

JINS MEME ACADEMIC PACK

Instruction Manual



JIN CO.,LTD.

ver.1.0

Preface

Thank you for purchasing JINS MEME ACADEMIC PACK.

This instruction manual provides notes and instructions on how to use JINS MEME ACADEMIC PACK.

In order to enjoy prolonged use of your JINS MEME ACADEMIC PACK, read this manual carefully before use to use it correctly and safely. In addition, store this document safely in a place where you can view it as needed.

- Copying this document in part or entirety without permission is prohibited.
- Every effort has been made to ensure the accuracy of the content of this document, but if you notice any errors or have any questions, please contact the JINS MEME Customer Support Center.
- The contents of this document may change in the future without notice.
- The product could be damaged if it is used in a manner not described in this document.

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Safety Precautions










JINS MEME ACADEMIC PACK is designed to be used as a normal pair of eyeglasses, but since it contains electronic components, it may result in damage that differs from normal glasses if used improperly.


Please read the following safety precautions carefully to ensure proper handling of the product.


JINS MEME ACADEMIC PACK is not a medical product. JINS MEME ACADEMIC PACK and its associated apps cannot be used for diagnosis, treatment, or prevention of any disease, medical condition, or injury.

If any problems occur, stop use immediately and contact the JINS MEME Customer Support Center. Continued use under faulty conditions may lead to adverse physical effects.

Safety precautions are classified as "WARNING" and "CAUTION" according to the degree of harm or damage and urgency.







Symbol	Description
	This indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
	This indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
	This indicates notes that must be read in order to use JINS MEME ACADEMIC PACK properly.
	This indicates additional related information in the guides when using JINS MEME ACADEMIC PACK.
	This indicates actions that must be avoided.
	This indicates actions that must be performed.
	This indicates the possibility of hazards such as an electric shock occurring when the product is disassembled.
	This indicates the possibility of an electric shock.
	This indicates the possibility of an explosion.

 **WARNING**



- **If you are wearing an implanted cardiac pacemaker or implanted cardioverter-defibrillator, keep JINS MEME ACADEMIC PACK at least 15 cm away from you.**
Otherwise, there is a risk of radio waves from JINS MEME ACADEMIC PACK affecting the operation of the implanted cardiac pacemaker or implanted cardioverter-defibrillator.

 **WARNING**

	<ul style="list-style-type: none"> • Do not use in a crowded place such as in a crowded train. If there is anyone with an implanted cardiac pacemaker or implanted cardioverter-defibrillator present, there is a risk of radio waves from JINS MEME ACADEMIC PACK affecting the operation of the implanted cardiac pacemaker or implanted cardioverter-defibrillator. • Do not tamper with or alter JINS MEME ACADEMIC PACK in any of the following ways, dropping, bumping, bending excessively, deforming, drilling holes, or painting. Otherwise, it may lead to injury, damage, or failure. • Do not leave JINS MEME ACADEMIC PACK and its accessories near or on top of an automobile air bag. Otherwise, there is a risk of a serious accident if the air bag is activated.
	<ul style="list-style-type: none"> • Do not disassemble or alter JINS MEME ACADEMIC PACK. Do not attempt to repair it yourself. No parts in this Pack can be repaired by customers. Otherwise, there is a risk of accident. Contact the JINS MEME Customer Support Center if your JINS MEME ACADEMIC PACK fails.
	<ul style="list-style-type: none"> • Do not allow JINS MEME ACADEMIC PACK to get wet or expose it to moisture while charging. Exposing it to moisture while charging can cause an electric shock, short circuit, or fire. • Keep out of the reach of small children while charging. Otherwise, it may cause an electric shock or other accident.
	<ul style="list-style-type: none"> • Do not place JINS MEME ACADEMIC PACK near an open flame such as a gas range, candle, or stove, and do not directly apply hot air, such as from a dryer. Otherwise, it may cause damage including a rupture, discoloration, deformation, overheating, fire or battery failure. • Do not expose JINS MEME ACADEMIC PACK to prolonged direct sunlight. In addition, do not store in locations exposed to direct sunlight or high temperatures and humidity. Otherwise, it may cause damage including a rupture, discoloration, deformation, overheating, fire or battery failure. When not in use, store it in its case.
	<ul style="list-style-type: none"> • Be sure to turn OFF the power of JINS MEME ACADEMIC PACK in areas where use of radio equipment is prohibited such as on an airplane or in a hospital. Otherwise, it will adversely affect electronic and medical equipment and may cause a malfunction. • The lens may break if it is subjected to a strong shock. It may break and result in blindness or serious injury to the eyes or head when used during intense contact sports or when hit by a ball or hard object.
	<ul style="list-style-type: none"> • If you have allergies or sensitive skin, physical damage may occur or symptoms may worsen. If you notice any physical symptoms, stop use immediately and consult your doctor.

