Settings in SeasaveV7 and ManageCTD

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This document gives additional information to the CTD_Training.pdf document. Here we describe how you change the settings, configurations and calibration coefficients in Seasave and in ManageCTD. The software is used for recording and processing of CTD-profile-data. You need to change settings whenever you change sensors. Comments and feedback for improving this document are very welcome.

Seasave - Software for communication with CTD and recording of data

Seasave is the software for data recording. To run Seasave you need two configuration files. One with the ending .xmlcon and one with the ending .psa. The xmlcon file contains all sensor and instrument specific numbers and settings as serial numbers, calibration coefficients of sensors, which sensor is attached where and so on.

The psa file contains the settings of the program seasave. It contains information about the last profile, where to save it, which xmlcon file is used, how is the data displayed on the screen, and so on.

If you change on, it might affect the other.

Change or add a sensor or NMEA-input in Seasave

Open seasave and go to *Configure Inputs*. There you find *Instrument Configuration*, *Serial Ports, Water Sampler*, and more but those are the most important ones.

Under *Serial Ports* you can set the serial port of the CTD, water sampler and GPS (NMEA) input. You can find the respective number of the serial port in the Device Manager (Geräte Manager) of the computer.

Under *Water Sampler* you can type in how many bottles you use. Select the water sampler type *SBE Carousel* and the firing sequence *Sequential*.

Under *Instrument Configuration* you can change type and number of sensors, calibration coefficients, NMEA input, and you can export the settings for documentation.

Click *open* to open a previously prepared file or click *modify* to change the current settings.

After loading an xmlcon file or clicking *modify*, you should see a widow as

Configure Inputs - C:\CTD\Seasave1015-2016.p	osa	23
Instrument Configuration Serial Ports Water Sa	ampler SP/IP Ports Miscellaneous Pump Conti	ol
		- 1
Open Create Modify	D	
		▲
Configuration file opened	SN1015-2016.×mlcon	
Instrument type	911plus/917plus CTD	
Frequency channels suppressed	0	
Voltage words suppressed	0	
Deck unit or SEARAM	SBE11plus Firmware Version >= 5.0	
Computer interface	RS-232C	
Scans to average	1	
NMEA position data added	No	
NMEA depth data added	No	
NMEA time added	No	
Surface par voltage added	Yes	
Scan time added	No	.
Channel	Sensor	- 1
1. Frequency	Temperature	
2. Frequency	Conductivity	
3. Frequency	Pressure, Digiquartz with TC	
4. Frequency	Temperature, 2	
5. Frequency	Conductivity, 2	
6. A/D voltage 0	Altimeter	
7. A/D voltage 1	Free	-
Report Help	OK Cancel	

shown in the picture. The upper part (blue box) should look as in the picture. If not,

change it to look as in the picture. The middle part (orange box) needs to be edited depending on whether you use NMEA/GPS input and a PAR surface sensor.

Apparently it can happen that you need to indicate, that you use a PAR sensor although you don't. If you experience an error message stating an *error with the record length*, you might want to try to set/remove the hook for the PAR sensor.

The lower part (red box) deals with the sensors. If you want to change the serial number or calibration coefficient of a sensor, click *Modify*. If you want to change the sensor type on one of the channels click *Select* (e.g. you have the Fluorometer at a different channel then before). A list of possible sensors will open. Find the right sensor and unit and click *ok*. If the right sensor is not in the list, choose *User Polynomial*. You can type the sensor name, serial

