

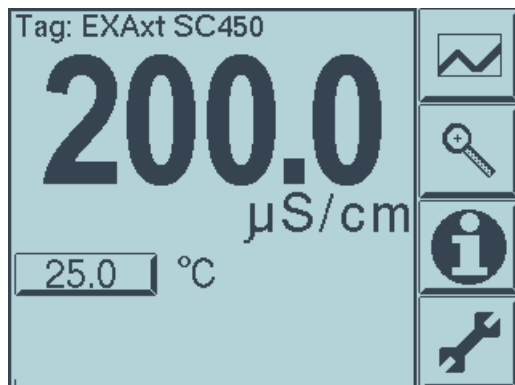
SC450 – Programming Percent Concentration Custom Curves

There are two choices for programming the SC450 for Percent Concentration measurement. The simplest, is to select one of the “built-in” tables already provided in the SC40. However, if none of these Tables meet the application requirements, then the second option of creating your own Table specific to your needs can be used.

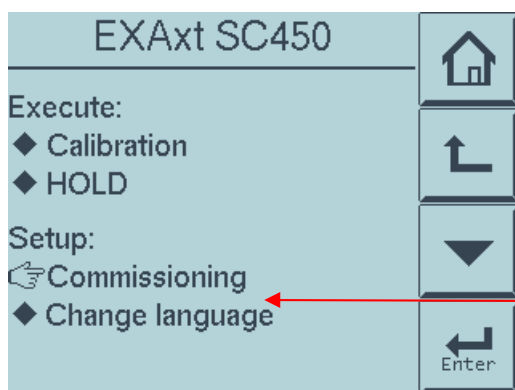
This Tech Note is designed to guide you through the programming steps required for Custom curves. All of the steps you will follow are in your SC450 Instruction Manual, but we have pulled out just those steps.

You will be programming the Analyzer to display in “Percent Concentration”; programming the desired Percent Concentration Matrix; Setting your 4-20 mA output and finally, setting (or turning off your Alarm contacts to eliminate any error codes being displayed).

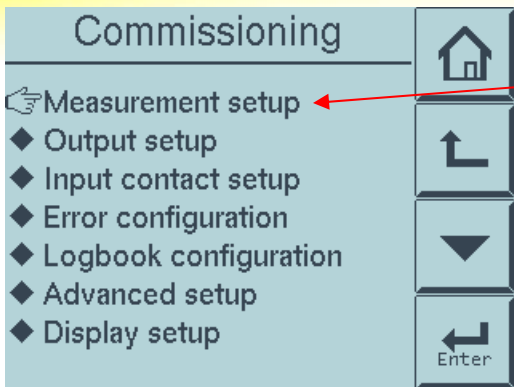
Option One - Programming using Preset Concentration Matrix



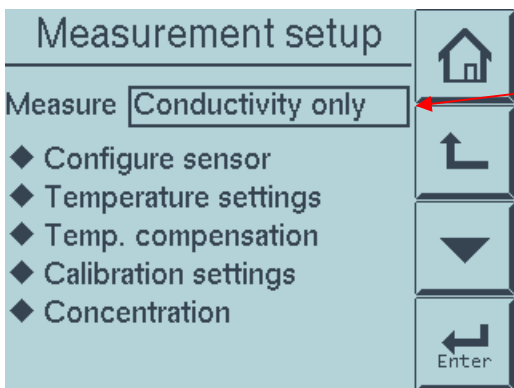
At the opening Screen – Press the **WRENCH** Key



