

# JOGOS

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Model:AS-SW1-U

## User's Manual

### For the safe use of this software

- Use after thoroughly reading the user's manual.  
Improper handling may lead to an accident.
- Safely keep this manual in order not to lose it.

# Introduction

- The software is made purposely for communication process with “AAQ-RINKO” and “RINKO-Profiler”. It also can be used for transferring data from “H-11”.
- The software has functions to configure measurement settings, to process measurement data, and to convert acquired measurement data files (raw files) into physical value files (CSV/MATLAB format).
- This manual is for “JOGOS”. Please refer to user’s manual of “AAQ-RINKO”, “RINKO-Profiler”, and “H-11” for how to use them.

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# 1 Terms and Names

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## 1.1 Terms

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Item	Detail
Instrument	“AAQ-RINKO” or “RINKO-Profiler”.
Display unit	“H-11”.
AD value	A/D converted raw value output from each sensor.
Physical value	Water temperature value and/or DO value calculated from an A/D value and calibration coefficients.
Measurement data	Recorded data from measurements using our instrument.
Raw file	Measurement data file that recorded AD values from each sensor. Able to confirm physical values by opening Raw file using the software.
Physical file	Measurement data file that recorded physical values from each sensor. Able to create physical value files from Raw files using the software.
Block data	Measurement data recorded in the device memory. (Only H-11)

## 1.2 Software

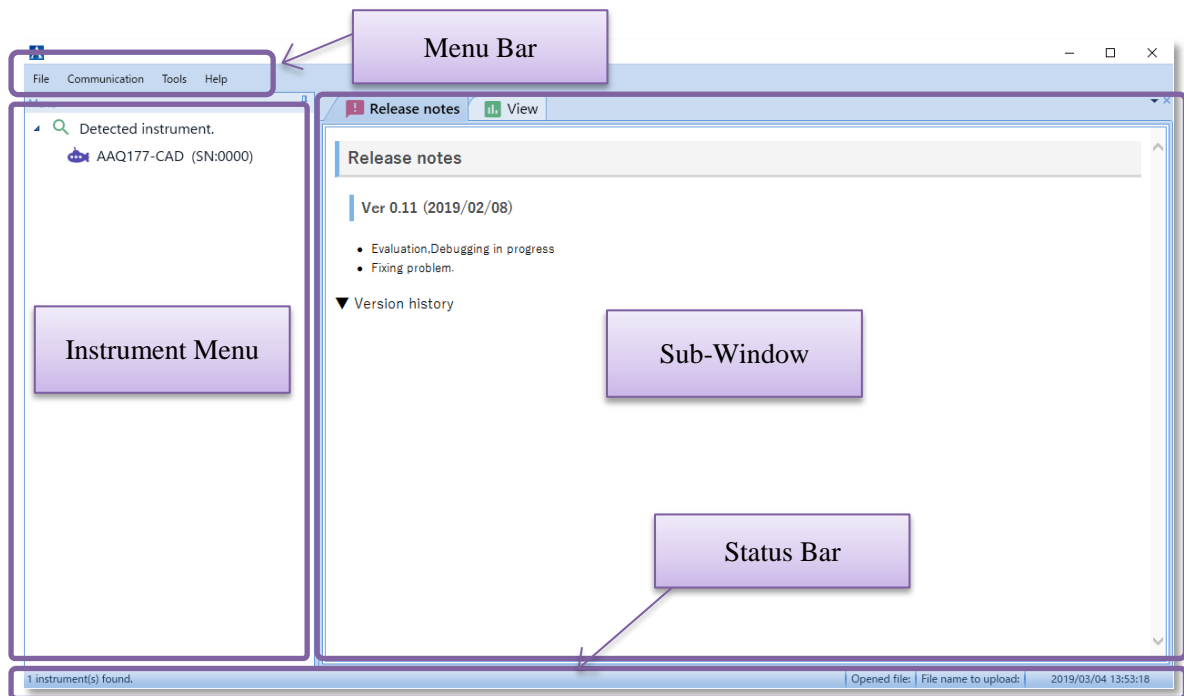


Figure 1.1 Startup Screen of “JOGOS”


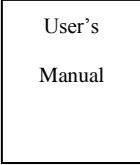
Item	Detail
Menu Bar	Displays menu selection. When described as “click [file > open] in the menu” in this manual, it refers to this menu bar.
Instrument Menu	Displays instruments detected by the software. Choosing an instrument from the menu shows usable functions.
Sub-Window	Displays release notes, instrument operations, and measurement data using tabs.
Status Bar	Displays software setting information and other information. Only for display and unable to operate.



- Unable to use some of the functions while in communication with instruments.

## 2 Packaged Contents

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No.	Item	Appearance	Qty
1	USB Memory		1 pc
2	User's Manual (this booklet)		1 copy







List above shows our standard package contents.  
Contents may differ depending on your order.




### 3 Caution

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	Warning	Improper operation may result in serious personal injury or death.
	Caution	Improper operation may result in slight personal injury or property damage only.
		Improper operation may result in influencing measurement and measurement data.
		Tips.


#### 3.1 About Software

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	<ul style="list-style-type: none"><li>● It is prohibited to reproduce and/or copy the software entirely or partially without any written permission from the manufacturer.</li><li>● We take no responsibility to any damages and losses created by the results of operation through the software and/or the manual.</li><li>● The contents and specifications of the software are subject to renewal and/or improvement without any prior notice.</li><li>● Should you notice anything or have any question, please contact us.</li><li>● We explain how to operate the software using Microsoft Windows 10 in this manual, therefore screen shots and operation methods may be different depending on your PC.</li></ul>
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#### 3.2 Raw File Handling

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	<ul style="list-style-type: none"><li>● Please do not process Raw files using other than specified software. Doing so may corrupt format of Raw files, and may not be able to process using specified software.</li><li>● Please do not delete Raw files but keep them safe. Physical value files can be made from Raw files multiple times, however Raw files cannot be restored once deleted.</li></ul>
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### 3.3 Compatible Models

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The software is compatible with instruments listed below.

- AAQ-RINKO series
  - AAQ170
  - AAQ171
  - AAQ172
  - AAQ175
  - AAQ176
  - AAQ177
  - Handy Unit / H-11 (Only for data transfer)
  
- RINKO-Profiler series
  - ASTD100
  - ASTD101
  - ASTD102
  - ASTD103
  - ASTD150
  - ASTD151
  - ASTD152
  - ASTD153



- The software may not operate with customized instruments.
- Please contact us for using the instruments not mentioned above or customized instruments.

## 4 Preparation

### 4.1 Installing the Software

Here is how to install “JOGOS” into your PC.

- (1) Open “Explorer” from Start Menu and choose the drive you inserted USB memory into.
- (2) Double click on “setup.exe” (Figure 4.1)

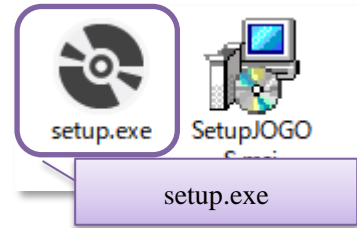
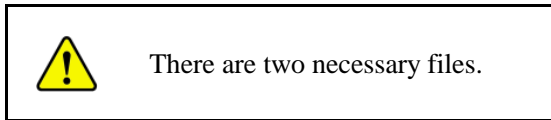
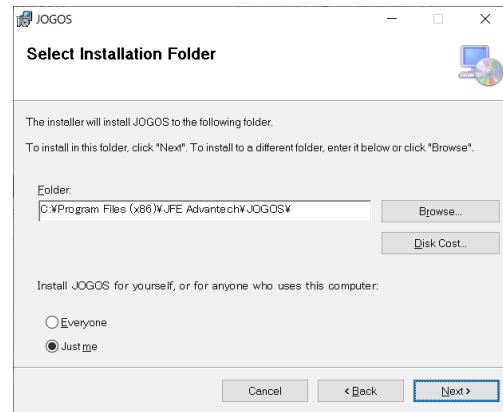


Figure 4.1 setup.exe

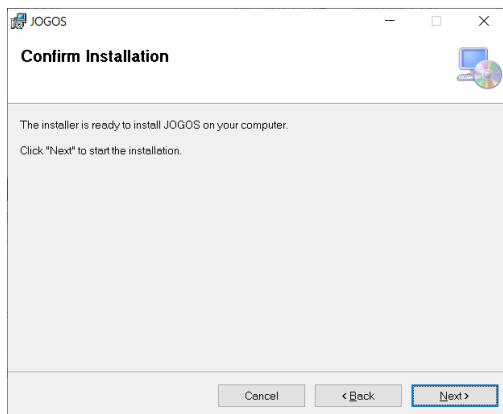
- (3) Please follow the procedures shown below in the order. An icon named “JOGOS” will be created in [JFE Advantech] in the start menu when completing the installation procedure. (Figure 4.2)



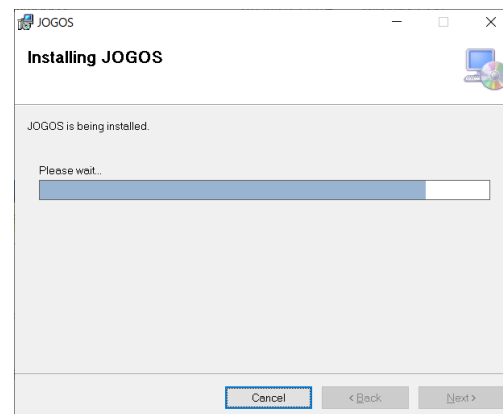
(1) Installation startup screen



(2) Choose a folder to install and click [Next]



(3) Start installation by clicking [Next]



(4) Installing

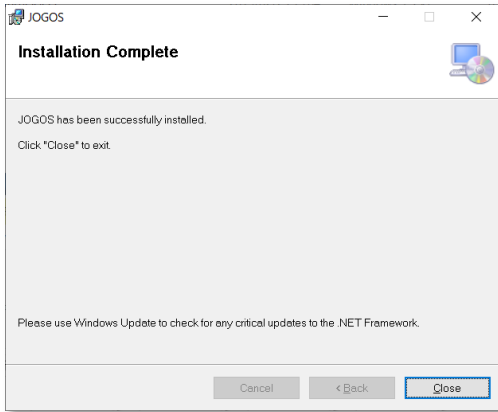
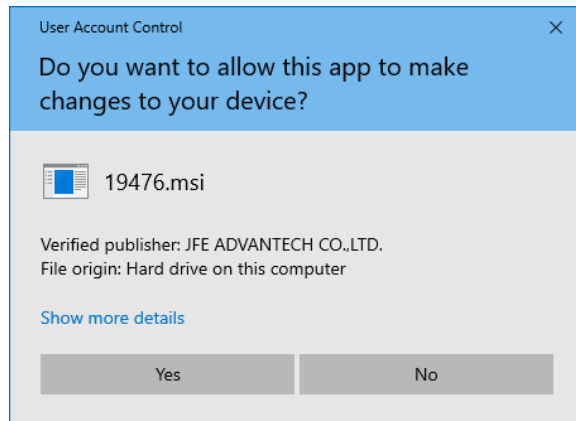


Figure 4.2 "JOGOS" icon

(5) Click [Close] to complete installation

- There are cases that a UAC (User Account Control) dialog box may be displayed while in installation for security reasons.
- Please choose [Yes] in UAC dialog box to continue on with the installation.
- UAC dialog box may not be displayed depending on your PC settings, but it is not an error.



UAC Dialog Box

## 4.2 Initial Setup of the software

Please make sure to run initial setup with the software before starting as follows.

### 4.2.1 Setup Items to Display

Measurement data will not be displayed without specifying which items to display.

Make sure to specify which items to display by following the procedures shown below before using the software for the first time.

- (1) Launch the software.
- (2) Choose [Tools > Option] and open “Option” window. (Figure 4.3)

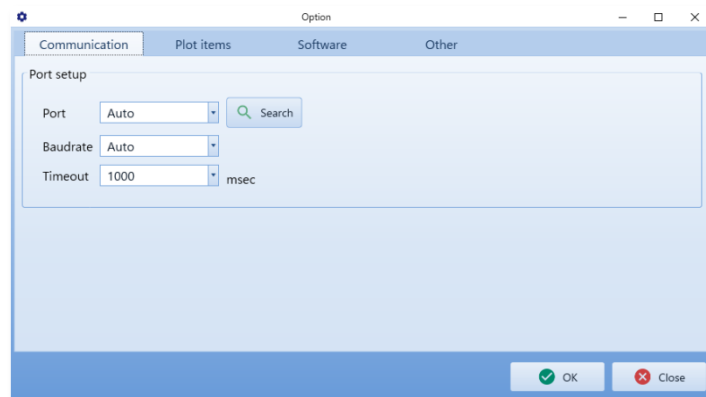


Figure 4.3 “Option” window

- (3) Choose [Plot items] tab and click on the boxes next to the items you wish to display. (Figure 4.4)

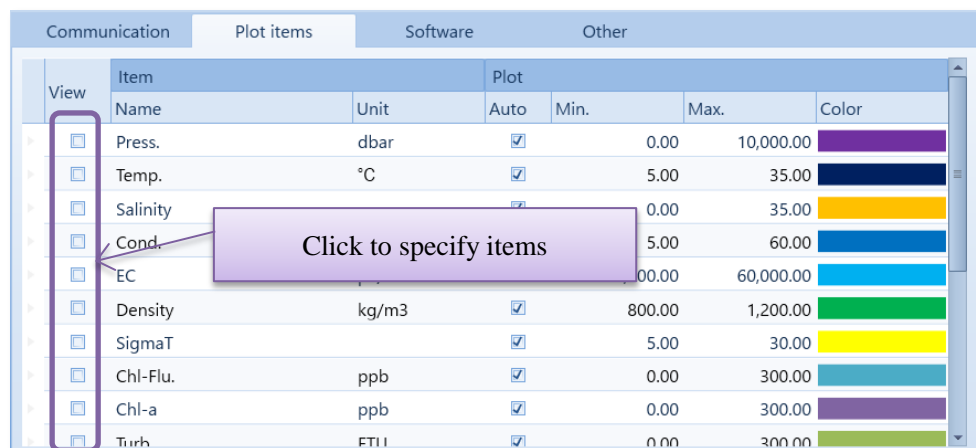


Figure 4.4 Choosing items to display

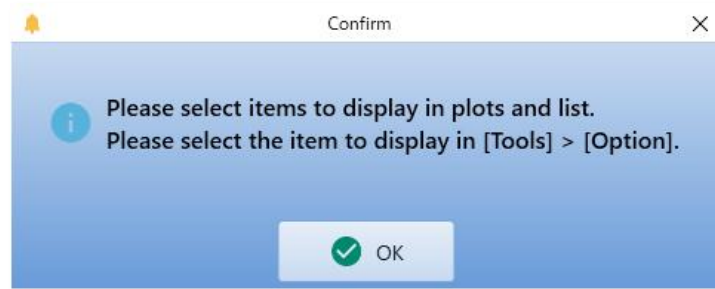
- (4) Save settings by clicking [OK] button.
- (5) Close the window by clicking on [Close] button.



- Settings are commonly used for all instruments.
- In case there is an instrument connected and reading raw file, only displayable items will be shown.
- Regardless to the displaying item setting, all items will be outputted to raw files made by real-time measurement, and physical value files converted by file conversion.



- Dialog window shown below will be displayed if there are no items specified to display at the time of software launch.



- Please note that no parameters will be displayed in real-time measurement or display data if no items are specified.

## 4.2.2 Communication Setup

The software detects serial ports on your PC and search for instruments every 15 seconds. Instrument search may take some time in case there are several serial ports on your PC. Please specify a port to be used for communication in case taking too much time for the search.

- (1) Launch the software.
- (2) Choose [Tools > Option] to open “option” window. (Figure 4.3)
- (3) Choose [Communication] tab and setup “Port”, “Baudrate”, and “Timeout”.

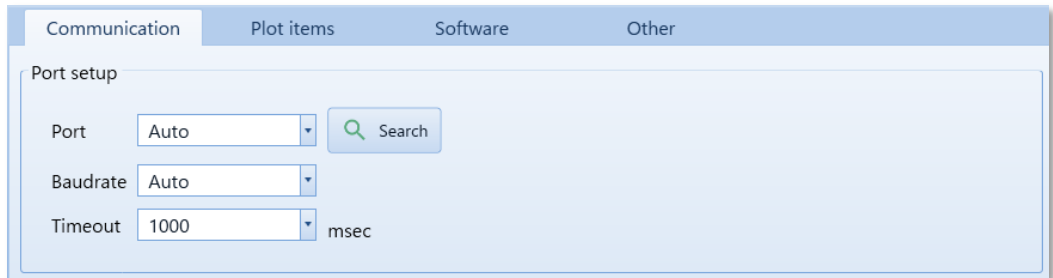


Figure 4.5 Changing communication setting



- Detect serial port on your PC by clicking on [Search] button.
- Search for instruments on all ports by choosing “Auto” in “Port”.
- Search for instruments at all usable baudrate (9600, 19200, 38400, and 115200) by choosing “Auto” in “Baudrate”.

- (4) Click on [OK] button to save settings.
- (5) Click on [Close] button to close the window.
- (6) Connect an instrument(s) to your PC.



- Please refer to the instrument manual for how to connect instruments.
- Search for instruments every 15 seconds at specified communication settings. Unable to stop auto-search function.
- Detected instruments will be displayed in “Instrument Menu”.
- Able to start searching by [Communication > Search instruments].
- Able to cancel the search by [Communication > Cancel instrument search].  
Able to use instruments those were detected before cancelling the search.

## 5 Measurement Flow

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Please make sure that initial setup of the software is completed. (Refer to “4.2 Initial Setup of the software”)

### 1 Connect your PC to the instrument

- Connect the instrument you wish to use to the PC (a PC with the software preinstalled).



- Please refer to instrument manual for how to connect your instruments to a PC.

### 2 Launching the software

- (1) Launch the software. → “6.1 Launching and Terminating the Software”
- (2) The software searches for instruments every 15 seconds.
- (3) Choose an instrument from “Instrument Menu”. → “6.2.2 Specifying the Instrument to Use”

### 3 Pre-measurement setup

- (1) Confirm instrument information.
- (2) Conduct pre-measurement setup.
  - Setup clock information.  
→ “6.3.1 Setting Up the Clock (RINKO-Profiler)”
  - Setup measurement interval.  
→ “6.3.2 Setting Up the Measurement Interval (AAQ-RINKO)”
- (3) Choose a function to use.

### 4 Conduct measurement

- Send measurement settings to the instrument. → “6.5 Conducting Measurement Using Instrument (RINKO-Profiler)”
- Conduct real-time measurement. → “6.4 Conduct Measurement Using Instruments (AAQ-RINKO)”

### 5 Transfer measurement data from the instrument / from the display unit

- Transfer measurement data in the instrument / in the display unit to PC. → “6.6 Transferring Data to PC”



## 6 How to Operate the Software

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### 6.1 Launching and Terminating the Software

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Followings are the procedures to launch or terminate the software “JOGOS”.

#### 6.1.1 Launching the Software

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The software can be launched by the following procedures.