 **WARNING**

■ **Notes on Handling the Built-in battery**



- **Do not charge or use JINS MEME ACADEMIC PACK in extremely high (such as saunas) or low temperature environments.**
Otherwise it may cause damage such as burns, discoloration, deformation, overheating, fire or battery failure.
Use in an environment between 0 and 40°C.



- **Use only the included AC adapter and micro USB cable to charge JINS MEME ACADEMIC PACK.**
Otherwise, it may cause an electric shock, short circuit, fire, malfunction or failure.
- **Turn off JINS MEME ACADEMIC PACK while charging.**
- **Do not wipe JINS MEME ACADEMIC PACK with a damp cloth while it is charging. Be sure to remove the included AC adapter and micro USB cable before cleaning JINS MEME ACADEMIC PACK.**
Otherwise, it may cause an electric shock, short circuit, or fire.
- **Do not use the charging micro USB terminal and micro USB cable if they are dirty, contaminated, or deformed.**
Otherwise, it may cause an electric shock, short circuit, or fire.
- **Always hold the tip of the plug when unplugging the AC adapter from the wall socket after charging. Also, do not plug or unplug with wet hands.**
Otherwise, it may cause an electric shock, short circuit, disconnection, or other failure.
- **Charge the battery by following the instructions in this document for JINS MEME ACADEMIC PACK.**
Otherwise, it may cause an electric shock, overheating, or battery failure.



- **Do not put JINS MEME ACADEMIC PACK into a fire or incinerate it.**
Otherwise, the battery may ignite or explode.

 **CAUTION**



- **Store in a location out of reach of small children.**
Otherwise, it may lead to an injury or accident such as the swallowing of small parts.

Notes on Handling

To prevent damage to or failure of JINS MEME ACADEMIC PACK, follow the instructions below when handling it.

- **Use both hands when putting on or removing JINS MEME ACADEMIC PACK.**
Carefully use both hands when putting on or removing JINS MEME ACADEMIC PACK.
- **When setting down JINS MEME ACADEMIC PACK, keep the convex side of the lens facing up.**
The lens may be scratched if it is placed facing down.
- **Do not apply heat to JINS MEME ACADEMIC PACK or place it in any location that is subject to high temperatures.**
Otherwise, the frame may deform or crack.
- **Remove JINS MEME ACADEMIC PACK and turn the power OFF before going to sleep.**
Sleeping while wearing JINS MEME ACADEMIC PACK can cause deformation, damage, or malfunction.
- **JINS MEME ACADEMIC PACK is designed for adults and is not suitable for children to wear.**
If JINS MEME ACADEMIC PACK does not fit properly, the three-point electrooculography sensor, three-axis acceleration sensor, and three-axis gyro sensor may not accurately detect or obtain data.
- **Do not replace the battery of JINS MEME ACADEMIC PACK. The battery is built-in, and cannot be replaced.**
If the battery cannot be charged, contact the JINS MEME Customer Support Center.
- **Do not take JINS MEME ACADEMIC PACK into bathrooms, saunas, swimming pools or any other area where it may come in direct contact with water.**
Otherwise it can cause a short circuit or malfunction.
- **Do not use an abrasive liquid, alcohol, thinner, benzene, or polish remover to clean JINS MEME ACADEMIC PACK. Also, do not wash it with water.**
Otherwise, it can cause discoloration, deformation, damage, or malfunction.
- **Do not insert anything into the micro USB terminal other than what is specified in this document.**
Otherwise, the internal components may be damaged.
- **Do not store JINS MEME ACADEMIC PACK with any hard object such as metal as it may scratch JINS MEME ACADEMIC PACK and visibility may be impaired.**
- **Always close the USB port cover when wearing JINS MEME ACADEMIC PACK.**
The penetration of water or sweat can cause malfunction.
- **JINS MEME ACADEMIC PACK contains a built-in lithium ion battery. Do not attempt to dispose of it yourself. Return it to JINS.**
Contact the JINS MEME dealer or the JINS MEME Customer Support Center for return details.
- **Dispose of accessories for JINS MEME ACADEMIC PACK, such as the AC adapter, in accordance with local regulations.**
- **Recycle the package in accordance with local regulations.**