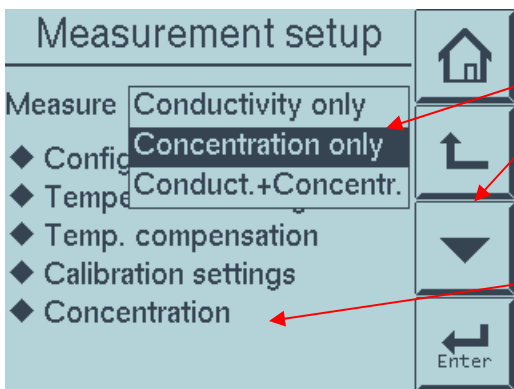
Press the **Commissioning** diamond



Press the **Measurement setup** diamond



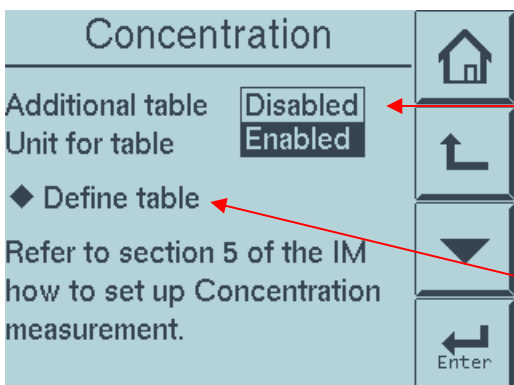
At the Measurement setup screen you will see that **Conductivity only** is displayed. Press the dropdown box to reveal the other options.



Using the Down Key, select **Concentration only**

THEN . . .

Press the **Concentration** diamond



Press the dropdown box and select **Enabled** (next to additional table)

THEN . . .

Press the **Define Table** diamond

Concentr. table

Clear table?	No action
Check values?	No action

Enter values

Press the **Enter Values** diamond

Concentr. table 1/3

1.*	S/cm	%
2.	S/cm	%
3.	S/cm	%
4.	S/cm	%
5.	S/cm	%
6.	S/cm	%
7.	S/cm	%

◆ Next * = mandatory

You need to know what you min and max percent concentrations will be and what the conductivity values will be throughout the range.

The program only requires you to know the min and max value but in order to have an accurate matrix it is good to know values in between.

New value: _ S/cm

Units 0-9	7	8	9
.	4	5	6
0	1	2	3

To Enter a conductivity value press next to the number and the following screen will pop up, where you use the numeric key pad to select you concentration number.

New value: _ %

-	7	8	9
.	4	5	6
0	1	2	3

To Enter a value press next to the % and the following screen will pop up, where you use the numeric key pad to select you concentration number.

Concentr. table 1/3		
1.*	S/cm	%
2.	S/cm	%
3.	S/cm	%
4.	S/cm	%
5.	S/cm	%
6.	S/cm	%
7.	S/cm	%
Next	* = mandatory	

To move thru the screens press the **Next** diamond

Concentr. table 2/3		
8.	S/cm	%
9.	S/cm	%
10.	S/cm	%
11.	S/cm	%
12.	S/cm	%
13.	S/cm	%
14.	S/cm	%
Next	none mandatory	

Concentr. table 3/3		
15.	S/cm	%
16.	S/cm	%
17.	S/cm	%
18.	S/cm	%
19.	S/cm	%
20.	S/cm	%
21.*	S/cm	%
Finish	* = mandatory	

On the third screen you have to input the Max percent and the conductivity value

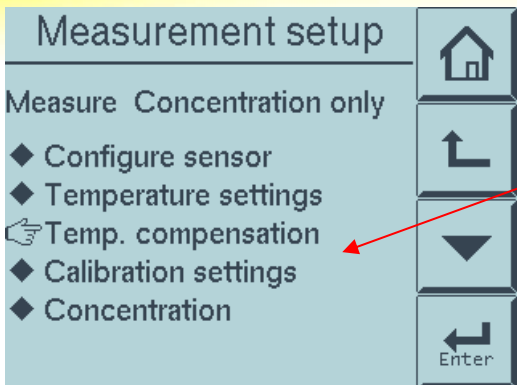
Select Finish once all the desired values have been entered thru your range.

Concentr. table	
Clear table?	No action
Check values?	No action
Enter values	

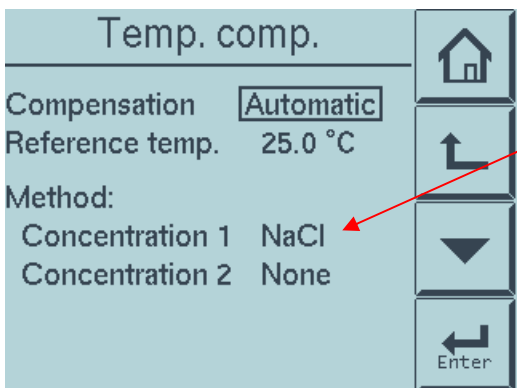
You will be returned to this screen automatically.