- Windows 7
  - (1) Choose [Start > All Programs > JFE Advantech > JOGOS].
  - (2) The software will launch.
  
- Windows 8.1 or later
  - (1) Choose [Start > JFE Advantech > JOGOS].
  - (2) The software will launch.

#### 6.1.2 Terminating the Software

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The software can be terminated by the following procedures.

- Terminate from [File] menu.
  - (1) Choose [File > Exit].
  - (2) Click [OK] in displayed dialog window to terminate the software.
  
- Terminate by clicking [×] button in the title bar.
  - (1) Click on [×] button in the title bar.
  - (2) Click on [OK] in the displayed confirmation dialog box.



- Unable to terminate the software while communicating with an instrument. Please stop communication process or terminate the software after confirming process completion.

## 6.2 Choosing the Instrument to Use

Choose the instrument to be used with the software. Multiple instruments can be detected in case there are multiple ports on your PC, however only one instrument can be used at a time.

### 6.2.1 Search for the Instrument

The software searches for instruments connected to ports on your PC every 15 seconds; however it is also possible to start the search when you wish to do so.

- (1) Launch the software.
- (2) Start the search by choosing [Communication > Search instruments]. You can check the search status by checking the status bar. (Figure 6.1)



Figure 6.1 Begin search

- (3) Displays detected instruments in “instrument menu” if any are detected. (Figure 6.2)  
Cancel instrument search by choosing [Communication > Cancel instrument search] while searching. (Figure 6.3)

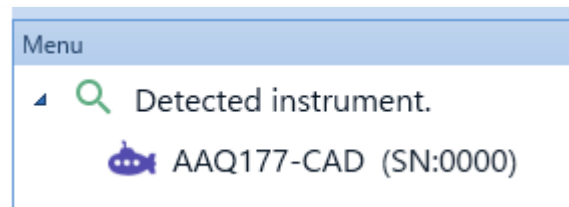


Figure 6.2 Detected instrument

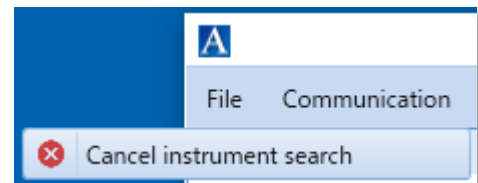


Figure 6.3 Cancel searching



- Auto search will re-start 15 seconds after manually cancelling the search.
- Unable to stop auto search function.
- Unable to search while an instrument is already chosen. (while displaying “function menu”)

## 6.2.2 Specifying the Instrument to Use

Choose the instrument to use from detected instrument. Choosing the instrument will display inherent “function menu” by the model. Choose a function to use from displayed “function menu”.

- (1) Launch the software and search the instrument.
- (2) Choose the instrument from displayed “instrument menu”. (Figure 6.4)

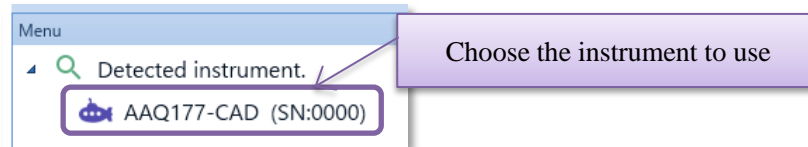


Figure 6.4 Choose at “Instrument Menu”

- (3) Displays inherent “function menu” depending on the model. (Figure 6.5)

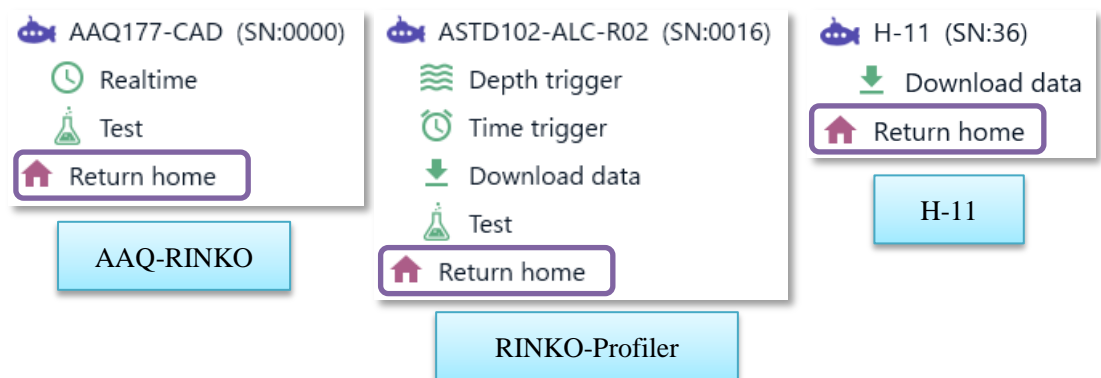


Figure 6.5 Examples of “Function Menu”

- (4) Return to “instrument menu” by choosing [Return home] in “function menu”. (Figure 6.5)



- The software will not search for the instrument while displaying “function menu”. The software will automatically start searching by returning to “instrument menu”.

### 6.2.3 Choosing a Function to Use

Choose a function you wish to use from “function menu”.

Chosen function will be displayed in “sub-window”.

Usable functions differ depending on the model.

- (1) Choose the instrument to use from instrument menu (refer to “6.2.2 Specifying the Instrument to Use”)
- (2) Choose the function to use from displayed “function menu”. (Figure 6.5 / Table 6.1)

Table 6.1 Function list

Function	AAQ	ASTD	H-11	Reference
Information	●	●	●	6.3 Confirming Instrument Status
Real-time	●			6.4 Conduct Measurement Using Instruments (AAQ-RINKO)
Depth trigger		●		6.5.1 Depth Trigger
Time trigger		●		6.5.2 Time-Trigger
Download		●	●	6.6 Transferring Data to PC
Test	●	●		6.10 Confirming Instrument Operation and

- (3) Chosen function will be displayed in “sub-window”.

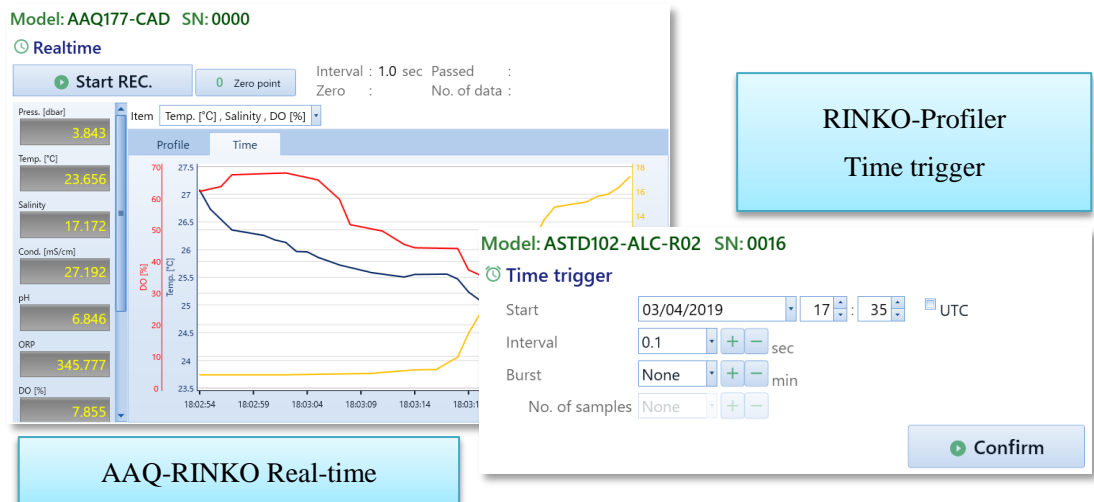


Figure 6.6 Examples of function

### 6.3 Confirming Instrument Status

Here is how to confirm information of the chosen instrument.

Pre-measurement setup can also be done here.

- (1) Connect the instrument to the PC and launch the software.
- (2) Click on the instrument model at the top under “function menu”. (Figure 6.7)

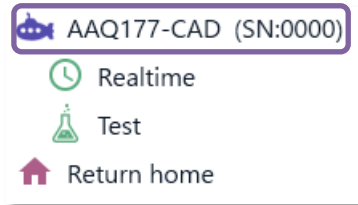


Figure 6.7 Displaying instrument information

- (3) Inherent instrument information will be displayed in “sub-window”. (Figure 6.8)

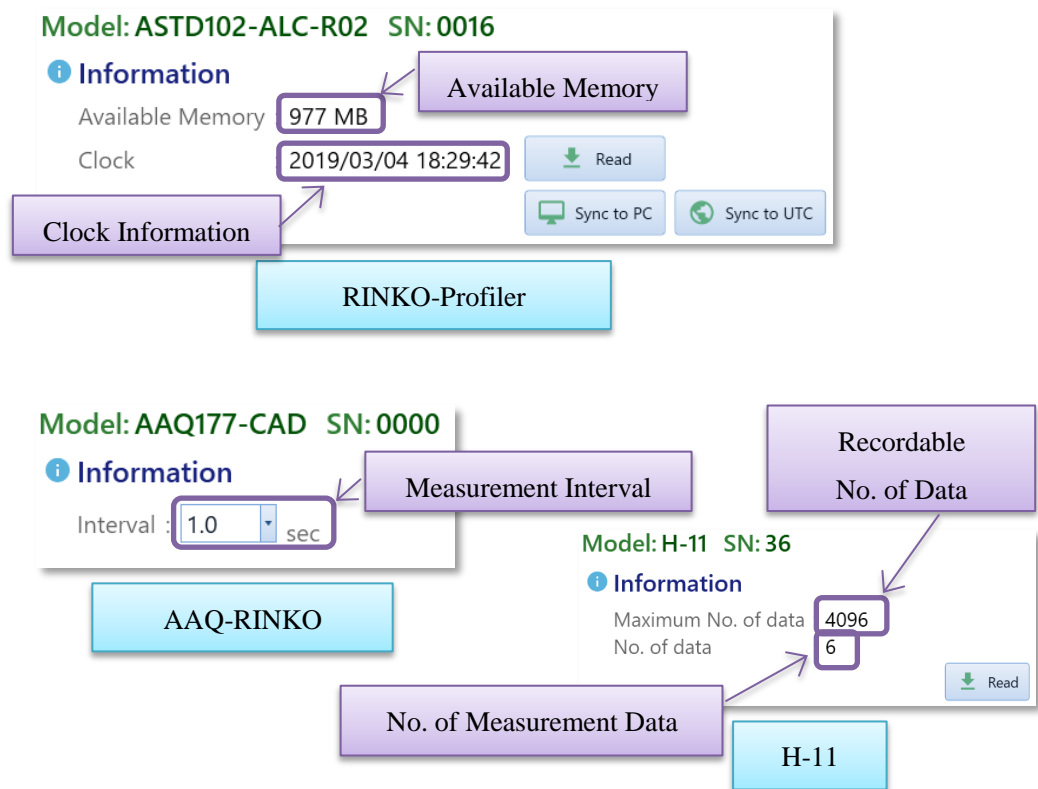



Figure 6.8 Examples of instrument information

 ● Choosing instrument from “instrument menu” will display “sub window” also.

### 6.3.1 Setting Up the Clock (RINKO-Profiler)

Here is how to setup internal clock information in your RINKO-Profiler.

Please make sure the clock information on your PC is correct.

- (1) Click on [Sync to PC] button if you wish to synchronize to the local time on your PC, and click on [Sync to UTC] button if you wish to set your clock at UTC time. (Figure 6.9)

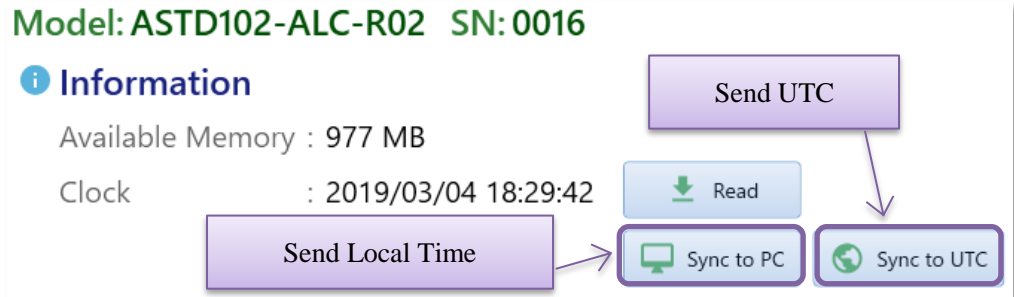


Figure 6.9 Clock setup

- (2) Confirm the clock information in the instrument is correct by clicking on [Read] button.



- There is no way to determine the clock information in your instrument is in local time or UTC. Please confirm by the clock information received by [Read].
- Be sure not to setup incorrect measurement start time.

### 6.3.2 Setting Up the Measurement Interval (AAQ-RINKO)

---

Here is how to setup measurement interval for real-time measurement using AAQ-RINKO.

Please note that there are cases unable to proceed with the entered interval depending on your PC and/or OS status.

(1) Choose interval length you wish to use for your measurement. (Figure 6.10)

- Interval (in seconds): 0.1, 0.5, 1.0, 5.0, 10.0, and 60.0

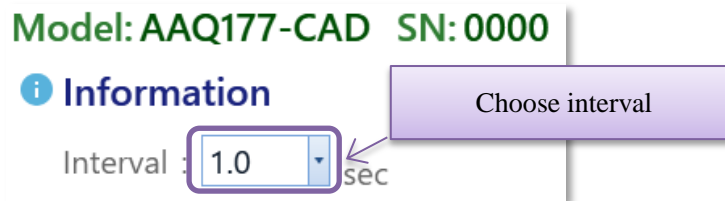


Figure 6.10 Choosing interval

(2) Conduct real-time measurement with the entered interval.



- Unable to change interval length while in real-time measurement.
- There might be cases unable to use with entered interval length depending on your PC and/or OS status. Please confirm prior to your measurement.
- Changing plot settings may reduce load burden.  
→ “7.1.5 Others”

## 6.4 Conduct Measurement Using Instruments (AAQ-RINKO)

---

With AAQ-RINKO, it requires a PC to conduct real-time measurement.

The instrument communicates at entered interval length.

Received measurement data from the instrument will be outputted to the PC as Raw files.



- Only limited functions can be used while in communication with the instrument.
- Unable to terminate the software while in communication with the instrument.  
Be sure to terminate the software after shutting the communication with the instrument down.
- Please avoid taking the instrument off from the PC while in communication, avoid switching to another instrument from the detected instrument list, and avoid anything those may cause communication error. These might cause cases unable to communicate with the instrument, or unable to record measurement data, or influence negatively to measurement.
- **There might be cases unable to record at entered interval length depending on your PC and/or OS status. Please confirm prior to your measurement.**
- There might be cases unable to record correct measurement data if your PC goes into sleep mode, screensaver becomes activated, or those influence PC status.  
Please confirm your PC settings prior to your measurement.
- Please refer to the instrument manual for instrument detail.



- Raw files will be outputted separately by the specified number of data.  
→ “7.1.5 Others”



## 6.4.1 Initiating Real-Time Measurement

- (1) Launch the software after connecting the instrument to the PC.
- (2) Choose the instrument to use from “instrument menu”.  
→ “6.2 Choosing the Instrument to Use”
- (3) Setup measurement interval.  
→ “6.3.2 Setting Up the Measurement Interval (AAQ-RINKO)”
- (4) Choose “Real-time” from “function menu”. (Figure 6.11)

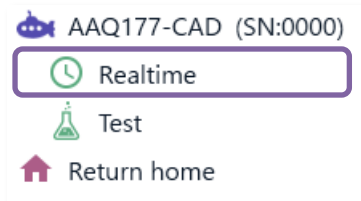


Figure 6.11 Real-time measurement

- (5) “Real-time measurement” will be displayed in “sub-window” and start communication with the instrument. (hereinafter, “monitored status”) (Figure 6.12)

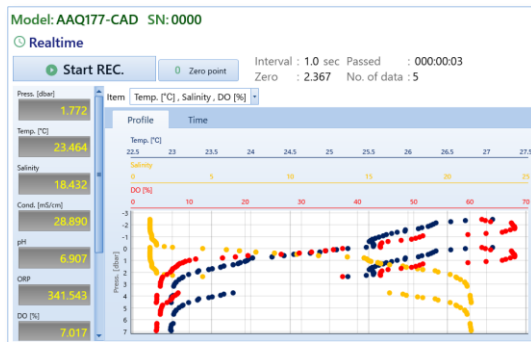


Figure 6.12 Example of real-time measurement

- (6) Numerical values and physical values will be displayed in “monitored status”.



- Only limited functions can be used while in “monitored status”.
- Unable to terminate the software while in “monitored status”.
- Please avoid taking the instrument off from the PC while in communication, avoid switching to another instrument from the detected instrument list, and avoid anything those may cause communication error. These might cause cases unable to communicate with the instrument, or unable to record measurement data, or influence negatively to measurement.

## 6.4.2 Real-Time Measurement Screen

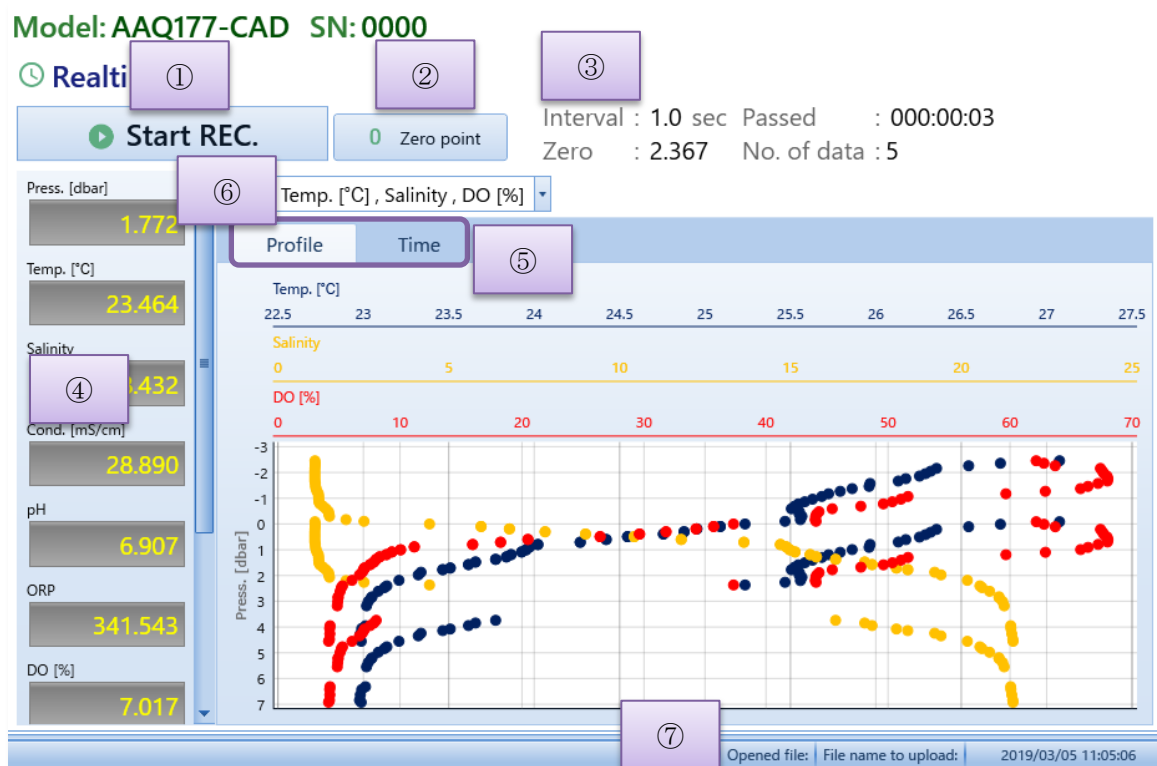


Figure 6.13 Real-time measurement screen


Table 6.2 Explanation of real-time measurement screen

No	Item	Detail
1	[Start REC.] [Stop REC.]	Starts recording measurement data. Clicking while in record will stop recording.
2	[Zero point]	Setup current pressure value as the zero-point. Unable to use this while recording measurement data.
3	Measurement information	Displays measurement settings and/or information of recording data. <ul style="list-style-type: none"> <li>● Interval : Entered interval</li> <li>● Zero : Entered Zero-point value</li> <li>● Passed : Time-lapse since recording started</li> <li>● No. of data : The number of recorded data</li> </ul>
4	Physical values	Displays received measurement data from the instrument in numerical values. Displays only specified items.
5	Switching plot	Switch between profiling plot and chronological plot.
6	Plot items to display	Choose up to 3 items to plot. Displays only specified items.
7	Output file name	Displays the file name of which in recording.