■ Notes on Handling the 3-point Electrooculography Sensor Parts (nose pad and inter-eyebrows part)

- **Do not press or bend the three-point electrooculography sensor.**
Otherwise it can cause damage or malfunction
- **When adjusting the nose pads, make sure you do so while supporting the base of the nose pad to ensure that no damage is caused. Use of excessive force and consistent adjustment can damage the nose pads so please take care when performing adjustments.**
Damage caused by excessive force will not be covered under warranty.
- **After use, gently wipe the sensor part with a soft cloth such as a cleaning cloth.**
If not handled carefully, it may cause a malfunction or failure.
- **If the three-point eye potential sensor part is dirty with sweat, sebum, or cosmetics, gently wipe it.**
Leaving it dirty may impair the measurement.

■ Notes on Radio Waves

Bluetooth uses the 2.4 GHz frequency band. In addition to industrial, scientific, and medical equipment such as microwave ovens, this frequency band is also used by other radio stations of the same type, on-board radio stations for mobile identification requiring licenses such as those used in factory production lines, specified low power radio stations that do not require licenses, and amateur radio stations (hereinafter referred to as "other radio stations").

- **Make sure there are no "other radio stations" in the vicinity before communicating with JINS MEME ACADEMIC PACK.**
If there is radio wave interference between JINS MEME ACADEMIC PACK and "other radio stations", immediately change the location of JINS MEME ACADEMIC PACK, disconnect the Bluetooth, or turn OFF the power of JINS MEME ACADEMIC PACK. If this does not solve the problem, contact the JINS MEME Customer Support Center.
- **Keep away from other electrical appliances (such as microwave ovens or digital cordless phones) when communicating.**
When communicating in the vicinity of such equipment, normal communication may not be possible or radio interference may occur.
If communication is affected, move away from such equipment.
- **When a broadcast station or radio equipment is nearby and normal communication is not possible, change the location of JINS MEME ACADEMIC PACK.**
Normal communication may not be possible when the surrounding radio waves are too strong.
- **If there is a device equipped with wireless LAN in the vicinity of JINS MEME ACADEMIC PACK, radio interference may occur and communication speed may be reduced or connection may be impossible.**
Keep away from any device equipped with wireless LAN when communicating.

Table of Contents

Instruction Manual	1
Preface.....	2
Safety Precautions	3
Notes on Handling.....	6
Table of Contents	8
1. Unit Description.....	10
1.1 Checking the Package Content	10
1.2 Part Names.....	11
2. Before Use.....	12
2.1 Switching Operations	12
2.2 Charging Time and Usage Time.....	13
2.3 Charging Method.....	13
3. Using from a PC	14
3.1 Installing the Software	14
3.1.1 Downloading the Software	14
3.1.2 Installing.....	14
3.2 Establishing Communication with JINS MEME ACADEMIC PACK.....	18
3.2.1 Connecting the Dongle.....	18
3.2.2 Connecting with JINS MEME ACADEMIC PACK.....	19
3.3 Measuring with JINS MEME ACADEMIC PACK.....	21
3.3.1 Starting Measurement.....	21
3.3.2 Stopping Measurement.....	21
3.4 Disconnecting Communication.....	22
3.4.1 Disconnecting Communication with JINS MEME ACADEMIC PACK.....	22
3.4.2 Disconnecting Communication with the Dongle.....	22
3.5 Uninstalling the Software.....	23
3.6 Windows.....	24
3.6.1 Data Acquisition Window.....	24
3.6.2 Review Data Window	27
3.6.3 Settings Window.....	29
3.6.4 TCP Socket Communication Receive Format	30
4. Using with an Android Device	33
4.1 Installing the Software	33
4.1.1 Downloading the Software	33
4.1.2 Installing.....	33

