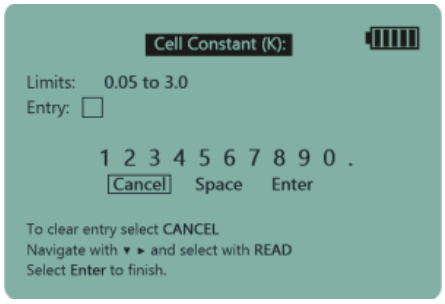
Press the **right arrow** key to enter the Parameters adjust screen.



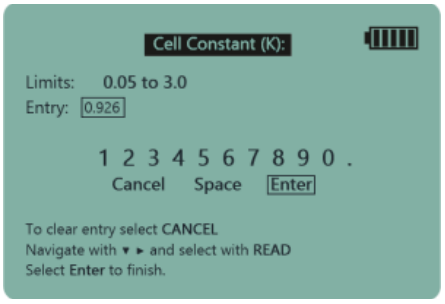
Scroll down to Cell Constant and press **READ.**



You are now in the Cell Constant Screen.



Select CANCEL and press **READ** to clear the current entry.



Input the custom Cell Constant. Select ENTER and press **READ**.

You have now entered the custom Cell Constant. Select CONTINUE and press **READ** to return to Conductivity Mode. You may now carry out a calibration or take on sample readings.

For instructions on how to use the Data Kit, please read the DK400 manual which can be found in the document files for Data Kit for Series 4 Portable Meters (DK400).

Specification

Accuracy (Conductivity)	±0.2% of Reading
ATC/Temperature	ATC across the entire range
Auto-ranging (Conductivity)	Selects the correct unit range automatically.
Battery Life	200 hours continuous use - auto switch off and power saving options
Chloride Concentration	Direct Reading as % Chloride - Resolution 0.001% - Range 0-30% (Saturation)
Conductivity Range	0-999.9 mS/cm Autoranging - Auto Unit Selection
Conductivity Resolution	0.01uS/cm in the low range. Otherwise 4 Significant Figures
Connection	Mini DIN
Data Output	Mini USB - outputs CSV - 38,400 Baud
Data Storage	Storage of up to 64 files - Logging max 10,000 data points
Data Logging	64,000 data points - Log 10 seconds to 99 hrs, 59mins ,59 secs - Log interval minimum 1 second.
Dimensions	175x88x48mm
Reference Temperature	Set at 25 degrees C
Temperature Coefficient	2% Per Degree Over The Whole Range
Temperature Range	-30 to +130 Degrees Centigrade
Weight	350g - Meter only

Related Products

Salcon II Standard (500ml)

1413µS/cm Conductivity Standard

K=1 Glass Conductivity Cell

www.edt.co.uk/product/salcon-ii-salt-concentration-meter-kit