

Calibration of the Odyssey water level logger.

Note: If possible it is best to calibrate the logger using water taken from the site where the logger will eventually be deployed.

- 1. Calibrate the logger by marking two points on the sensor cable. One 200mm up from the bottom of the weight and another equal to the specified length of the sensor i.e. for a 2 meter probe put a mark 2 meters up from the bottom of the weight.
- 2. Using the Odyssey software create a new site file for your logger.
- 3. Connect the logger to the computer using the interface cable and click on the 'Trace Mode' button.

0	S Odyssey Data Logging Software								
ile	Communications Logger S	ite Help Top	oics						
-	🗆 New Site File 📱 Edit Site File 🏹 Explore Data Files 🛛 🖬 🔿 🔀 📅 COM2 USB-COM								
	Site Files Site Summary Data Graph Data Worksheet								
	8296_001.KEY			Start Date: 29/06/2011	Site Number : 1	Τe			
	8297 001.KEY			Start Time: 14:00:00	Logger S/N : 8313	Ca			
	8298 001 KEY			Scan Time: 00:01:00	Total Scans : 1263				
					Linear Logging	Sa			

4. Select the sensor type using the radio buttons and, if prompted, select the sensor length from the drop down menu.

face index mode will follow the data logge be used to test and calibrate sensors. If a calibration file exists for the sensor bein of only linearly calibrated sensors can be vi Note: Probe Trace Mode shuts down ater f	tested, then by selecting it will display the calibrated data of the sensor. wed by this option.	Calibrated data
Select a sensor type Capacitance Water Level 	Sensor Type Sensor Calibration File : Select a Calibration File 👽	
 Tipping Bucket Han Water L Integrating Light Sense Temperature Soil Moisture Temperature and Sali Temperature and Pressure Temperature and Humidity Fast Pressure 	vel Probe Length ater level probe length :- Capacitance Water Level 2.0 m OK Cancel	
	Start Trace Mode End Trace Mode]
		Close

5. Lower the probe, up to the first 200mm mark, into a vessel containing water and click on the 'Start Trace Mode' button. You should now see sensor readings appearing on the screen.

a calibration file exists for the sensor being only linearly calibrated sensors can be view ote: Probe Trace Mode shuts down ater 64	ested, then by selecting it will dis ed by this option. scans to conserve battery powe	splay the calibrat er.	ed data of the sensor.Calibrate	d data
Select a sensor type	Sensor Type : Ca	pacitance \	Water Level 2 Metre	
Capacitance Water Level	Scan No: Capaci	tance Water I	.evel 2 Metre	
Integrating Link Server (PAP)	O1	r Reading 2069		
C Temperature	02 03	2069 2070 2000		
Soil Moisture	04 05 06	2069		
Temperature and Salinity	07 08	2069 2069		
Temperature and Pressure	09	2069		
C Temperature and Humidity				
O Fast Pressure				
	Start Trace	Mode	End Trace Mode	
			Close	

- 6. Wait until the readings have stabilised and write down the value.
- 7. Lower the probe into the solution up to the second marker i.e. 2 meters, and repeat steps 4 and 5.
- 8. With the two calibration values recorded, close the 'Trace Mode' window.

Saving The Calibration Data.

- 1. From the menu bar click on 'Logger' and select the 'Set Calibration Data' option. This will open the calibration data window.
- 2. On the right side of the screen fill in the fields corresponding to your logger. The 'Measured Values' on the 'Linear Calibration Tab' correspond the points you marked on the sensor element and the 'Sensor Readings' correspond the values you recorded earlier whilst carrying out the 'Trace Mode'.

By Import Files	Sensor Calibration Data		
	Conver Seviel Number 21224		
Serial Number			
 Linear Calibration 	Select Sensor Type Capacitive Water Level 🗸		
O Polynomial Calibration	Select Preferred Units		
	Select Decimal Places 1		
Linear Calibration Files	Linear Calibration Polynomial Calibration		
12345L.CAL			
2098L.CAL	Sensor Readings Measured Values		
2101L.CAL			
2102L.CAL	First Beading 2125 -> 200		
2103L.CAL			
2104L.CAL	Second Reading 4504 - 2000		
2105L.CAL			
2106L.CAL	Relative Value 0		
2107L.CAL			
2108L.CAL	Calculated Slope 1 32166666667		
2109L.CAL	1.321000000001		
2110L.CAL	Calculated Offset 1860.66666666667		
2111L.CAL			

3. With all the fields complete click on 'Save Data' at the top of the screen and close the window. The software now has the calibration data file for this logger.

Applying The Calibration Data.

If you have already used the logger and downloaded an un-calibrated data block you can apply your calibration settings retrospectively.

- 1. Select the site file for your logger.
- 2. Click on the 'Data Worksheet' tab and select a data block.
- From the 'Site' menu select 'ReCalibrate Data Block'. The calibration settings will now be applied to your data and it should be presented in the desired units of measurement.

🖁 Odyssey Data Logging Software								
File Communications Logger	Site	Help Topics						
🗌 New Site File 🔠 Edit Site File		Site Summary	M1 сом2 USB-сом 🛈 🗵					
		Data Graph						
Site Files		Data Work Sheet	Graph Data Worksheet					
8296_001.KEY		Composite Data Graph	2011 Site Num					
8297_001.KEY		Undate Data Values	10 Logger S					
8298 001.KEY			:00 Total Sc					
		ReCalibrate Data Block	Linear Lo					
8299_001.KEY		ReCalibrate Site Data	30/06/2011 Time : 1*					
8300_001.KEY			e Time					
8301_001.KEY		Export Data to Excel						
8302_001.KEY		1	29/06/2011 , 14:00:00					
8303_001.KEY		2	29/06/2011 , 14:01:00					
0104 001 VEV		3	29/06/2011 14:02:00					

4. If you are downloading a new data block the calibration settings will automatically be applied to your data without the need to recalibrate the data manually as per steps 1 to 3.