4.2	Establishing Communication with JINS MEME ACADEMIC PACK.....	35
4.2.1	Connecting the Dongle.....	35
4.2.2	Connecting with JINS MEME ACADEMIC PACK.....	37
4.3	Measuring with JINS MEME ACADEMIC PACK.....	39
4.3.1	Starting Measurement.....	39
4.3.2	Stopping Measurement.....	40
4.4	Disconnecting Communication.....	41
4.4.1	Disconnecting Communication with JINS MEME ACADEMIC PACK.....	41
4.4.2	Disconnecting Communication with the Dongle.....	41
5.	Customer Service.....	42
6.	Product Specifications.....	43
7.	About Warranty	45

1. Unit Description

1.1 Checking the Package Content

After opening the box, check the content of the package and the unit itself. If any item is missing or damaged, please contact the JINS MEME Customer Support Center.

The following items are included in this product:

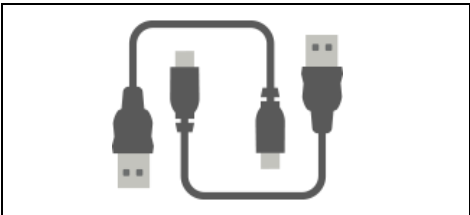
JINS MEME ACADEMIC PACK
(main unit)2



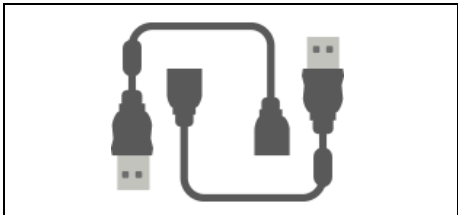
Instruction Manual
(this document) 1



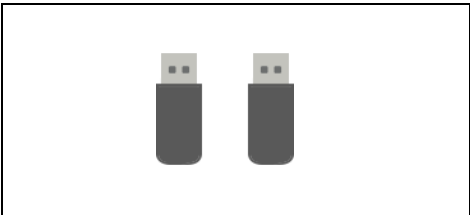
USB cable (for charging).....2



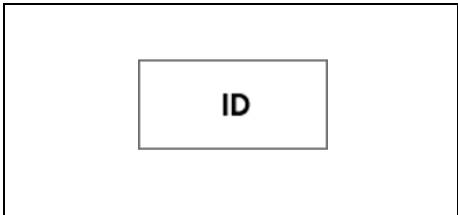
USB extension cable..... 2



Dongle2



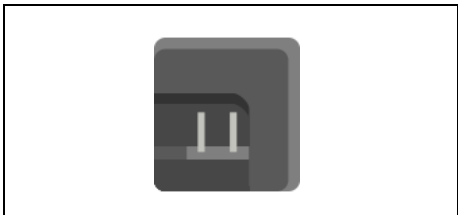
Bluetooth ID..... 2



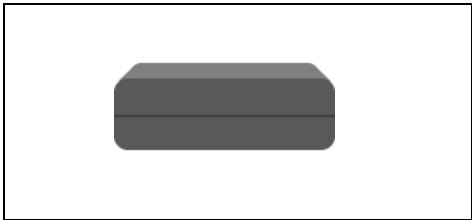
Data logger security key.....1



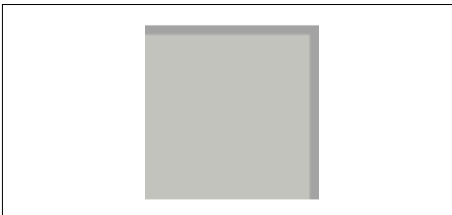
AC adapter 2



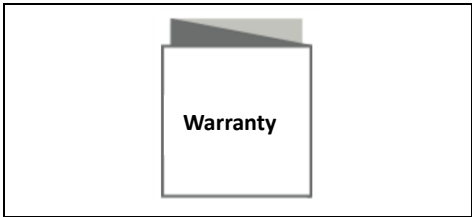