Then...

Press the return arrow until you return to the measurement screen. You now have to set up the instrument to use your user defined matrix

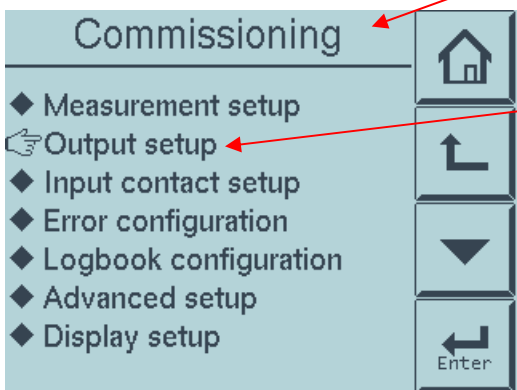


Do set up the instrument to use your user defined matrix for percent concentration press the Temp. Compensation diamond

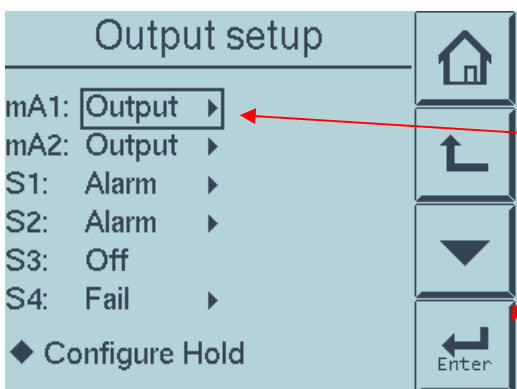


Make sure that the Concentration is set for **NaCl**

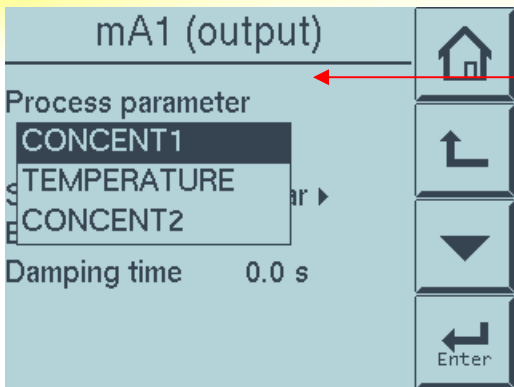
NOW . . . Press the **RETURN** Key (3 times) until the **Commissioning** screen comes up again.



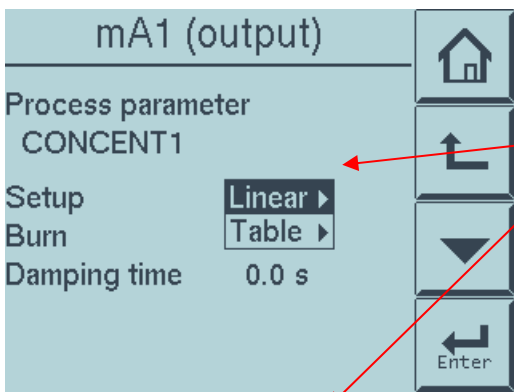
Press the **Output setup** diamond.



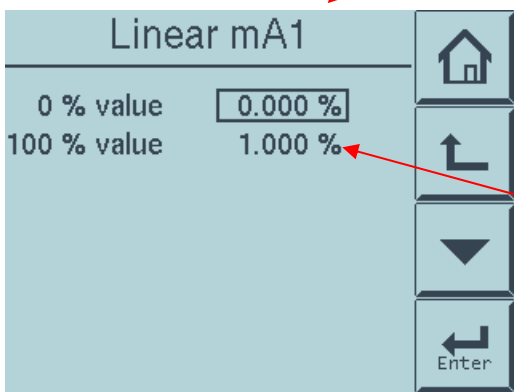
Select **Output** on mA1 and then Press **Enter**