Configuration for the SBE 911plus/917plus CTD									
Configuration file open	ed: PS122_OC_20_08_2019.xmlcon								
Frequency channels s	uppressed 0 🗸 Voltage words su	ppressed	0 💌						
Deck unit or SEARAM	SBE11plus Firmware Version	n >= 5.0	-						
Computer interface	RS-232C •								
Scans to average	1								
✓ NMEA position data added									
O NMEA device conn	○ NMEA device connected to deck unit								
NMEA device connected to PC									
Surface PAR voltage added Scan time added									
Diamel	Seroar		New						
1. Frequency	Temperature	•							
1. Гицинсу 2. Гицинсу	Tenperake Conductivity	-	New Open						
1. Гиоралер 2. Гиоралер 3. Гиоралер	Terwonikke Conductivity Preside, Digiquats with TC								
1. Гицинсу 2. Гицинсу	Tenperake Conductivity		Open Save						
1. Frequency 2. Frequency 3. Frequency 4. Frequency 5. Frequency	Tenuerskue Conductivity Pressue, Digiquatz with TC Temperature, 2 Conductivity, 2		Open						
1. Frequency 2. Frequency 3. Frequency 4. Frequency 5. Frequency 6. A/D voltage D	Tenuoriske Canductivity Pressue: Digiquate with TC Temperature: 2		Open Save Save As						
1. Frequency 2. Frequency 3. Frequency 4. Frequency 5. Frequency	Tenuerskue Conductivity Pressue, Digiquatz with TC Temperature, 2 Conductivity, 2		Open Save						
1. Frequency 2. Frequency 3. Frequency 4. Frequency 5. Frequency 6. A/D voltage D	Temperature Conductivity Pressues: Digiquests with TC Temperature, 2 Conductivity, 2 Dirygen, 58E 43		Open Save Save As						
1. Frequency 2. Frequency 3. Frequency 4. Frequency 5. Frequency 6. A/D voltage D 7. A/D voltage D	Tengenikare Conductivity Presise: Digiquato with TC Tengenikare: 2 Conductivity: 2 Diregen: SBE 43 PARAInadionce: Bospheiod/Licor		Open Save Save As						
Friequercy Friequercy Friequercy Friequercy Friequercy G ADD voltage D AD voltage 1 G ADD voltage 2	Tersonskile Canductivity Pressee: Digigupats with TC Temperature: 2 Canductivity: 2 Daygen: 58E 43 PAR/Inadiance: Biosphelosk/Licor Fluoroneter, WET Labo EDD AFU/FL		Open Save Save As						
Frequency Frequency Singuency Singuency Singuency Singuency SAD voltage D AD voltage 1 B ADD voltage 2 SAD voltage 3	Tenuosikke Dandkuthity Pressee: Digigujats with TC Tenpersture: 2 Dandkuthity: 2 Dandkuthity: 2 Dagen: SBE 43 PAR/Iradience: Bosphelost/Licol Pisconneter. WET Labs EDD APL/FL Transmissoneter. WET Labs CG1ar		Open Save Save As						
Frequency Frequency Frequency Frequency Frequency Frequency Frequency A frequency A for voltage D A DO voltage 1 A DO voltage 2 S ADO voltage 3 10. ADO voltage 4	Terromikke Conductivity Pressue: Digiquatz with TE Terromikutivity. 2 Conductivity. 2 Disgen: SBE 43 PMR/Insidence: Biospherical/Licor Flucometer: WET Labo EDD APL/FL Transmissoneter: WET Labo EDD APL/FL Flucometer: WET Labo EDD CDDM		Open Save Save As						

number, and calibration coefficients manually.

If you removed a sensor, choose the option *free*.

You might realize, that the names of the channels, from *channel* 6 onwards, are counting up, starting from *voltage* 0 (red stars). This is confusing, as *voltage* 0 and 1 are corresponding to the *Auxiliary Sensor Connector* 1. *Voltage* 2 and 3 correspond to the *Auxiliary Sensor Connector* 2. So be careful which sensor you enter where.

After selecting the right sensor you can type serial number, and calibration coefficients manually, or you can import an .xml file containing the respective information. Go to *Import* and find your file, click open and check the imported values.

When you entered all the settings you want, go to *save as..* and save your new configuration with a new name! Also click *Report* and save the report to the respective cruise and configuration folder. Print it and store it with the station protocols. Do this also after changing a sensor!

Next, you need to modify the settings of ManageCTD, which includes changing the settings of SBE Data processing. If you changed a sensor, you need to create a new configuration folder with ManageCTD (see next page). Save the new profiles recorded with the new sensor configuration, within this new folder.