### 6.4.3 Recording Measurement Data

Record receiving measurement data from the instrument. Please refer to “6.4 Conduct Measurement Using Instruments (AAQ-RINKO)” for important notes for recording measurement data.

- (1) Connect the instrument and change to “monitor status”.
- (2) Click on [Zero point] button to conduct zero-point calibration.



- Chosen zero-point value will be displayed at “Zero” in “measurement information”.

- (3) Click on [Start REC.] button to start recording.  
[Start REC.] button will change to [Stop REC.] button once recording starts. (Figure 6.14)

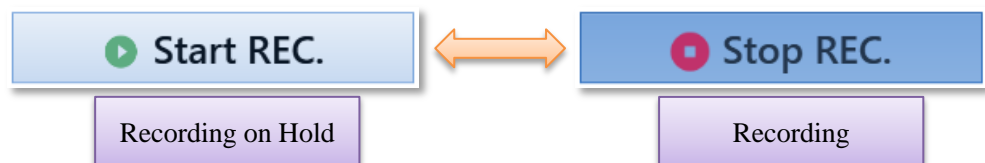




Figure 6.14 “Start REC.” and “Stop REC.”



- Be sure to conduct zero-point calibration before recording measurement data.



- [Stop REC.] button blinks while recording.
- “Passed” shows the time-lapse from record starting time, and “No. of data” shows the number of measurement data.
- The name of file in recording is displayed in status bar.
- Unable to use [Zero point] while recording.

- (4) Click on [Stop REC.] button to stop recording.
- (5) Return to step (2) or (3) to restart measurement.

#### 6.4.4 Terminating Real-Time Measurement

Stop real-time communication (monitored status), and switch to stand-by status.

- (1) Unable to stop “monitored status” while in measurement data recording.  
Click on [Stop REC.] button to stop recording measurement data.
- (2) Stop communication with the instrument by choosing [Communication > Disconnect] and to switch it over to “stand-by status”. (Figure 6.15)

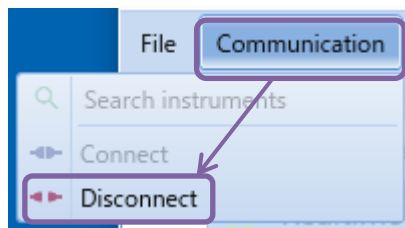


Figure 6.15 Terminating communication



- Unable to use [Start REC.] and [Zero point] buttons while in “stand-by status”.

- (3) To reopen the communication with the instrument, choose [Communication > Connect].  
This will reopen the communication with the instrument and switch to “monitored status”.  
(Figure 6.16)

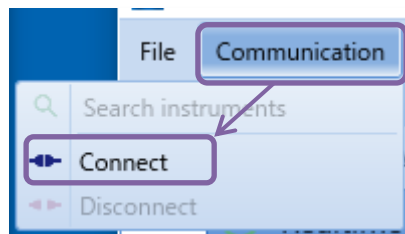


Figure 6.16 Re-opening communication



- Unable to reopen the communication when a different instrument is connected which is different from the detected one.

## 6.5 Conducting Measurement Using Instrument (RINKO-Profiler)

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Measurement using RINKO-Profiler is done accordingly to the measurement settings sent from the PC. There are two measurement modes, one is depth trigger mode that measures based on pressure information, and the other is time trigger mode that measures based on clock information. All measurement data will be saved in the instrument memory.



- Only limited functions can be used while in communication with the instrument.
- Unable to terminate the software while in communication with the instrument. Terminate the software after stopping the communication with the instrument.
- Please avoid taking the instrument off from the PC while in communication, avoid switching to another instrument from the detected instrument list, and avoid anything those may cause communication error. These might cause cases unable to communicate with the instrument, or unable to record measurement data, or influence negatively to measurement.
- Make sure to setup clock information before conducting measurement. Measurement may not start properly if not.
- Please confirm the time zone (local time / UTC) when setting up clock information. Measurement may not start at correct time if entered incorrectly.
- **Make sure the descending speed of your instrument is 50cm/sec or less. Correct measurement data may not be recorded with faster descending speed.**
- Refer to the instrument manual for any details of the instrument.
- **Please do not use our previous communication processing software with RINKO-Profiler's measurement data (Raw files) recorded by this software. Due to setup values being different, physical values may not be calculated correctly.**
- RINKO-Profiler's measurement data recorded by previous communication processing software can be used with this software.

## 6.5.1 Depth Trigger Measurement

Vertical profiling measurement to record data every specified pressure pitch can be conducted with depth trigger measurement.

- (1) Connect the PC with the instrument and launch the software.
- (2) Choose the instrument to use from “instrument menu”.  
→ “6.2 Choosing the Instrument to Use”
- (3) Choose “Depth trigger” from “function menu”. (Figure 6.17)

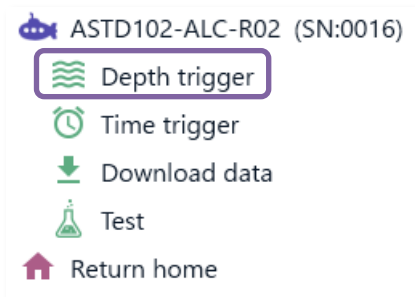
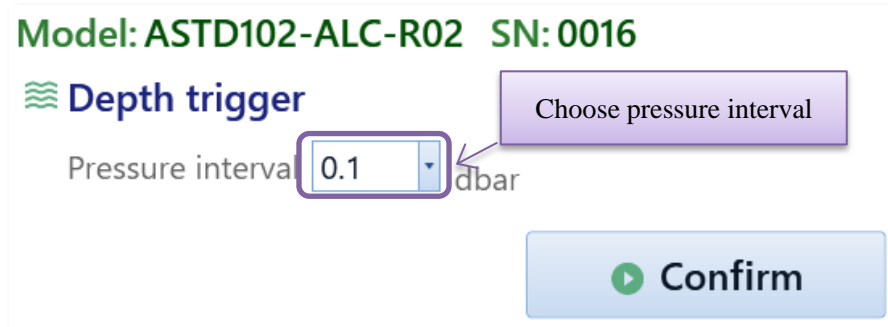


Figure 6.17 Depth trigger measurement

- (4) Setup pressure pitch (dbar) you wish to use as [Pressure Interval].



- Able to choose pressure pitch from 0.1, 0.2, 0.5, and 1.0 (dbar).

- (5) Send your measurement settings to the instrument by clicking on [Confirm] button.  
Displays setting result for 10 seconds if sent properly. (Figure 6.18)

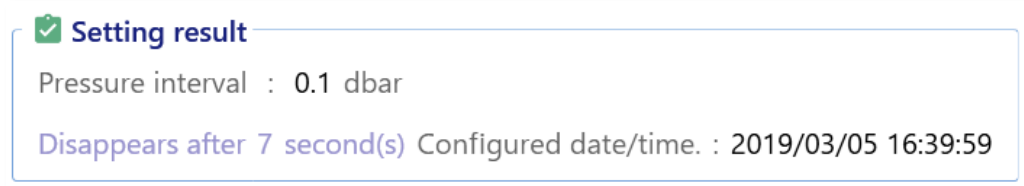




Figure 6.18 Displaying setup result

- (6) Take the communication cable off that is connected to I/F while the instrument power ON.  
Red LED placed on top of the instrument blinks for 20 seconds, and will start measuring as the LED stop blinking.




- Optional sensors (chlorophyll and turbidity sensor) require 10 seconds for pre-heat.  
This pre-heat process is conducted while LED blinking (20 seconds).
- Zero-point calibration is conducted when LED stops blinking. Please hold the instrument (sensor section) under water close to the surface until its LED stops blinking, and then start your measurement by letting it descend slowly.
- **Keep descending speed at 50cm/sec or less.**

- (7) Turn instrument power OFF when measurement is completed. Please turn the power back ON if you wish to conduct another measurement with the same settings.  
LED blinks for 20 seconds and start measuring after stops blinking.



- Refer to the instrument manual for details of the instrument.



- **Please do not use our previous communication processing software with RINKO-Profiler's measurement data (Raw files) recorded by this software. Due to setup values being different, physical values may not be calculated correctly.**
- RINKO-Profiler's measurement data recorded by previous communication processing software can be used with this software.

## 6.5.2 Time-Trigger Measurement

Time trigger measurement records measurement data based on the clock information and conditions saved on the instrument. “Continuous mode” conducts measurement continuously every specified interval (seconds). “Burst mode” conducts measurement every specified burst time (minutes).

Please be sure to setup clock information in the instrument before measurement, since clock information in the instruments is used for starting measurement and recording clock information of measurement data.

- (1) Connect the instrument to the PC and launch the software.
- (2) Choose the instrument to use from “instrument menu”. (Refer to “6.2 Choosing the Instrument to Use”)
- (3) Choose “Time trigger” from “function menu”. (Figure 6.19)

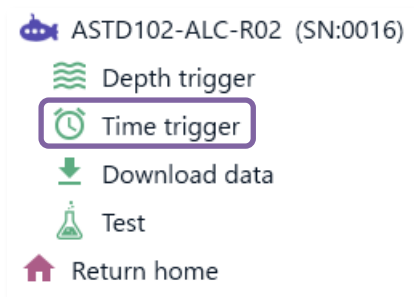


Figure 6.19 Time-trigger measurement

- (4) Setup measurement conditions. (Figure 6.20)

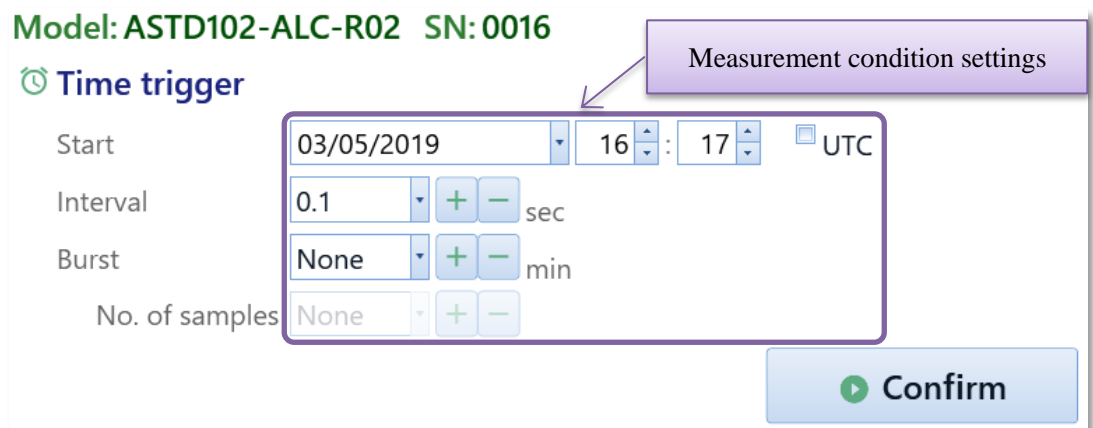


Figure 6.20 Setting up measurement conditions



- Please refer to “6.5.2.1 Measurement ” for detail.



(5) Send your measurement settings to the instrument by clicking on [Confirm] button.  
Displays setting result for 10 seconds if sent properly. (Figure 6.18)

(6) Same as depth trigger measurement, take off the communication cable connected to I/F while the instrument power is ON. Red LED turns OFF automatically, and stands by until its start time. LED turns ON when it reaches to the specified time and starts measuring.



- Zero-point calibration for depth will not be conducted.
- Pre-heat of the sensor takes 5 seconds from when LED turns ON.  
Measurement starts 5 seconds after LED turns ON.
- Takes 10 seconds for pre-heat with the instrument with optional sensors (chlorophyll and turbidity).
- **Keep descending speed at 50 cm/sec or less.**



- In case you wish to start measuring without waiting for measurement start time, please turn the power OFF once after sending measurement settings and turn it back ON. It starts measurement after completing pre-heat.

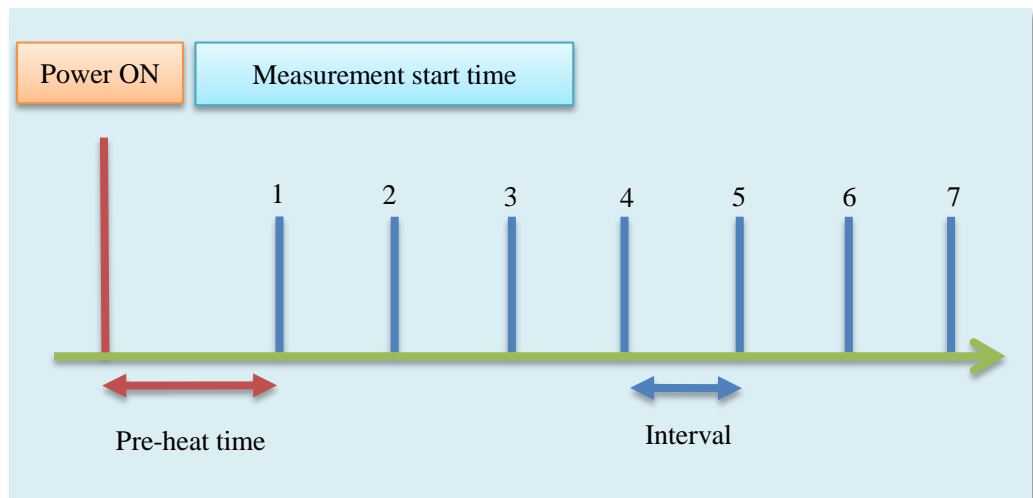
(7) Able to stop measurement by turning instrument power OFF. Turn the power back ON if you wish to conduct measurement again. Measurement restarts after completing pre-heat process. In case of changing measurement settings, put the communication cable back on then turn the instrument power ON.



- **Please do not use our previous communication processing software with RINKO-Profiler's measurement data (Raw files) recorded by this software. Due to setup values being different, physical values may not be calculated correctly.**
- RINKO-Profiler's measurement data recorded by previous communication processing software can be used with this software.

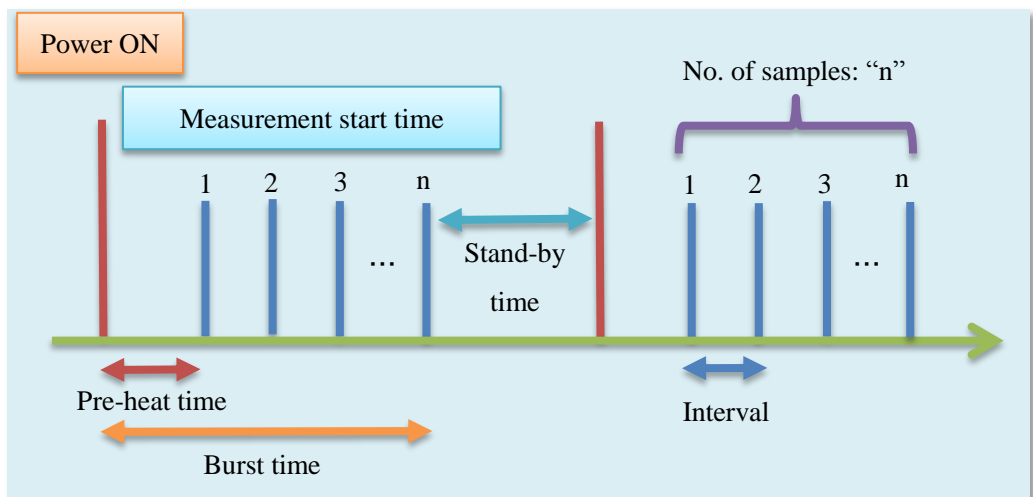
### 6.5.2.1 Measurement Setting

- Below are the measurement methods by each mode.  
[Continuous Mode]



The instrument records measurement data continuously starting from measurement starting time at every specified interval. The instrument turns ON itself early enough to complete pre-heat before its measurement start time. **Measurement will start in “Continuous mode” by setting “none” as its burst time and the number of samples.**

[Burst Mode]



The instrument records measurement data between starting time and stop time per every burst time, and take specified number of samples every specified burst time before becoming into stand-by status. The instrument turns ON itself early enough to complete pre-heat before its measurement start time. **Measurement will start in “Burst mode” by setting other than “none” as its burst time and the number of samples.**

- Setting up Items

- Measurement start time

Measurement starts at specified time.

UTC can be used to specify time by checking the box enabling UTC.

	<ul style="list-style-type: none"><li>● Make sure to setup clock information in the instrument before measurement. If not, measurement may not start properly.</li><li>● Confirm the time zone (local or UTC) you chose when setting the clock information in the instrument. Incorrect setting may cause improper measurement start.</li></ul>
	<ul style="list-style-type: none"><li>● The instrument turns itself ON before its start time just enough for pre-heat, and starts measurement at specified start time.</li><li>● When setting start time, make sure to allow 1 minute or more from the clock information in the instrument.</li></ul>

- Interval (seconds)

Here is how to setup interval between each measurement data to record. Interval can be chosen between 0.1 second and 60.0 seconds. Either choosing from 0,1, 0.5, 1.0, 5.0, 10.0, and 60.0, or enter desired interval manually.



**Starts measurement in “Continuous mode” if choose “none” as its burst time and the number of samples.**

	<ul style="list-style-type: none"><li>● Unable to start measurement if incorrect settings are entered.</li></ul>
	<ul style="list-style-type: none"><li>● Able to choose per 0.1 second when setting less than 1 second.<ul style="list-style-type: none"><li>× Unable to choose such as 0.12 second.</li></ul></li><li>● Able to choose per 1 second when setting 1 second or longer.<ul style="list-style-type: none"><li>× Unable to choose such as 10.5 seconds.</li></ul></li></ul>

➤ Burst time (minutes)

Setup burst time between each time the instrument turns ON under “Burst mode”, and it can be chosen between 1 minute and 1440 minutes.