Press Drop Down Menu and select **CONCENT1**

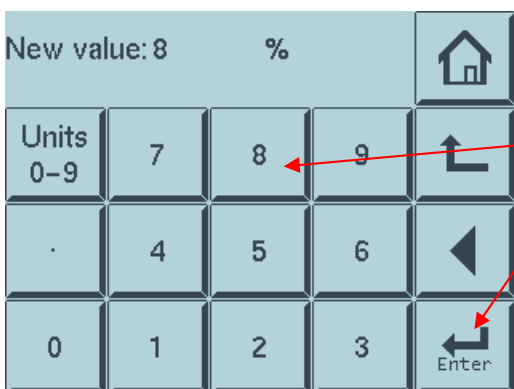


Press **Linear** in Drop Down box so that the **Linear mA1** menu appears.

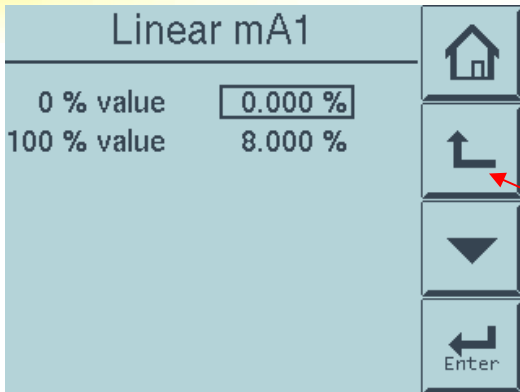


The **0% value** is equivalent to your desired 4 mA and the **100% value** is equivalent to 20 mA. So, if your 4 – 20 mA range is to be 0-8% NaOH, leave the **0% value** as it is.

Press the **100% value** window to bring up the Key pad.

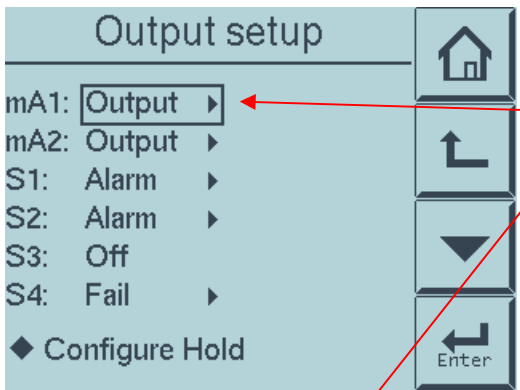


Using the Numeric Pad, enter 8.00 and Press the **Enter** Key.

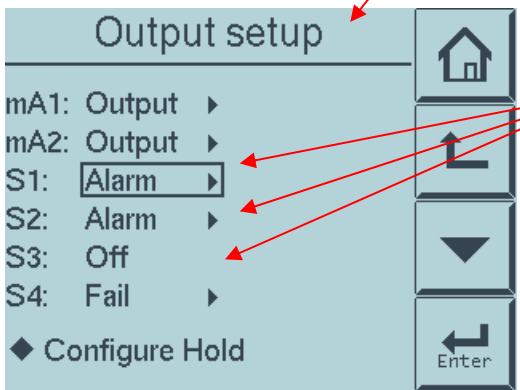


Now the 4-20 mA on mA1 of the Analyzer is set for 0-8% percent concentration.

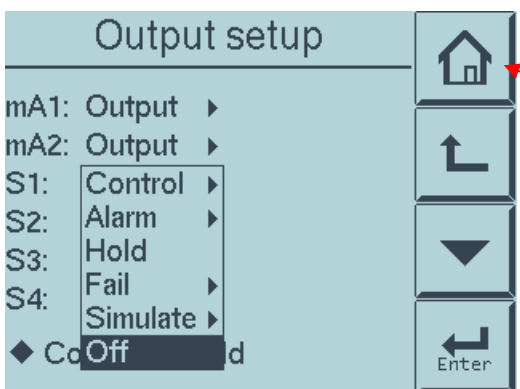
NOW . . . Press the **RETURN** Key until the **Commissioning** screen comes up again.



Press the **Output setup** diamond.



Now you can set up your Alarms (**S1**, **S2**, and **S3**) if you desire. If you are NOT using them, Press the Drop Down Menu and select **Off**. This will eliminate any setup errors being displayed on the Main Menu.



When you are finished, Press the **Home** Key.