Call Catherine Jordan: 0851014679 at *any* stage if help is needed setting this up or email [c.jordan4@nuigalway.ie](mailto:c.jordan4@nuigalway.ie) [catherine.jordan@marine.ie](mailto:catherine.jordan@marine.ie)

Hyperspectral Radiometer Set Up

TriOS RAMSES MSDA\_XE Software

At the beginning of each survey a new database will be set up. Catherine will set this up prior to each cruise but if this needs to be done follow these steps:

**How to set up a new database at the beginning of each survey**

Locate calibration files (driver files) for each sensor as these will be required

In MSDA\_XE software click on database

Click on configuration

-Databases

-Create new database

Under Target

Path- clicked on desired folder you would like to store database in

Name- named it the survey eg: CE19009

Click Create new database

Restart software- Yes

Reopen software

Click on Database

Import files

Select all calibration files (.dat & .ini files)

Open MSDA\_XE software on the desktop

Device manager should be open with the sensors ‘On-line’ Sensors are called SAM\_8504 SAM\_8503 and SAM\_860D.

If they are not showing up click on one (SAM\_8504) and click Scan, then click on the other (Sam\_8503) and click Scan and (SAM\_860D) and click scan.

(If they are still not showing up click Options, Port manager and make sure the active COM port is selected)

Three boxes SAM\_8504 and SAM\_8503 SAM\_860 D should be open side by side.

If they are not open: in Device manager click on one sensor (eg SAM\_8504) and click Control and repeat for 2nd and 3rd sensor.

Keep SAM\_8504 and SAM\_8503 SAM\_860 D open side by side

In SAM\_8504 check or do the following:

Comment box. To edit click the … symbol. Comment should be the survey name eg: CE19009

Click OK

Click the arrow beside (More…)

In the General tab:

Measurement: Integration automatic

Storing: Boxes to be ticked- Database, File, Raw and Calibrated

Automatic Measurements: Click Configure: Click Interval and select 15 minute (00:15:00), then click the box beside Restrict down the bottom and select the hours 09:00 and 18:00 then click OK

Calibration Tabs: Check Calibration driver files are there, if not, they can be added in by clicking database- import files and select calibration files

Repeat same steps with SAM\_8503

Repeat same steps with SAM\_860 D

Once ALL sensors have been set up have the 3 boxes (SAM\_8504 SAM\_8503 SAM\_860D) open side by side.

Click Auto in each box one after the other, this will start the sensors taking measurements every 15 minutes

If you are unable to select Auto check the top right hand corner of that box and make sure the red circle is green by clicking on it once.

To check data is being collected check software by clicking Database- Data and you should see new measurements for that day.

Once Auto has been selected you can minimise the software and it can be left running in the background for the duration of the survey. Make sure it is minimised and not x’d out of. Check on software daily in case of errors.

**Trouble shooting**

* Cannot get the sensors to show up in Device Manager?

Click Options, Port Manager, search through COM ports that are available and go back to device manager, click on SCAN and sensors should show up now, try a few COM ports if one doesn’t work. If it still doesn’t work turn off and on the power box and repeat steps for COM port.

* Software keeps crashing:

A new database needs to be set up prior to each survey\* as once the database goes past 1500MB it will start to crash and will be difficult taking data off post survey, therefore if the software is crashing, check the size of the database (DB- bottom left hand corner of screen). If it is nearing 1500MB save the data using SOP ‘how to save data from msda\_xe software’, once the data is off safely, create a new database.

\*Before a new database is set up make sure ALL data is exported to a secure location off the software as it is impossible to recover once a new database has been set up.

* Error message: **No reaction on measurement of device… after… sec**

Temporary communication problem with the device. No answer received, after command was sent by the computer. If taking automatic measurements. Press AUTO on each of the sensor box (this will stop the sensors taking measurements). Disconnect the cable of the sensor with the error from the IPS for around 10 seconds or **all** of them if unsure which sensor is which. Reconnect the cable(s) and click SCAN on the device manager. Click AUTO on all sensors which should start each sensor taking measurements again.

Any other problems send Catherine Jordan an email