You can edit the header of each profile under *Configure Outputs*. You can type in all information that you find useful. You should have the basic information as *Ship, cruise* and *operator*.

ManageCTD installation

ManageCTD should be already installed. If you need to install ManageCTD you need the *ManageCTD-Install-W64.exe* and everything else in the folder

\....\MOSAiC_backup\backup_CTD\Software\ManageCTD\

Make sure to install all programs. Also seasave and SBEDataProcessing. Check whether these programs are installed already. If they are already install, uninstall them! ManageCTD does only work with the versions provided in this folder!

The installation will create a shortcut on the desktop. Unfortunately this is also for an old version. Use the MCTD2013.exe instead. It is provided in the folder

\....\MOSAiC_backup\backup_CTD\Software\ManageCTD\

You can create a shortcut on the desktop to the MCTD2013.exe. This will execute the correct version of ManageCTD.

Do NOT pay to much attention to the stuff in the folder *Manuals*. It might be out-dated!

ManageCTD

Start ManageCTD and check whether you cruise already exists and is shown in the cruise list on the left. If not, go to *file* and click *New Cruise*. Type in the Cruise Name in exactly the way it is used in the station book (most likely something as PS122-1_xxx) !

Creating a new cruise will create a bunch of folders in the directory C:\CTD\...

Put your xmlcon and psa file into the directory C:\CTD\cruise

Edit the ManageCTD-INI-file as described. You find it in C:\ManageCTD\ManageCTD.ini Now record your first CTD profile. Only after the first profile, you can set ManageCTD. Strictly follow the steps described in *Setup_SBEDataProcessing.pdf*. Mark each step in the protocol. Check *Setup_SBEDataProcessing_ScreenShots.pdf* for additional guidelines for each of the steps. If you have questions contact <u>Gerd.Rohardt@awi.de</u> or <u>Sandra.Tippenhauer@awi.de</u>

If you had to **change a sensor**, you need to create a new configuration. To do so, go to ManageCTD, make a right-click in the field *configuration*, and click *add configuration*. This creates a new subfolder in you cruise directory C:\CTD\cruise\conf.. In the new conf-folder, you save all the profiles recorded with the new configuration. This means that you have to change the path in Seasave when you record a profile (see picture).

	Start Real-Time Data Acquisition	×
	Data Archiving Options	
	egin archiving data immediately	
	C Begin archiving data when 'Start Archiving' command is sent	
	Output data [.HEX] file	
	C:\CTD\HE324\conf1\raw\52001.hex	_
	Select Output Date File Name	-
_	Configuration Options	
]	Do not forget to change on figure inputs	s)
t	the directory to \conf2	
_	Configure Inputs Configure Outputs	
	Timeout in seconds at startup	
	Timeout in seconds between scans 10	
	Report Help Start Exit Cancel	

Remember to create, save and print the report of the new configuration. Store it with the station protocols.

Cruise		Station/Cas	t Confi	CTDjob	CTD
2016		1-1	1	х	Х
ANT-XXX-2		10-1	1		
CTD Sensoren		10-2	1	х	х
HE431		11-1	1	х	х
HE443		12-2	1	х	х
HE446		13-1	1	х	х
HE454		14-1	1	х	х
HExxx PS100		15-1	1	х	х
F 3 100		16-1	1	х	х
		19-1	1	х	х
Configuration		2-1]1	х	х
conf1		20-2	1	х	Х
		21-1	1	х	х
		23-1	1	х	х
		24-1	1	Х	х
	Ri	ght clic	k he	re	х
			1 7	X	х
	-	28-1	1	X	х

If you only changed a sensor but still have the same sensor type (i.e. a temperature sensor with another serial number) you are done.

If you changed a sensor type, or the connector channel, you have to do the procedure of configuring ManageCTD again! To do that, record a profile with the new configuration. Then Strictly follow the steps described in *Setup_SBEDataProcessing.pdf.* Mark each step in the protocol. Check *Setup_SBEDataProcessing_ScreenShots.pdf* for additional guidelines for each of the steps.