**Measurement starts in “Burst mode” if choose anything other than “none” as its burst time and the number of samples.**

	<ul style="list-style-type: none"><li>● Unable to start measurement if incorrect settings are entered.</li><li>● Unable to choose the number of samples exceeding its burst time.</li></ul>
	<ul style="list-style-type: none"><li>● The number of samples will be available to choose once you choose other than “none” as its burst time.</li></ul>

➤ The number of samples

The number of measurement data to record in single burst under “Burst mode”, and it can be chosen between 1 and 18000.

**Measurement starts in “Burst mode” if choose anything other than “none” as its burst time and the number of samples.**

	<ul style="list-style-type: none"><li>● Unable to start measurement if incorrect settings are entered.</li><li>● Unable to choose the number of samples exceeding its burst time.</li></ul>
	<ul style="list-style-type: none"><li>● The number of samples will be available to choose once you choose other than “none” as its burst time.</li></ul>

## 6.6 Transferring Data to PC

Here is how to transfer measurement data recorded in the instrument (RINKO-Profiler / H-11) to the PC. Unnecessary measurement data can also be deleted from the instrument.

### 6.6.1 Confirming Measurement Data

Here is how to confirm recorded measurement data in the instrument.

- (1) Connect the instrument to the PC and launch the software.
- (2) Choose the instrument to use from “instrument menu”.  
→ “6.2 Choosing the Instrument to Use”
- (3) Choose “Download data” from “function menu”. (Figure 6.21)

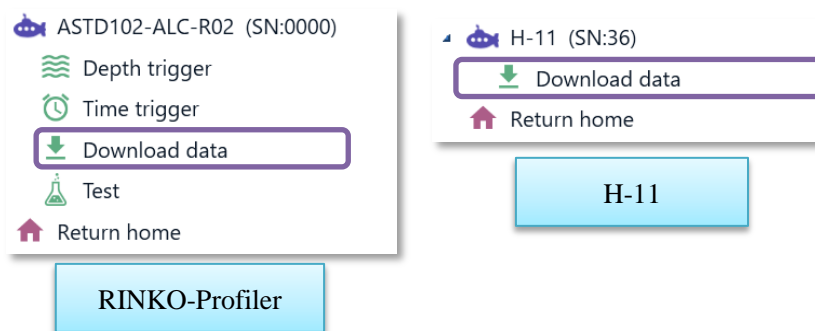


Figure 6.21 Examples of “function menu”

- (4) Measurement data information received from the instrument is shown. (Figure 6.22 / Table 6.3) Able to cancel by clicking on [Cancel] button while receiving.

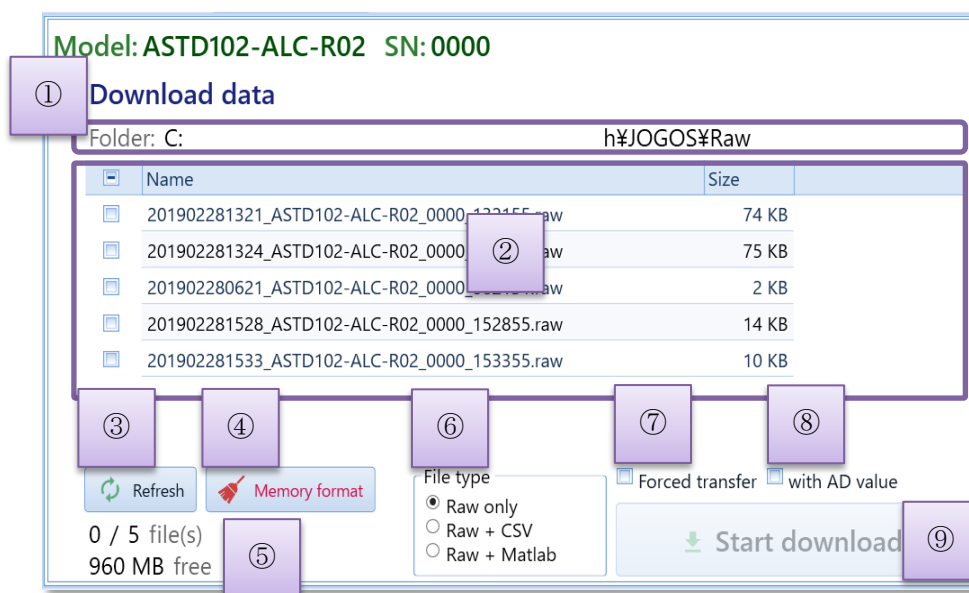


Figure 6.22 Data transfer screen (RINKO-Profiler)

Table 6.3 Explanation of data transfer screen

№	Item	Detail
1	Folder	Displays the folder where to save the files.
2	File information	Displays measurement data information recorded in memory. Contents differ depending on the instrument and the displaying unit. Choose measurement data to transfer over to the PC.
3	[Refresh]	Receive measurement data information from the instrument.
4	[Memory format]	Clears memory.
5	Information	Displays memory availability and the number of data.
6	File type	Specify the file type to transfer in. Raw : Raw files only Raw + CSV : Raw + Physical value files (CSV format) Raw + Matlab : Raw + Physical value files (Matlab format)
7	Forced transfer	Conduct forced data transfer. (Only with RINKO-Profilier)
8	with AD value	Output AD values along with physical values in case you wish to output CSV files or Matlab files.
9	[Start download]	Start data transfer.



- Unable to communicate with the instrument in case connected instrument is different from detected instrument.
- The list will not be displayed if [Cancel] button was pressed while receiving measurement data information.

## 6.6.2 Transferring Measurement Data

Here is how to transfer measurement data saved in the instrument to the PC.  
Physical value files (CSV or Matlab file) can be also outputted when transfer.

- (1) Choose a file(s) to transfer in data transfer screen. (Figure 6.22)
- (2) Click on [Start download] button. (Figure 6.23)

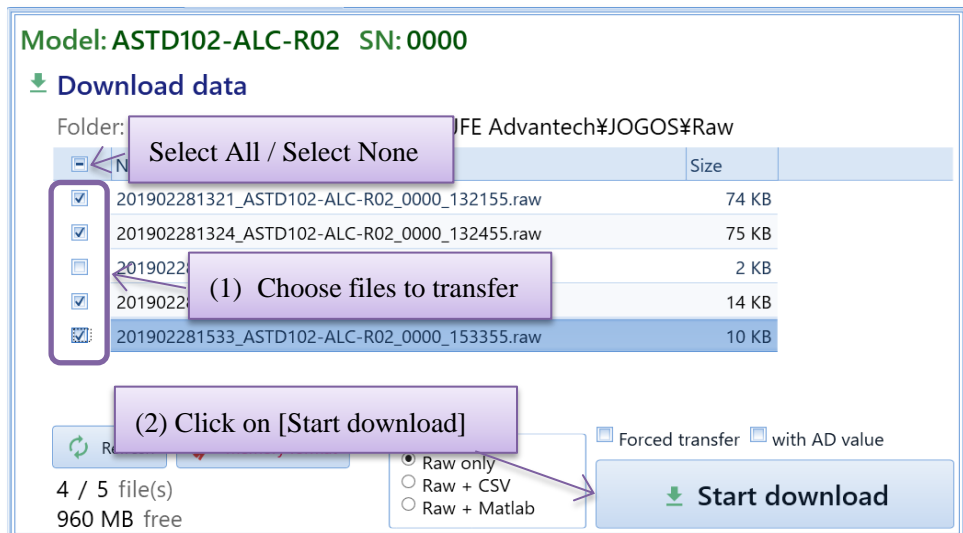


Figure 6.23 Choosing files to transfer

- (3) Displays confirmation message before transfer. (Figure 6.24)  
Click on [Yes] to continue.

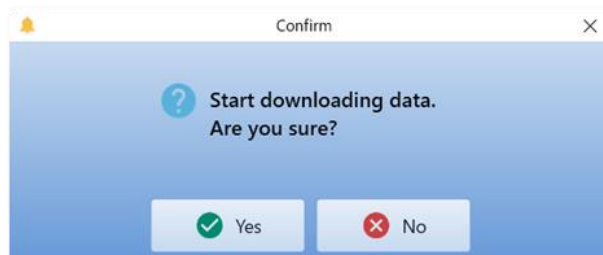



Figure 6.24 Confirmation dialog box before transfer

- (4) Displays progress status while in transfer. Able to cancel by clicking on [Cancel] button.



- Measurement data in transfer will be deleted.
- Transferring data cannot be canceled with RINKO-Profiler.  
Cancels the process when transfer process is completed.

(5) Displays confirmation dialog as transfer completes. (Figure 6.24)

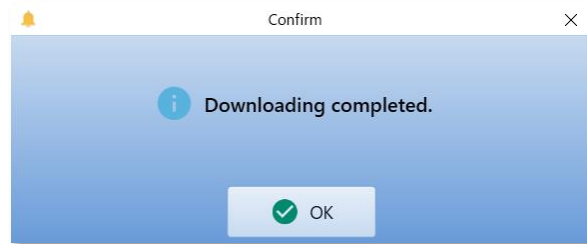


Figure 6.25 Transfer completion confirmation dialog

(6) Displays "Error" window if any error occurs while in data transfer. Please confirm error information. (Figure 6.26)

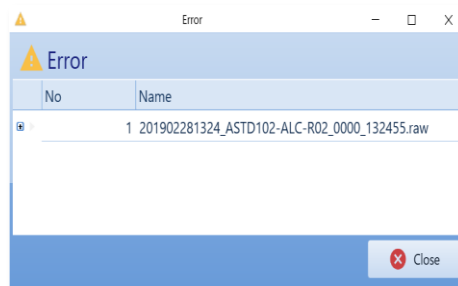


Figure 6.26 "Error" window



- Measurement data could be damaged if you repeatedly fail to transfer. Conducting "Force transfer" by turning it ON may make it possible to transfer. (Only with RINKO-Profilers)



- Please be sure to turn OFF "Forced transfer" function when transferring normal measurement data. The transfer may not work properly if transfer normal data forcefully.
- "Forced transfer" may not work in all cases.
- "Forced transfer" may corrupt the format of outputted Raw files.



### 6.6.3 Deleting Measurement Data (Memory Format)

Here is how to delete measurement data recorded in the instrument.

**Please be aware that deleted measurement data cannot be restored.**

- (1) Click on [Memory format] button and display confirmation message. (Figure 6.27)

Click on [Yes] button to continue, and click on [No] button to abort.

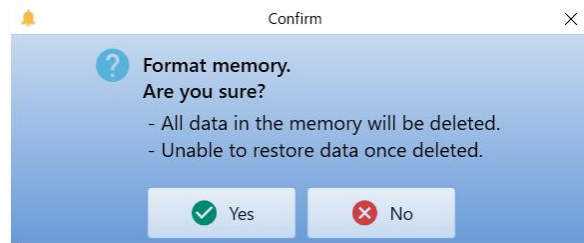


Figure 6.27 Confirmation message

- (2) Displays final confirmation message. (Figure 6.28)

Click on [Yes] button to continue, and click on [No] button to abort.

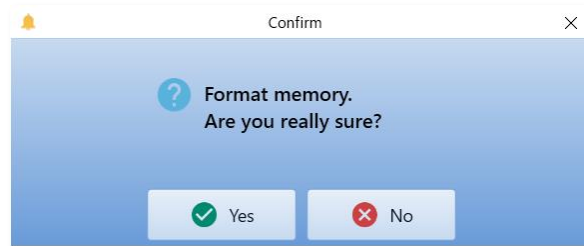


Figure 6.28 Final confirmation message

- (3) Initiates memory format. Format is completed if you see the confirmation message shown below. (Figure 6.29)

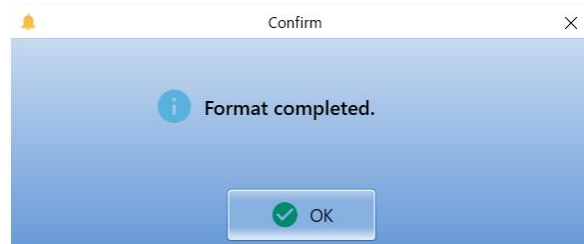


Figure 6.29 Completion message



- Unable to specify a measurement data for partial deletion.
- **Be aware that deleted measurement data cannot be restored.**  
**Confirm data before deleting.**

## 6.7 Displaying Measurement Data

Here is how to confirm measurement data (Raw data) transferred from the instrument.

### 6.7.1 Opening File

Specify measurement data (raw file) to confirm.

- (1) Launch the software.
- (2) Display file selection dialog by choosing [File > Open].
- (3) Choose a file you wish to display from the dialog.
- (4) Automatically switches to [View] tab. Able to confirm measurement data in plot or in data list.  
→ “6.7.2 Displaying Plot” / “6.7.3 Data List”

### 6.7.2 Displaying Plot

Vertical profiling plot and chronological plot can be displayed using the software.

Chronological plotting cannot be done with measurement data obtained using depth trigger.

- (1) Choose up to 3 items you wish to plot from [Item]. Able to setup items in “option” window. Items to plot are common items for both vertical profiling plot and chronological plot. → “7.1.3 Changing Plot and List Display Setting”

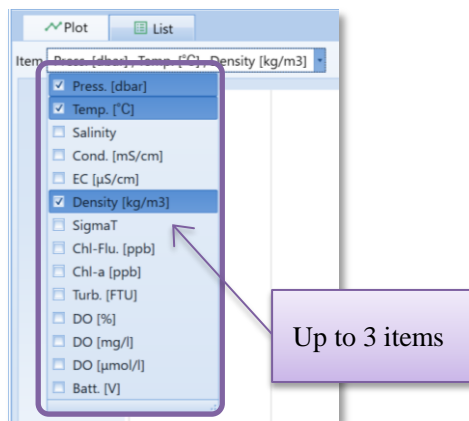


Figure 6.30 Setup items for plot display



- Items will not be displayed in the list if chosen not to display in “display item” under “option”.
- “Pressure” will not be plotted in vertical profiling plot even chosen as an item to display.

- (2) Switch which plot to display by using the tabs on the bottom of the window. (Figure 6.31)

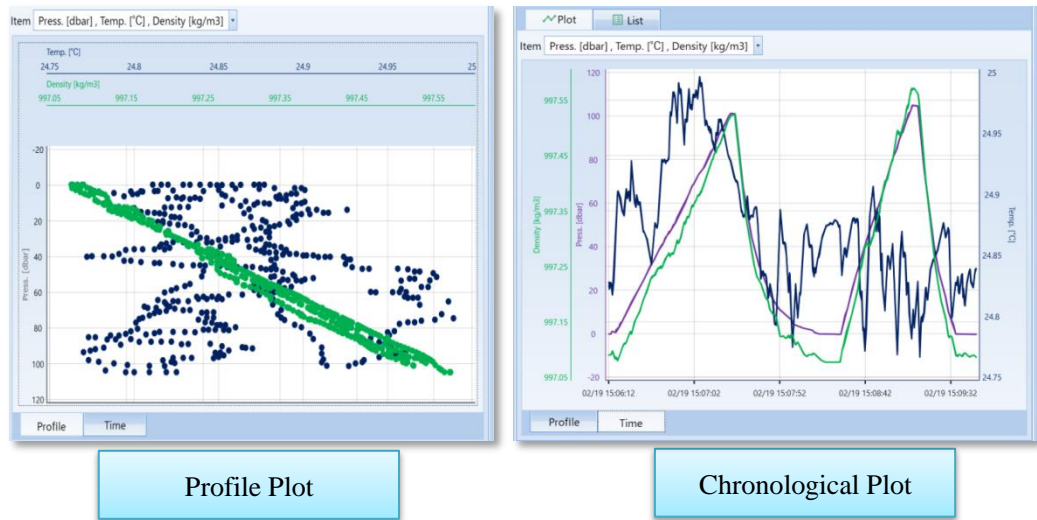


Figure 6.31 Plot display examples

- (3) Placing the cursor on plot shows physical values of the coordinates. Able to zoom in and out by using mouse wheel, and specify the zooming area by dragging the mouse while holding left click button. (Figure 6.32)

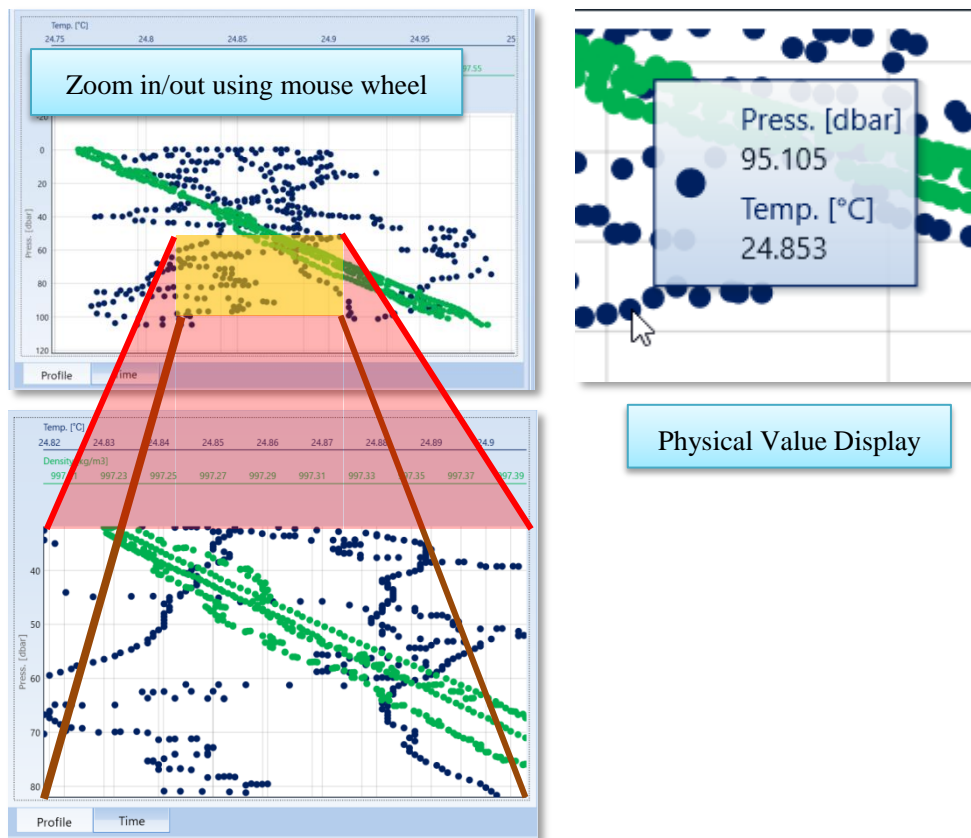


Figure 6.32 Supporting function for plot display

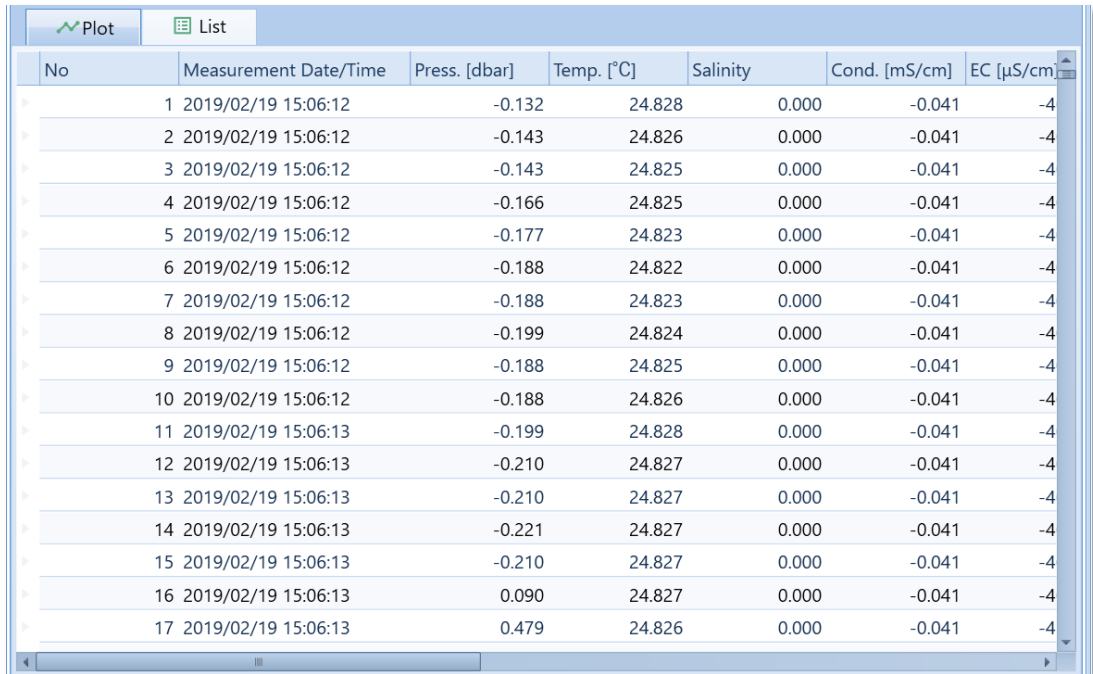
Unable to zoom in or out with real-time measurement.

### 6.7.3 Data List

Displays physical values converted from AD values recorded in measurement data (Raw file).

Displays “display items” chosen in “option” window. (Figure 6.33)

→ “7.1.3 Changing Plot and List Display Setting”



The screenshot shows a software window with two tabs: 'Plot' and 'List'. The 'List' tab is active, displaying a table with 7 columns: 'No', 'Measurement Date/Time', 'Press. [dbar]', 'Temp. [°C]', 'Salinity', 'Cond. [mS/cm]', and 'EC [µS/cm]'. The table contains 17 rows of data, with the last row (No. 17) having a measurement time of 15:06:13, while the others are at 15:06:12. The 'EC' column values are consistently -4.

No	Measurement Date/Time	Press. [dbar]	Temp. [°C]	Salinity	Cond. [mS/cm]	EC [µS/cm]
1	2019/02/19 15:06:12	-0.132	24.828	0.000	-0.041	-4
2	2019/02/19 15:06:12	-0.143	24.826	0.000	-0.041	-4
3	2019/02/19 15:06:12	-0.143	24.825	0.000	-0.041	-4
4	2019/02/19 15:06:12	-0.166	24.825	0.000	-0.041	-4
5	2019/02/19 15:06:12	-0.177	24.823	0.000	-0.041	-4
6	2019/02/19 15:06:12	-0.188	24.822	0.000	-0.041	-4
7	2019/02/19 15:06:12	-0.188	24.823	0.000	-0.041	-4
8	2019/02/19 15:06:12	-0.199	24.824	0.000	-0.041	-4
9	2019/02/19 15:06:12	-0.188	24.825	0.000	-0.041	-4
10	2019/02/19 15:06:12	-0.188	24.826	0.000	-0.041	-4
11	2019/02/19 15:06:13	-0.199	24.828	0.000	-0.041	-4
12	2019/02/19 15:06:13	-0.210	24.827	0.000	-0.041	-4
13	2019/02/19 15:06:13	-0.210	24.827	0.000	-0.041	-4
14	2019/02/19 15:06:13	-0.221	24.827	0.000	-0.041	-4
15	2019/02/19 15:06:13	-0.210	24.827	0.000	-0.041	-4
16	2019/02/19 15:06:13	0.090	24.827	0.000	-0.041	-4
17	2019/02/19 15:06:13	0.479	24.826	0.000	-0.041	-4

Figure 6.33 Displaying data list



Clock information will not be displayed with measurement data acquired by using depth trigger.

## 6.8 Creating Raw File from Physical Value File

Here is how to convert measurement data files (Raw files) to physical value files.  
Able to convert into CSV formatted files and Matlab formatted files.

### 6.8.1 Opening File Conversion Screen

- (1) Launch the software.
- (2) Choose [File > Convert] to open “file conversion” window. (Figure 6.34 / Table 6.4)

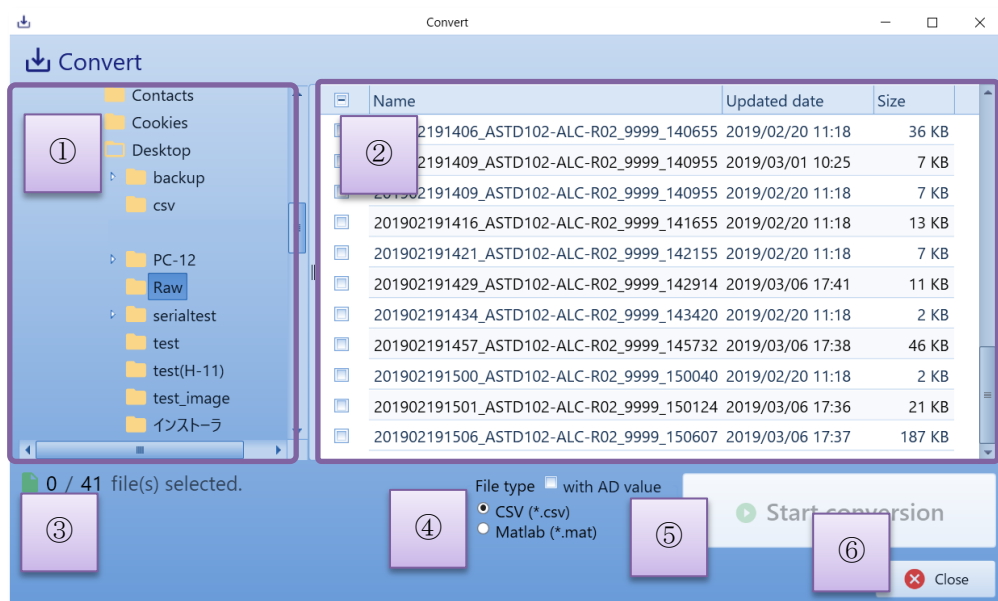


Figure 6.34 File conversion window

Table 6.4 Explanation of file conversion window

No	Item	Detail
1	Folder	Choose a folder with files to convert.
2	File information	Displays Raw files in the chosen folder. Choose a file(s) to convert. Able to select all or select none of the files by checking the box in the very first row.
3	No. of files	Displays the number of chosen files.
4	File type	Specify a format type when converting to physical value files. Choose either CSV or Matlab. Outputs AD values also by checking the box next to [with AD value].
5	[Start conversion]	Start conversion into physical value files.
6	[Close]	Close file conversion window.

## 6.8.2 Converting File

Here is how to convert a file(s) specified in “file information” into physical value file in specified format.

- (1) Choose a Raw file(s) to convert into a physical file(s) in “file information”, and specify a format to convert into at “File type”. (Figure 6.35)

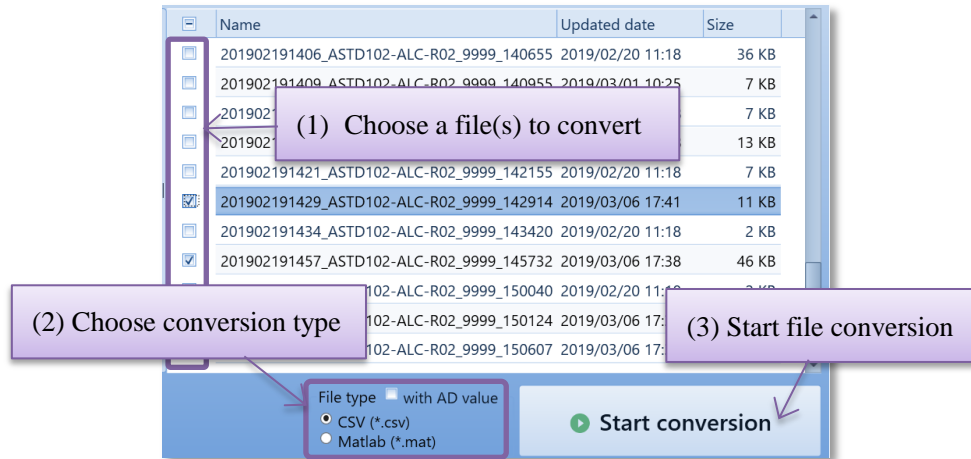
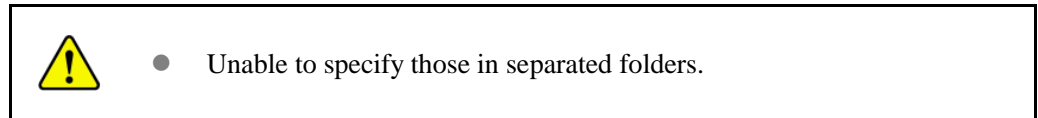


Figure 6.35 File conversion



- (2) Click on [Start conversion] button and display confirmation window. Click on [Yes] to continue, and click on [No] to abort.



Figure 6.36 Confirmation message

- (3) Displays progress status once you start file conversion. Click on [Cancel] button to abort.

- (4) Displays completion message once file conversion is completed.  
Outputs physical value files to same folder where original Raw files are. (Figure 6.37)

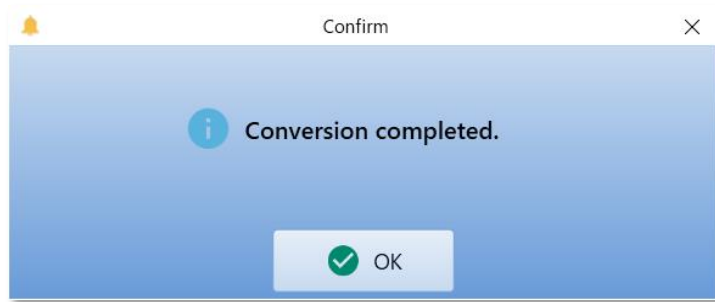


Figure 6.37 Completion message

- (5) Displays “error” window if any error occurs in conversion process. (Figure 6.38)

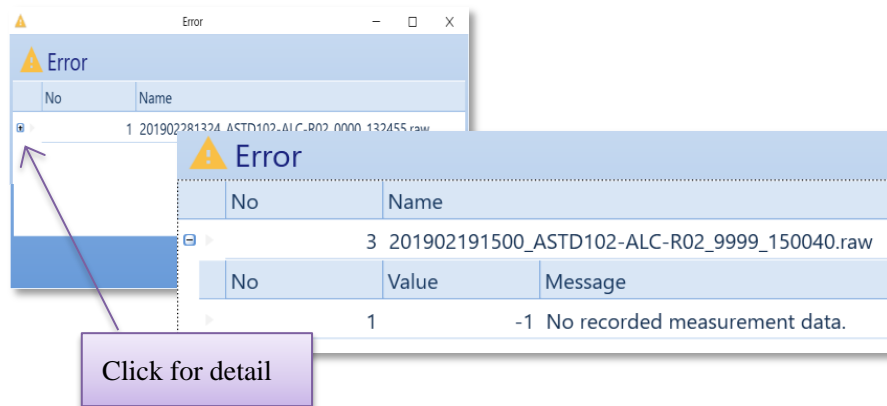


Figure 6.38 Error window

## 6.9 Calibrating Installed Sensor

The software allows you to calibrate DO (RINKO) sensor and pH sensor on our instruments.

### 6.9.1 Opening Calibration Screen

- (1) Launch the software after connecting the instrument to the PC.
- (2) Choose the instrument to use from “instrument menu”.  
→ “6.2 Choosing the Instrument to Use”
- (3) Choose [Tools > Calibration] and display “Calibration”. (Figure 6.39 / Table 6.5)

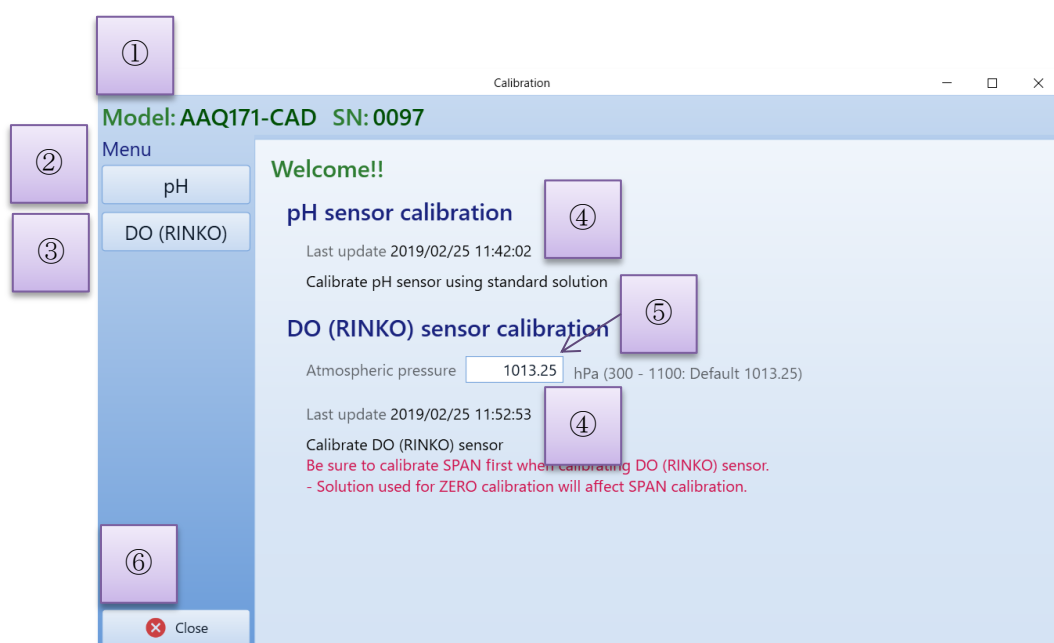


Figure 6.39 Calibration window

Table 6.5 Explanation of calibration window

No	Item	Detail
1	Instrument information	Displays connected instrument information.
2	[pH]	Conduct calibration of pH sensor. (only with installed instruments)
3	DO(RINKO)	Conduct calibration of DO (RINKO) sensor. (only with installed instruments)
4	Last update	Displays clock information of last updates of each sensor.
5	Atmospheric pressure	Enter atmospheric pressure used for DO (RINKO) sensor calibration.
6	[Close]	Closes the window.



## 6.9.2 Calibrating pH Sensor

Here is how to calibrate installed pH sensor.

Unable to use with instruments without pH sensor installed.

- (1) Switch to calibration screen by clicking on [pH] button, and start communication with the instrument. (Figure 6.40 / Table 6.6)

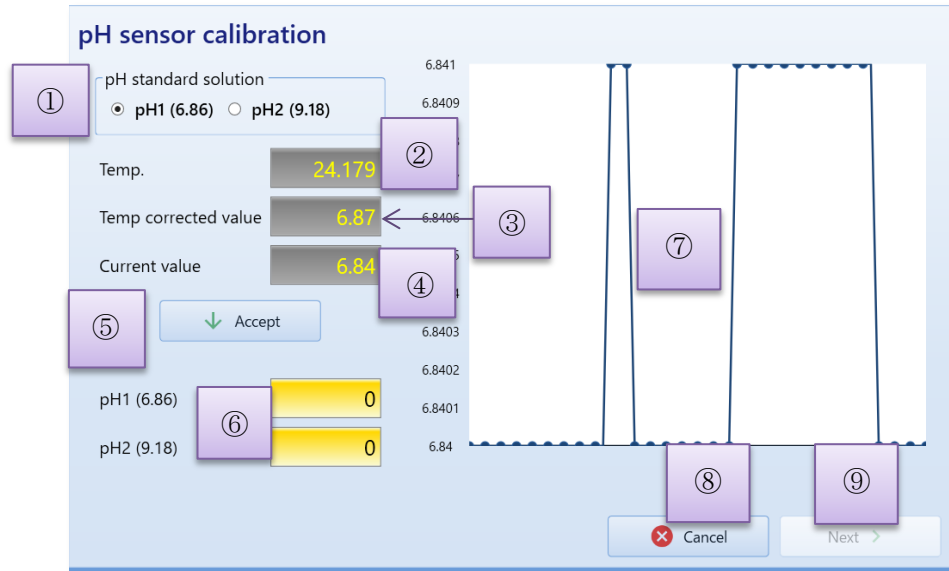


Figure 6.40 Calibration of pH sensor

Table 6.6 Explanation of pH sensor calibration

No	Item	Detail
1	pH standard solution	Choose standard solution used for calibration.
2	Temp.	Displays water temperature measured by installed pH sensor.
3	Temp corrected value	Displays pH value of standard solution adjusted by water temperature.
4	Current value	Displays value from installed pH sensor.
5	[Accept]	Click to accept current sensor value.
6	Setup values	Displays values to be used for calibration.
7	Chronological plot	Displays current pH sensor value chronologically. 1 minute display time in 1 second update interval.
8	[Cancel]	Click to cancel calibration and returns to Home.
9	[Next]	Switch over to calibration result screen. Unable to click until all standard solution values are accepted.

- (2) Soak the sensor in the chosen “pH standard solution” and confirm values by clicking on [Accept] button when plot values stabilize. (Figure 6.41)  
Click on [Accept] again if failed to acquire the values.

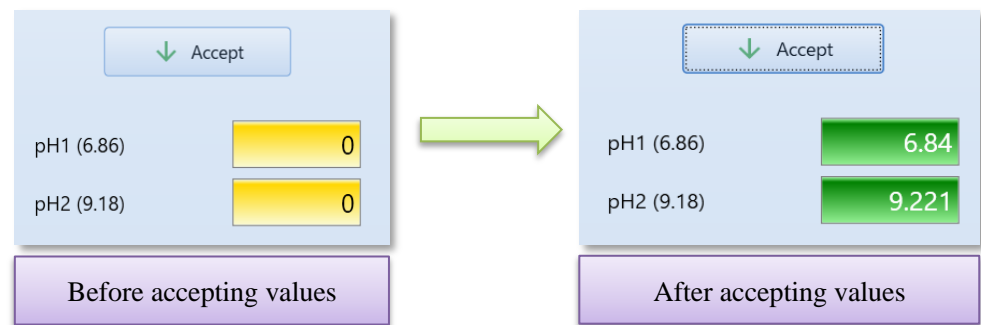


Figure 6.41 Acquire figures to be used for calibration


- (3) [Next] button will be available to click once you complete with all standard solutions.  
Move to calibration result screen by clicking on [Next] button.  
→ “6.9.4 Confirming Calibration Result”

### 6.9.3 Calibrating DO (RINKO) Sensor

Here is how to calibrate installed DO (RINKO) sensor.

Unable to use with instruments without DO (RINKO) sensor installed.

Please refer to instrument manual for detail.



- **Make sure to conduct SPAN calibration first in case conducting SPAN/ZERO calibration.**

- (1) Enter current “Atmospheric pressure” right before you calibrate.  
Choose setting between 300 and 1100hPa.
- (2) Switch to calibration screen by clicking on [DO (RINKO)] button,  
and start communication with the instrument. (Figure 6.42 / Table 6.7 / Table 6.8)

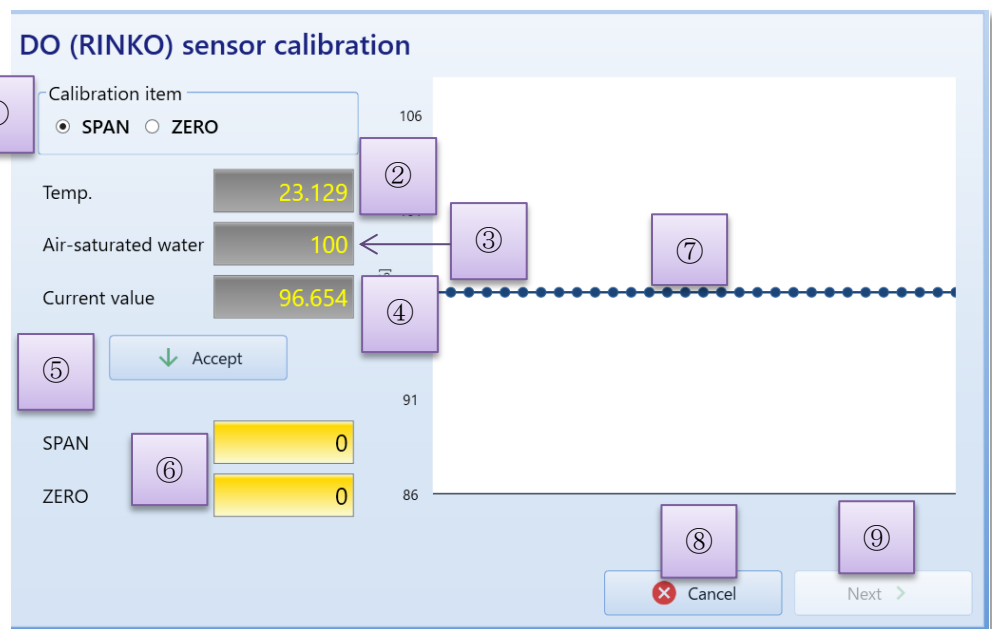


Figure 6.42 DO (RINKO) sensor calibration

Table 6.7 Explanation of DO (RINKO) sensor calibration #1

No	Item	Detail
1	Calibration item	Choose a calibration method. <ul style="list-style-type: none"> <li>● Able to conduct only SPAN calibration or ZERO calibration individually.</li> <li>● <b>Conduct SPAN calibration first in case conducting both calibrations.</b></li> </ul>
2	Temp.	Displays water temperature from DO sensor.
3	Air saturated water	Displays saturation level at entered atmospheric pressure.

Table 6.8 Explanation of DO (RINKO) sensor calibration #2

No	Item	Detail
4	Current value	Displays values of installed DO sensor.
5	[Accept]	Click to accept current sensor value.
6	Setup values	Displays values to be used for calibration.
7	Chronological Plot	Displays current DO sensor value chronologically. 1 minute display time in 1 second update interval.
8	[Cancel]	Click to cancel the calibration and returns Home.
9	[Next]	Switch over to calibration result screen.

- (3) Choose “SPAN” as “Calibration item” when conducting SPAN calibration. Make sure the values are stabilized in plot, and then click on [Accept] button to accept. (Figure 6.43)  
Switch over to calibration result screen by clicking on [Next] button in case conducting only SPAN calibration.

→ “6.9.4 Confirming Calibration Result”

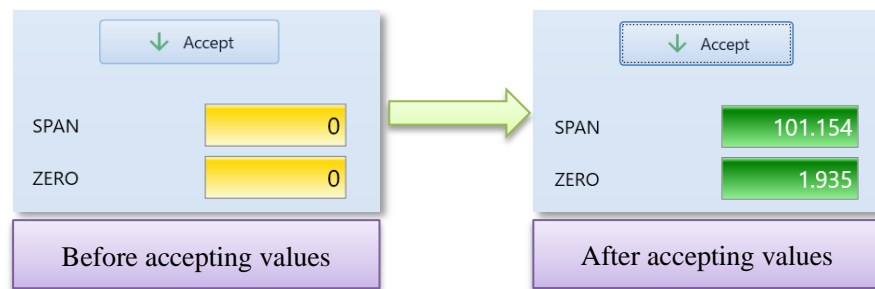




Figure 6.43 Acquire values to be used for calibration

- Warning will be displayed if there is more than 20% difference compared to “Air-saturated water”. Able to calibrate even if the warning is displayed.

- (4) Choose “ZERO” as “Calibration item” when conducting ZERO calibration. Make sure the values are stabilized in plot, and then click on [Accept] button to accept. (Figure 6.43)  
Switch to calibration result screen by clicking on [Next] button.  
→ “6.9.4 Confirming Calibration Result”

- **Conduct SPAN calibration first in case conducting both SPAN calibration and ZERO calibration.**
- Warning will be displayed if there is more than 20% difference compared to “Air-saturated water”. Able to calibrate even if the warning is displayed.



## 6.9.4 Confirming Calibration Result

Here is how to display calibration results of each sensor.

- (1) Switch to calibration result screen by clicking on [Next] button in calibration screen of each sensor to calculate new coefficients. (Figure 6.44 / Table 6.9)

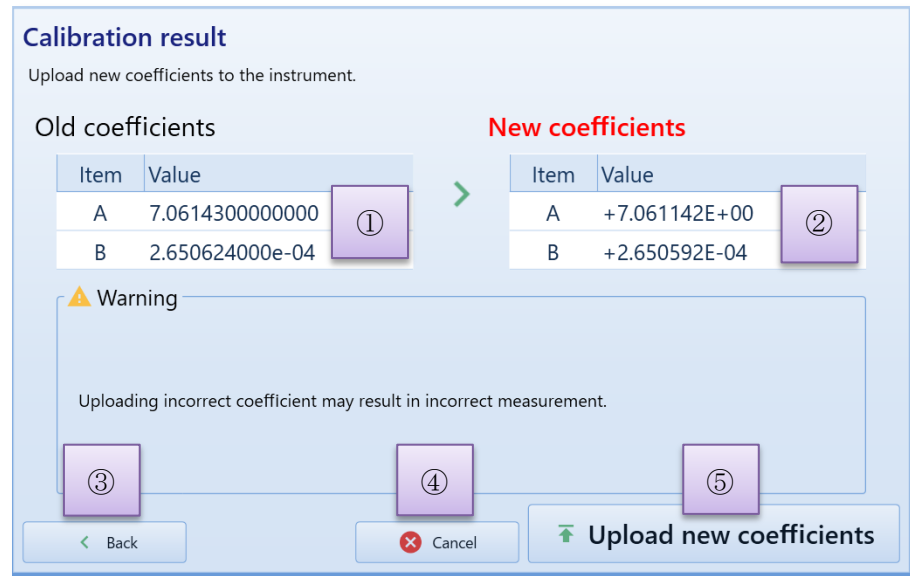


Figure 6.44 Calibration result

Table 6.9 Explanation of calibration result screen

No	Item	Detail
1	Old coefficients	Displays current calibration coefficients. DO (RINKO) sensor: Displays coefficients G and H pH sensor: Displays coefficients A and B
2	New coefficients	Displays newly calculated coefficients.
3	[Back]	Click to return to value acquisition screen.
4	[Cancel]	Click to cancel calibration and return to calibration start screen.
5	[Upload new coefficients]	Click to upload new coefficients to the instrument.

- Displays error message in case calibration failed.  
Please conduct calibration again.



- (2) Upload new coefficients to the instrument by clicking on [Upload new coefficients] button.  
Click on [Yes] button in displayed confirmation window. (Figure 6.45)  
Click on [No] button to cancel the process.

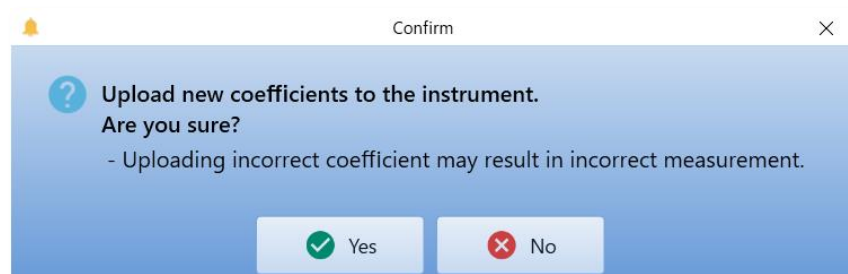



Figure 6.45 Uploading confirmation

- (3) Sending coefficients to the instrument will display confirmation dialog box.  
Cycle the instrument power and confirm the coefficients are uploaded to the instrument.



Figure 6.46 Upload completion

- Pay extra attention since it will influence physical values.
- Consider replacing sensors if it does not calibrate correctly.



## 6.10 Confirming Instrument Operation and Setting

Here is how to confirm instrument operation and calibration coefficients. Unable to confirm with H-11.

### 6.10.1 Conducting Instrument Test

Here is how to communicate with the instrument and confirm sensor operation.

- (1) Connect the instrument to the PC and launch the software.
- (2) Choose the instrument to use from “instrument menu”.  
→ “6.2 Choosing the Instrument to Use”
- (3) Choose “Test” from “function menu”. (Figure 6.47)

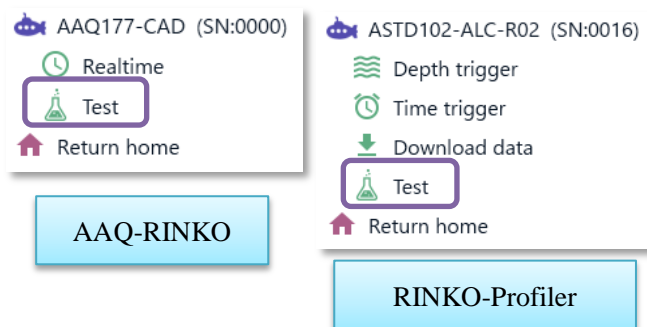


Figure 6.47 Choose “Test”

- (4) Start communication with the instrument by clicking on [Start] button to confirm each sensor’s AD values and physical values every 1 second. (Figure 6.48)  
[Start] button turns into [Stop] button once it is started.

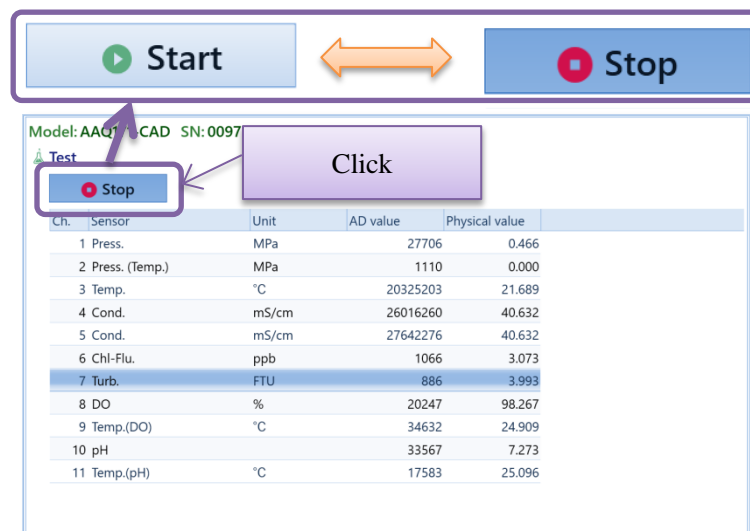


Figure 6.48 Example of communication test (AAQ-RINKO)

- (5) Stop the instrument test by clicking on [Stop] button.
- (6) Return to (4) if you wish to test again.



## 6.10.2 Confirming Calibration Coefficients

Here is how to confirm calibration coefficients registered in an instrument.

Able to output calibration coefficients to files.



- Confirmation only, and unable to change.
- Please send us output files in case error occurs.

- (1) Connect the instrument to the PC and launch the software.
- (2) Choose the instrument to use from “instrument menu”.  
→ “6.2 Choosing the Instrument to Use”
- (3) Choose [Tools > Instruments] to open “instrument information” window. (Figure 6.49)

Channel	Type	Name	Coefficient					
			Value A	Value B	Value C	Value D	Value E	Value F
1	D0	Press.	-5.83261600e-0	1.893092000e-C	0.000000000e0	0.000000000e0	0.000000000e0	0.0000000
2	D1	Press. (Temp.	0.000000000e0	0.000000000e0	0.000000000e0	0.000000000e0	0.000000000e0	0.0000000
3	T1	Temp.	-6.05328300e0	1.067156000e-C	-1.25505400e-0	2.881144000e-1	-3.46524400e-1	2.4939940
4	C1	Cond.	-5.64067000e-0	3.826508000e01	-1.72643500e-0	0.000000000e0	0.000000000e0	0.0000000
5	C2	Cond.	0.000000000e0	1.0000000000e0	0.000000000e0	0.000000000e0	0.000000000e0	0.0000000
6	K0	Chl-Flu.	-4.8975230000e	7.477134000e-C	0.000000000e0	0.000000000e0	0.000000000e0	0.0000000
7	U3	Turb.	-1.08786900e01	1.669919000e-C	9.709160000e-C	6.325667000e-1	0.000000000e0	0.0000000
8	O0	DO	-4.39215300e01	2.354507000e0	-3.23288400e0E	1.310000000e-C	5.200000000e-C	0.0000000
9	TO	Temp.(DO)	-5.19220000e0	1.029473000e-C	-8.44854700e-0	1.103082000e-1	0.000000000e0	0.0000000
10	P0	pH	+7.000000E+00	+2.600000E-04	+0.000000E+00	+0.000000E+00	+0.000000E+00	+0.000000
11	TP	Temp.(pH)	-5.31081900e0	1.729307000e-C	0.000000000e0	0.000000000e0	0.000000000e0	0.0000000

Figure 6.49 “Instrument Information” window

- (4) Able to output calibration coefficients to files by clicking on [Save as file].  
Press [Save] button after entering file name in file selection dialog.

## 6.11 Troubleshooting

This section covers troubleshooting for in case operational error occurs with your instrument.

Below are the possible cases that troubleshooting of the software covers.

- Unable to measure correctly after calibration of pH sensor and/or DO (RINKO) sensor using the software.
- Necessary to update the instrument firmware.

### 6.11.1 Opening Troubleshooting Screen

- (1) Connect the instrument and launch the software.
- (2) Choose the instrument from “instrument menu” to use.  
→ “6.2 Choosing the Instrument to Use”
- (3) Open “troubleshooting” window by choosing [Help > Troubleshooting].

(Figure 6.50 / Table 6.10)

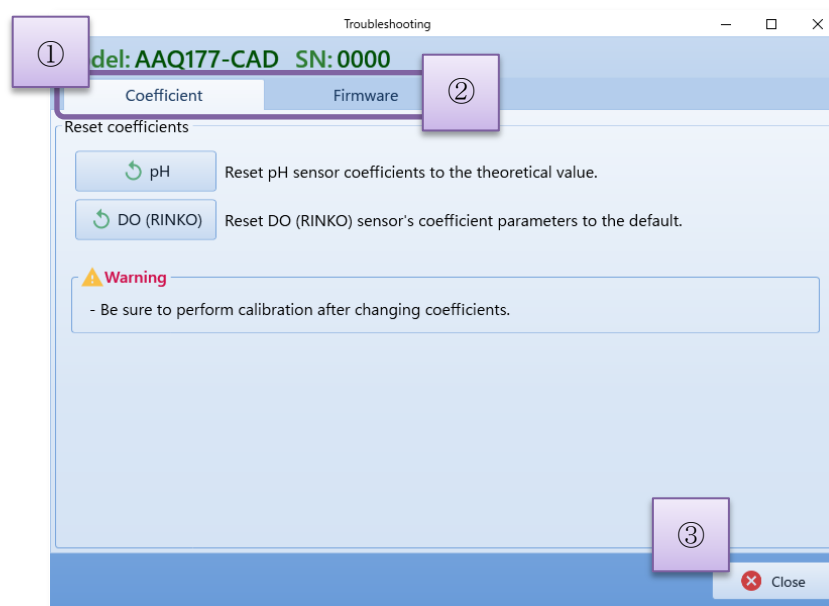


Figure 6.50 “Troubleshooting” window

Table 6.10 Explanation of troubleshooting window

No	Item	Detail
1	Instrument information	Displays information of connected instrument.
2	Function selection	Choose a function to use.
3	[Close]	Click to close the window.

## 6.11.2 Resetting Calibration Coefficients

In case unable to measure correctly after calibrations of pH sensor and/or DO (RINKO) sensor, it is possible to reset the calibration coefficients back to originals or those used before last calibration.

**Please calibrate again if you reset calibration coefficients.**

- (1) Open “Troubleshooting” window.
- (2) Choose “Coefficient” in “function selection”. (Figure 6.51)

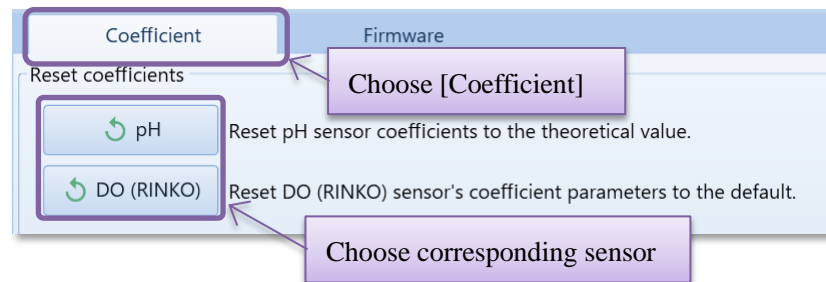


Figure 6.51 Calibration coefficients reset screen

- (3) Open “Select coefficient” window by choosing corresponding sensor. (Figure 6.51)  
 Choose “Reset to initial values” in case resetting back to original values. (Table 6.11)  
 Choose “Return to values before last calibration” if you wish to reset them back before last calibration. Unable to choose this if calibration was not conducted using the software.

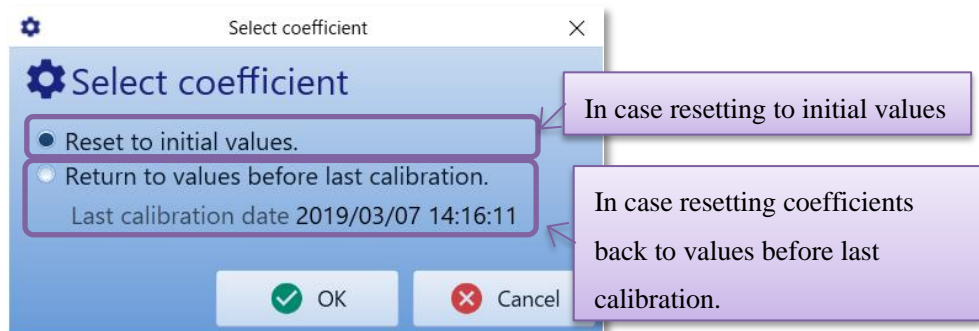


Figure 6.52 Choosing calibration coefficients

Table 6.11 Initial values of each sensor

Sensor	Initial values of calibration coefficients
pH	<ul style="list-style-type: none"> <li>● A=7.000</li> <li>● B=0.00026</li> </ul>
DO(RINKO)	<ul style="list-style-type: none"> <li>● G=0</li> <li>● H=1</li> </ul>

- (4) Open the confirmation message by clicking on [OK] button. (Figure 6.53)  
Click [Yes] button to continue, and click [No] button to abort.

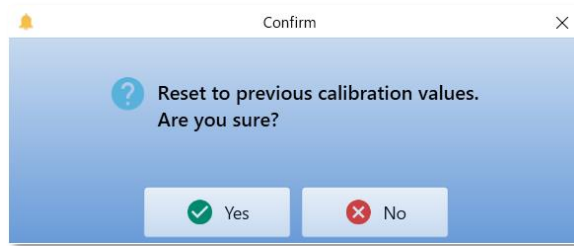


Figure 6.53 Confirmation message

- (5) Once coefficients were uploaded to the instrument properly, it opens confirmation message. (Figure 6.54)

Confirm coefficients are properly uploaded by cycling the instrument power.

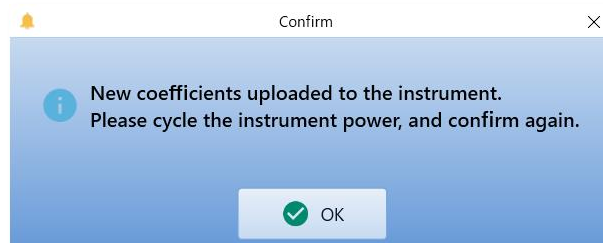


Figure 6.54 Upload completion message



- **Calibrate again if you reset the calibration coefficients.**
- Pay extra attention since it will influence physical values
- Consider replacing sensors if it does not calibrate correctly.

### 6.11.3 Updating Instrument Firmware

Here is how to update software (firmware) to control instrument operations.



- **The instrument will not be operational if you fail to update its firmware.**
- Firmware update function is password protected.  
Please contact us if you wish to use the update function.
- Only use files provided by our company for firmware updates.

- (1) Open “Troubleshooting” window.
- (2) Choose “Firmware” in “function selection”. (Figure 6.55)

Confirm current version by clicking on [Read] button.

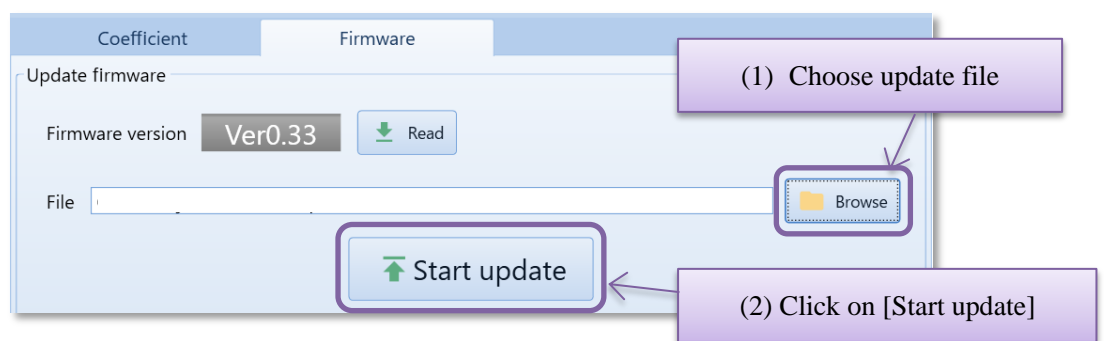


Figure 6.55 Firmware update

- (3) Choose firmware updating file from [Browse].
- (4) Display “Password” window by clicking on [Start update]. (Figure 6.56)

Enter correct password and click on [OK].

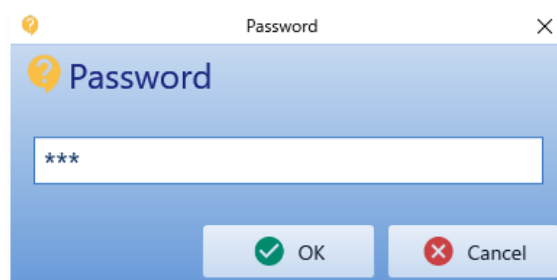


Figure 6.56 “Password” window



- Please contact us for the password.

(5) Displays confirmation message. (Figure 6.57)

Click [Yes] button to continue, and click on [No] to abort.




Figure 6.57 Confirmation message

(6) Displays final confirmation message. (Figure 6.58)

Click on [Yes] to start updating firmware, and click on [No] to abort.



Figure 6.58 Final confirmation message



- **The instrument will not be operational if you fail to update its firmware.**
- Only use files provided by our company for firmware updates.
- Unable to cancel firmware update once it is started.
- Do not take the cable off and/or turn the power off those may influence communication with instruments, and cause firmware update failure.

(7) Displays progress status while updating firmware. Unable to cancel while in progress.

(8) Displays confirmation dialog once firmware update completes.

Cycle the instrument power and confirm the update was done correctly.

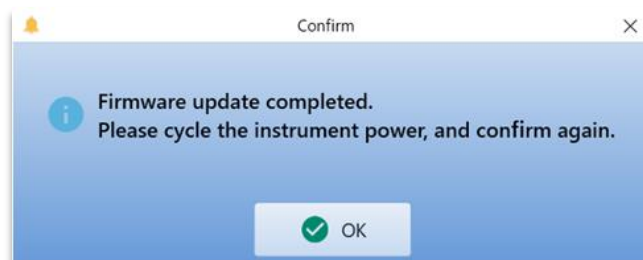


Figure 6.59 Update complete message

## 7 Changing Software Operation

Here is how to change the software operation.

### 7.1 Changing Software Setting

Here is how to change settings of the software operation such as settings for communication with instruments and item settings for plot display. Settings of the software can be changed without any instrument connected.

#### 7.1.1 Displaying Setup Screen

Displays “Option” window to change the software settings.

- (1) Launch the software.
- (2) Displays “Option” window by choosing [Tools > Option]. (Figure 7.1/ Table 7.1)

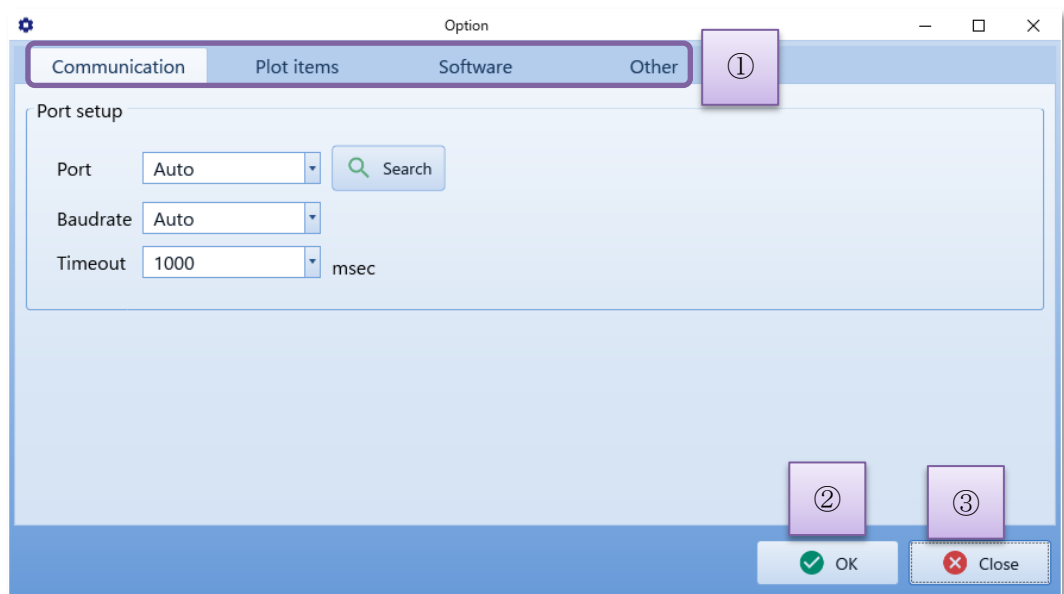


Figure 7.1 Option window

Table 7.1 Explanation on option window

No	Item	Detail
1	Function selection	Choose functions to setup.
2	[OK]	Click to save current settings.
3	[Close]	Click to close the window.

## 7.1.2 Changing Communication Settings

Here is how to change settings for instrument search and communication with instruments.

- (1) Open “Option” window and choose “Communication”. (Figure 7.2 / Table 7.2)

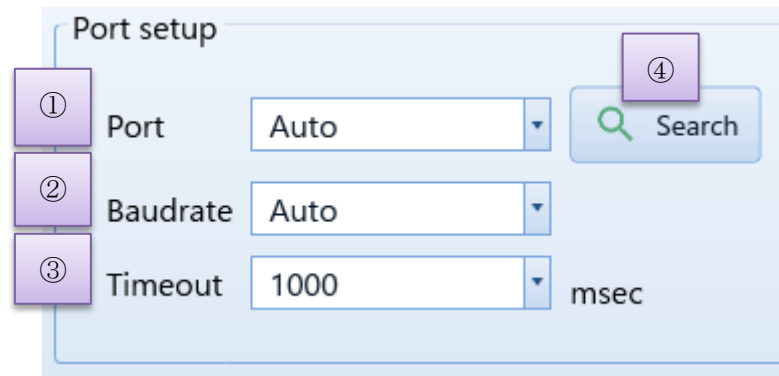


Figure 7.2 Communication setting

Table 7.2 Explanation on communication setting

No	Item	Detail
1	Port	Specify serial port to use for instrument search. <ul style="list-style-type: none"> <li>● Setting on “Auto”, all serial ports on the PC will be subjects for the search. (Default)</li> <li>● If specified, it will only observe specified port.</li> </ul>
2	Baudrate	Specify baudrate used for instrument search. Choose from “Auto, 9600, 19200, 38400, 115200” <ul style="list-style-type: none"> <li>● Setting on “Auto”, all baudrate will be subjects for the search. (Default)</li> <li>● If specified, it will only observe specified baudrate. (e.g.) AAQ-RINKO:38400 / RINKO-Profilers:115200</li> </ul>
3	Timeout	Setup timeout length waiting for the instrument response. (in millisecond) Choose from “100, 500, 1000, and 5000” (Default 1000)
4	[Search]	Manually command to search serial ports on the PC.



- Please choose other than “Auto” for the port and baudrate search in case the search is taking time.

- (2) Change necessary settings.
- (3) Click [OK] button to save the settings.



### 7.1.3 Changing Plot and List Display Setting

Here is how to change settings for plot and data list display.

- (1) Open “Option” window and choose “Plot items”. (Figure 7.3, Table 7.3)

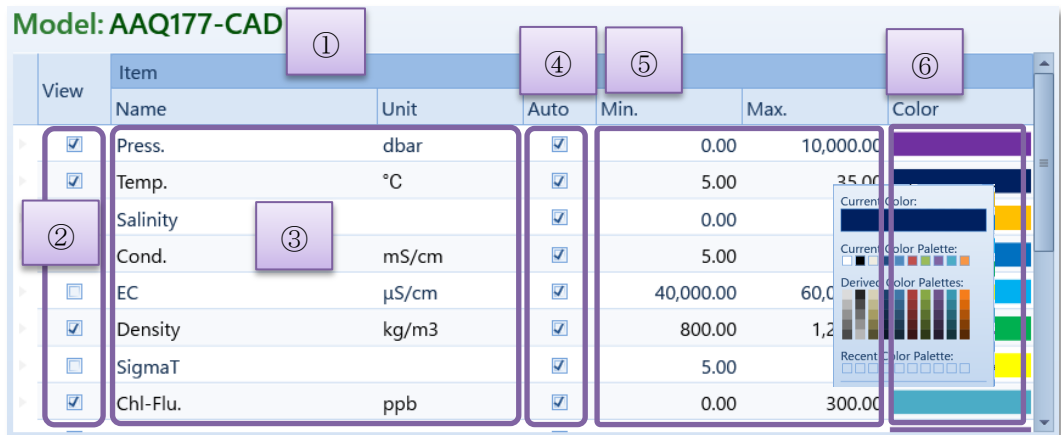


Figure 7.3 Display item setting

Table 7.3 Explanation on display item setting

No	Item	Detail
1	Model	Displays instrument model name. (Only when connected) Only items corresponding to the model are displayed.
2	View	Choose items to display in plot and list. Displays chosen items only in plot and list.
3	Name Unit	Displays item names and units. (Unable to change)
4	Auto	Automatically setup plot display range.
5	Min. Max	Specify plot display range. These will be ignored when Auto is ON. Min: Specify minimum value (-999,999,999 to 999,999,999) Max: Specify maximum value(-999,999,999 to 999,999,999)
6	Color	Setup colors for plotting. Displays color setup window by double-click.



- Displayed items are not chosen when launched for the first time.
- Unable to save when incorrect settings are included.

- (2) Change necessary settings.
- (3) Save setting by clicking on [OK] button.

## 7.1.4 Changing the Software Operation

Here is how to change settings of save-to-folder, language, and others.

- (1) Open “Option” window and choose “Software”. (Figure 7.4 / Table 7.4)

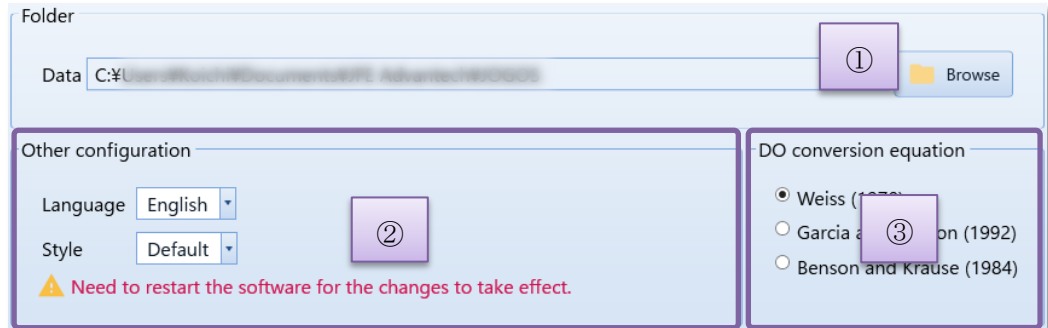


Figure 7.4 Software Setting

Table 7.4 Explanation on software setting

No	Item	Detail
1	[Browse]	Specify a folder to output files to when transferring data. Create a folder dedicated for outputted files. Outputs converted files to the same folder.
2	Other Setting	Change the language and design style of the software. Need to restart the software for the changes to be effective.
3	DO conversion equation	Choose DO conversion equation. (Default: Weiss) Used for when converting from saturation rate [%] to dissolved oxygen value [mg/l, μmol/l]. Will be applied to files processed after the change.

- (2) Change necessary settings.
- (3) Save settings by clicking [OK] button.

### 7.1.4.1 Language and Style

Here is how to change the language and design style of the software.

All setting changes will be effective after restarting the software. (Figure 7.5)

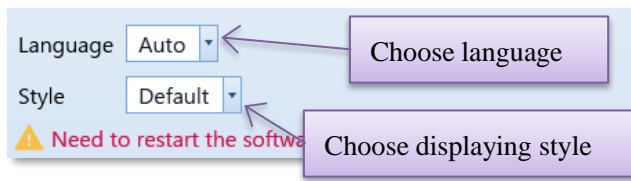


Figure 7.5 Changing language and style

- Changing displayed language.

Item	Detail
Auto	Automatically choose the language matching your OS (Default) Japanese will be only used when you are using Japanese OS.
English	Use English as the language regardless to your OS.
Japanese	Use Japanese as the language regardless to your OS.

- Changing design style.

Item	Detail
Default	Use default color. (Default)
Black	Use black color based design style.
White	Use white color based design style.

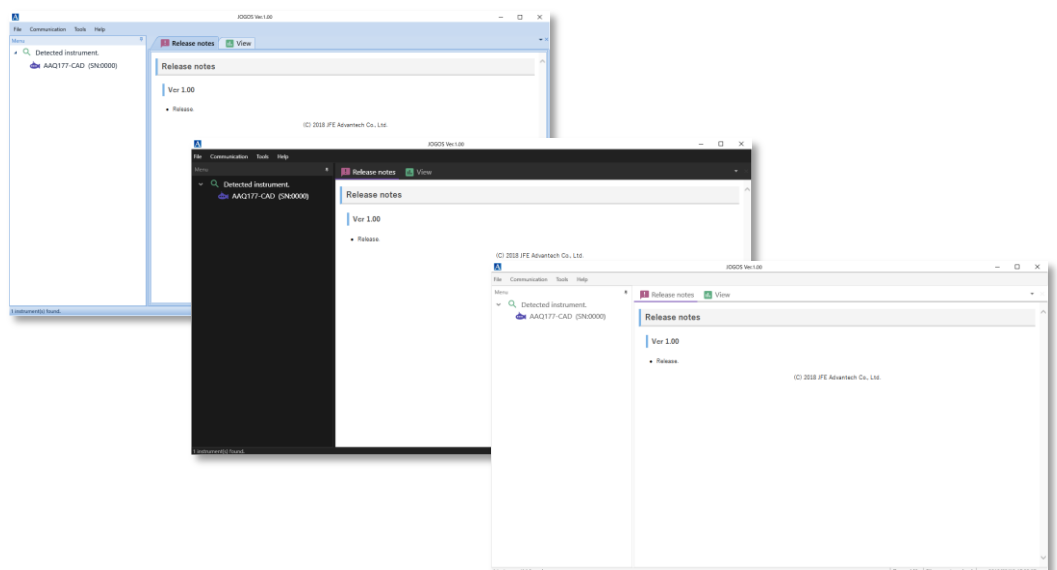


Figure 7.6 Style examples

## 7.1.5 Others

Here is how to change plot screen and real-time measurement settings.

- (1) Open “Option” window and choose “Other”. (Figure 7.7 / Table 7.5)

Figure 7.7 Other setting

Table 7.5 Explanation on other setting

No	Item	Detail
1	Real-time	Setup the number of data to be recorded in 1 file with real-time measurement. (Default: 1) Record a file with file number added to the end of its file name whenever the number of data reaches its specified number.
2	Profile	Setup the number of data to be plotted in vertical profiling plot. (Default: 5) Plot to be cleared when reaching the number of plot specified here.
3	Time series	Setup time to be displayed as X-axis in chronological plot. (Default:1) Starts to scroll when it passes the specified time.



- Able to lower the burden to your PC by lowering setting values for “Profile” and “Time series”.

- (2) Change necessary settings.  
 (3) Click [OK] button to save the settings.

## 7.2 Software Information

---

Here is how to confirm the software version information.

Please contact us along with the version information handy if you notice anything about the software.

- (1) Launch the software.
- (2) Display “Version information” window by choosing [Help > About]. (Figure 7.8)



Figure 7.8 Version information window

## 7.3 Uninstalling the Software from PC

Here is how to uninstall the software from the PC.

Please note that the uninstallation procedures vary depending on the OS and its version you use.

### 7.3.1 Using the Setup Programs

Uninstall using setup files used for installing the software.

- (1) Open “Explorer” from start menu, and choose the drive with USB memory.
- (2) Double click on “setup.exe”. (Figure 7.9)

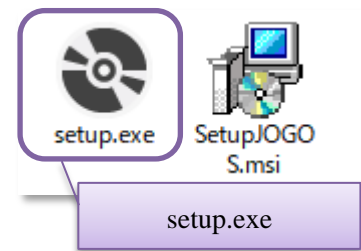
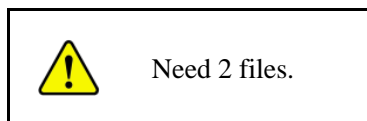
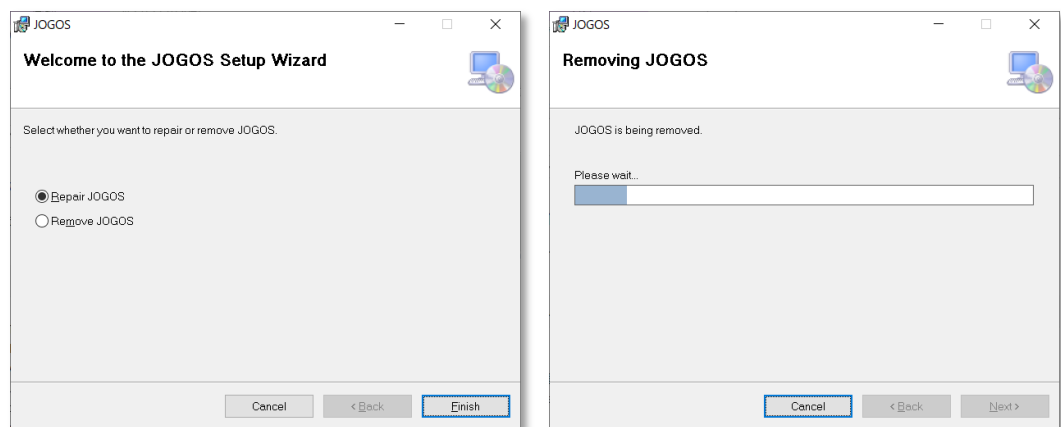


Figure 7.9 setup.exe

- (3) Please follow the procedures in the order shown below to uninstall. (Figure 7.10)



- (1) Choose [Remove JOGOS],  
then click on [Finish].

- (2) Uninstalling

Figure 7.10 Uninstallation procedures

### 7.3.2 Using Windows 10 Function

Here is how to uninstall from a PC using Windows 10.

Procedures may vary depending on the version you are using.

- (1) Open “setup” window by choosing “Settings” from “Start” menu. (Figure 7.11)

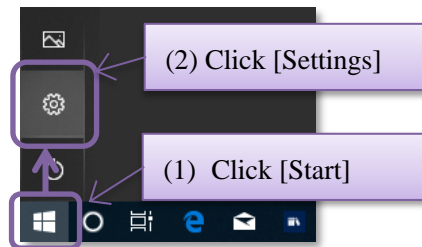


Figure 7.11 Open settings

- (2) Choose “Apps” from “Windows Settings” window. (Figure 7.12)

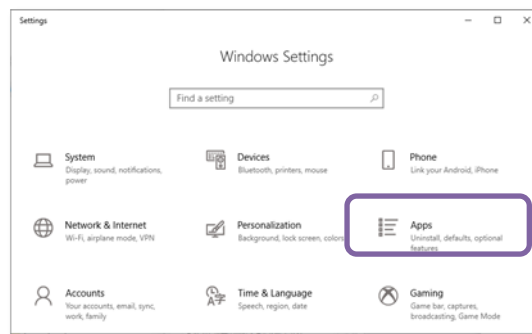


Figure 7.12 Setting window

- (3) Choose “JOGOS” in “Apps & features” and click on “Uninstall”. (Figure 7.13)

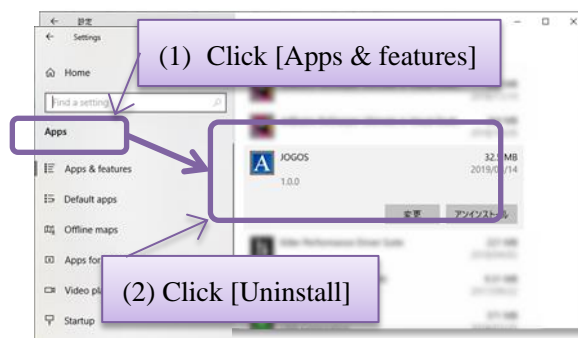


Figure 7.13 Apps & features

- (4) The software is uninstalled from your PC.

### 7.3.3 Using Windows 7 and Windows 8.1 Functions

Here is how to uninstall from a PC using Windows 7 or Windows 8.1. Procedures may vary depending on the version you are using.

- (1) Displays the control panel
  - with Windows 8.1
    - [Start > Apps > Windows System Tools > Control Panel]
  - with Windows 7
    - [Start > Control Panel]
- (2) Choose [Programs and Features].

Please change the display setting to “small icon” if not displayed.
- (3) Choose “JOGOS” and click on [Uninstall]. (Figure 7.14)

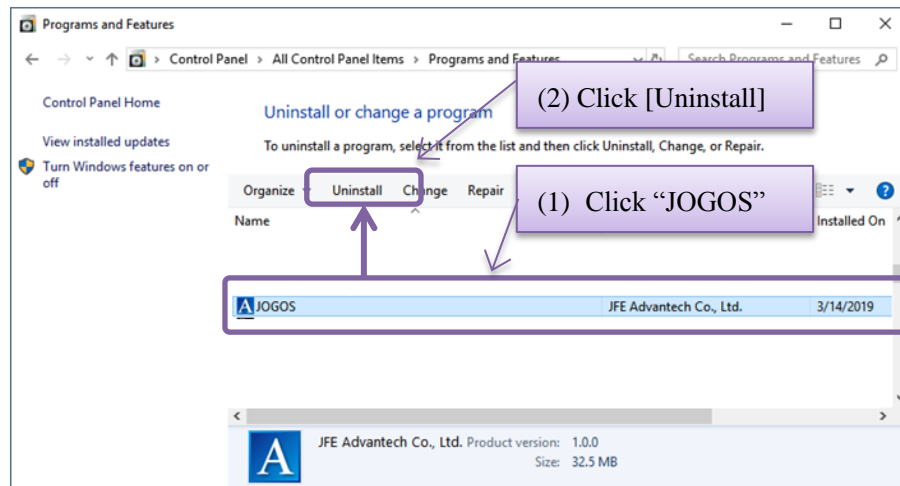


Figure 7.14 Programs and Features

- (4) Please follow the procedures in dialog to uninstall. (Figure 7.15)



Figure 7.15 Uninstallation confirmation



- Same procedures can also be used with Windows 10.



## 8 Troubleshooting

Item	Countermeasure
Unable to install	<ul style="list-style-type: none"> <li>● Unable to execute installer. Does not launch.               <ul style="list-style-type: none"> <li>➔ Make sure the OS on your PC is compatible with the software.</li> <li>➔ Make sure the USB port is running properly.</li> </ul> <p style="margin-left: 40px;">Please contact us if USB memory itself is causing the problem.</p> </li> <li>● No installer in USB memory.               <ul style="list-style-type: none"> <li>➔ Please contact us.</li> </ul> </li> </ul>
Does not launch. / Takes too long to launch	<ul style="list-style-type: none"> <li>● “.NET Framework” is not installed.               <ul style="list-style-type: none"> <li>➔ It is necessary for your PC to have “.NET Framework 4.6.2” or later pre-installed to use the software. This should be installed automatically in case your PC is connected to the internet while installing the software. Please use a PC that is accessible to the internet and download from Microsoft, then transfer the program to the PC.</li> </ul> </li> <li>● Installation did not complete properly.               <ul style="list-style-type: none"> <li>➔ Installation may not be completed properly if an error occurs in the middle of the installation. Please uninstall the software, and try installing it again.</li> </ul> </li> <li>● Takes too long to launch the software.               <ul style="list-style-type: none"> <li>➔ It may take some time to launch depending on the specification of your PC and/or “.NET Framework” specification. It may take shorter time to launch from the second time you launch.</li> </ul> </li> </ul>
Does not detect instruments	<ul style="list-style-type: none"> <li>● Does not detect instruments.               <ul style="list-style-type: none"> <li>➔ Confirm the connection between the instrument and the PC.</li> <li>➔ Confirm the instrument has its power ON.</li> <li>➔ In case of using USB serial conversion cable, confirm the driver for it is installed properly.</li> <li>➔ In case setting is not “Auto” for port setting, confirm the port setting.</li> <li>➔ In case setting is not “Auto” for baudrate setting, confirm the baudrate setting is correct for the instrument.</li> </ul> <p style="margin-left: 40px;">AAQ-RINKO:38400bps / RINKO-Profilr:115200bps</p> </li> </ul>

<p>Unable to open files</p>	<ul style="list-style-type: none"> <li>● Unable to open Raw file. <ul style="list-style-type: none"> <li>➔ Confirm the Raw file is compatible with the software.</li> </ul> <p>Unable to open Raw files for instrument models not compatible with the software.</p> <li>➔ Confirm the Raw file is not being opened by another software.</li> </li></ul> <li>● Unable to open physical value file. <ul style="list-style-type: none"> <li>➔ Physical value files cannot be opened by the software.</li> </ul> </li>
<p>Unable to convert files</p>	<ul style="list-style-type: none"> <li>● Unable to convert into physical value file. <ul style="list-style-type: none"> <li>➔ Confirm the Raw file is compatible with the software.</li> </ul> <p>Unable to open Raw files for instrument models not compatible with the software.</p> <li>➔ Confirm the Raw file or the output file is not being opened by another software.</li> <li>➔ Raw files with header information but without measurement data cannot be converted. Confirm measurement data is included.</li> </li></ul>
<p>Unable to terminate the software.</p>	<ul style="list-style-type: none"> <li>● Unable to terminate the software. <ul style="list-style-type: none"> <li>➔ The software cannot be terminated while searching for instruments or communicating with instruments. Terminate the software after shutting down the communication with instruments.</li> </ul> </li> </ul>

## 9 Specification

### 9.1 Software Specification

Item	Specification
OS	<ul style="list-style-type: none"><li>• Microsoft Windows 7 SP1 or later (32bit / 64bit)</li><li>• Microsoft Windows 8.1 (32bit / 64bit)</li><li>• Microsoft Windows 10 (32bit/64bit)</li></ul>
PC	PC with above mentioned OS in Japanese or English is preinstalled. (Upgraded version is out of our warranty)
CPU	Intel Core i5 or later
Memory	<ul style="list-style-type: none"><li>• Microsoft Windows 7 : 1 GB or larger (32bit) / 2 GB or larger (64bit)</li><li>• Microsoft Windows 8.1 : 1 GB or larger (32bit) / 2 GB or larger (64bit)</li><li>• Microsoft Windows 10 : 1 GB or larger (32bit) / 2 GB or larger (64bit)</li></ul>
HDD	Hard disk space with 1 GB or larger (About 30MB is necessary for the installation)
Resolution	1024 × 768 pixel or higher (1366 × 768 (WXGA) or higher is recommended)
Port	USB × 1 (For communication)
Others	.NET Framework 4.6.2 or later USB × 1 (Necessary for installation from USB memory)

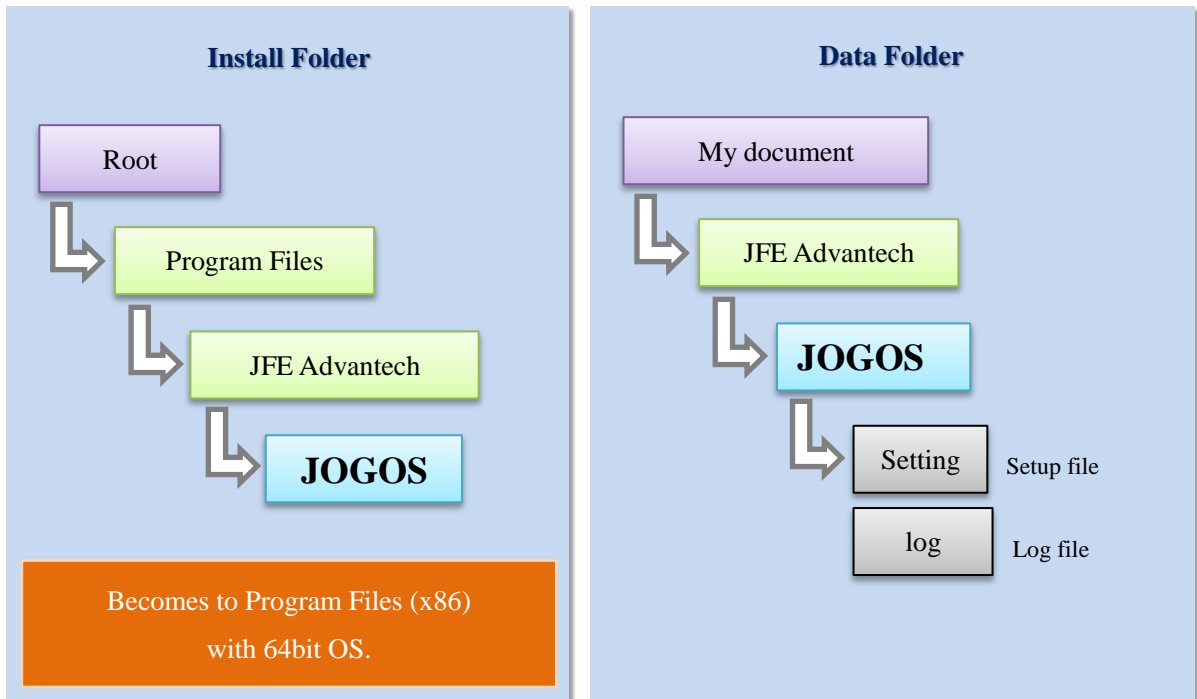


- The software is 32 bit software, however compatible for 64 bit OS.
- Always keep your OS updated using such as Windows Update or others for using the software.
- Please download and install “.NET Framework 4.6.2 or later” from the web site of Microsoft® in case you do not have it installed in your PC.  
This will be done automatically if connected to the internet while you installing the software.

Note: "Microsoft®", "Windows®", and ".NET Framework®" are registered trademark of Microsoft Corporation in the United States and other countries.

### 9.1.1 Folder Structure

Below are the folder structures right after installation.



- Creates installation folder at the time of installation.
- Data folder can be changed using setup.

## 9.2 File Format

Below are the file format used for Raw files and physical value files (CSV formatted).

These are commonly used with some exceptions.

- **[Format] Section**

Item	Detail	Remark
FormatVersion	Format version	
DataFormat	Type of file	0: Raw / 1: CSV (Default: 0)
Delimiter	Delimiter	0: Comma / 1: Tab (Default: 0)
Model	Product model name	Default: JOGOS

- **[Head] Section**

Item	Detail	Remark
SondeName	Model name	
SondeNo	Serial No.	
SensorType	Sensor type	Information of connected sensors
SensorType2	Sensor type 2	
Channel	No. of channels	
DelayTime	Delay time	
Comment	Comment	
MeasMode	Measurement mode	0: Continuous mode / 1: Burst mode / 2: Depth trigger mode
PreHeat	Pre-heat time	Unit: milliseconds
BurstTime	Burst time	Unit: minutes
BurstCnt	No. of burst	
Interval	Interval time	Unit: milliseconds
SampleCnt	Total No. of data	
StartTime	Start recording time	
EndTime	Recording end time	
DepAdjRho	Density adjustment value	Not used
ECA	Correction coefficient A value	Default: 0
ECB	Correction coefficient B value	Default: 1
ECDeg	EC standard temperature	
ECCoef	EC 2% coefficient	Default: 0.022
PC_SWA	—	Not used
PC_SWB	—	Not used

PC_SWC	—	Not used
PC_SWD	—	Not used
DepthZero	Zero-point for depth	
StartDepthA	—	Not used
StartDepthB	—	Not used
FilmNo	DO film number	
CondDepB		
DepM	Depth pitch	Pitch when measured in depth trigger mode
CoefDate	Date of calibration	
Ch1...Chn	Calibration coefficients	
BuzzerEN	Buzzer status	0: OFF / 1: ON (Default: 0)
BuzzerInterval	Buzzer interval	
BuzzerNumber	The No. of buzz	

- **[Item] Section**

Measurement data is commonly recorded in both files.

In case transferred while the box next to [with AD value] is being checked, AD values will be attached.

Measurement time and date, Data 1, Data 2, ... Data N,  
 ⋮

Both files have same format but with different [data] contents.

Raw file	Ad values in sensor alignment order
Physical value file	Measurement values in displaying order (1 <sup>st</sup> line is the item name)

## 10 Warranty

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The warranty period shall be one (1) year from the date of shipment from our factory, and will be repaired or replaced against any malfunctions attributed to its design, manufacturing, or malfunction occurred with proper use within the warranty period.

However, this warranty will NOT be applied to the following cases.

- (1) This warranty will not be applied to any accessories, consumables, packaging, scratches not relating to its function, grime, rust, and others.
- (2) Damage caused when integrating, mooring, observing, or storing.
- (3) Malfunction or damage caused by incorrect operation or carelessness.
- (4) Malfunction or damage caused by unwarrantable repair or modification which was not performed by JFE Advantech Co., Ltd.
- (5) Malfunction or damage caused by transporting, dropping, or applying impact after its purchase.
- (6) Malfunction or damage caused by external factors such as fire, earthquake, flood, lightning, or any other natural disaster, including pollution, abnormal voltage, or others.
- (7) Malfunction or damage caused by connecting to defective equipment.

This warranty will not be applied to any damage while integrating, mooring, or observing. Please insure your unit/software in case there might be a possibility of being damaged.

JFE Advantech Co., Ltd. will not be responsible for any damage, lost earnings caused by using this unit/software, or any claim from a third party.

For repairs done by JFE Advantech Co., Ltd. is given guarantee for none defects in material and workmanship for six (6) months from the date such repair was made. This warranty is limited only to the replaced part.



取A-0182-00



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