Case for JINS MEME.....2



Cleaning cloth..... 2

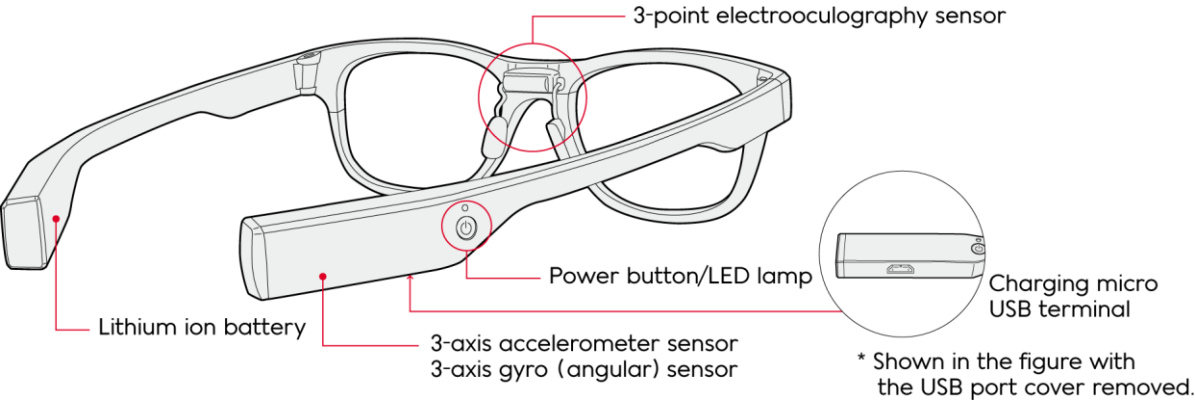


Warranty.....1



1.2 Part Names

■ JINS MEME ACADEMIC PACK



2. Before Use

2.1 Switching Operations

Use the power button to operate the power and its connection of JINS MEME ACADEMIC PACK.

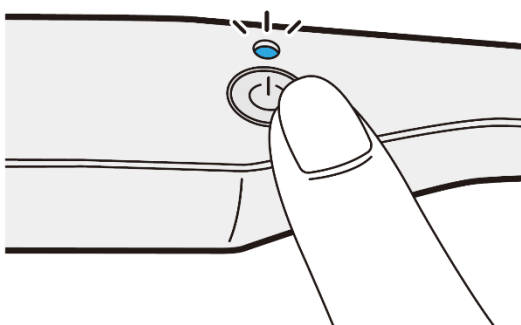
* The LED may not respond depending on the power status. In this case, charge JINS MEME ACADEMIC PACK.

- Turning the power ON

Press and hold JINS MEME ACADEMIC PACK power button for 2 seconds, then release it.

The LED flashes blue and enters advertising mode (communication standby).

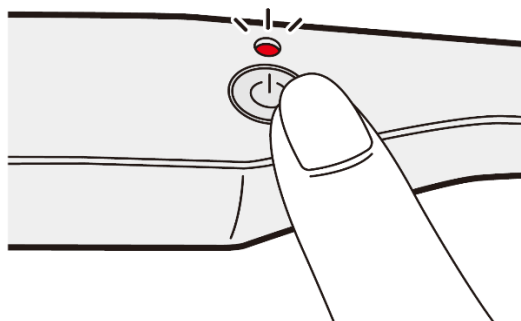
Tip If JINS MEME ACADEMIC PACK is not connected while in advertising mode, the LED turns red then the power turns off after 10 seconds.



- Turning the power OFF

Press and hold JINS MEME ACADEMIC PACK power button for 3 seconds.

The LED turns red then the power turns off after 10 seconds.



Tip Refer to section "3.2.2 Connecting with JINS MEME ACADEMIC PACK" for information on connection for measurement.

2.2 Charging Time and Usage Time

The approximate charging time and usage time of JINS MEME ACADEMIC PACK are as follows:

- Charging time: Approx. 2 hours
- Continuous use time: Up to 16 hours

2.3 Charging Method

The built-in battery is not fully charged at the time of purchase. Please charge it before using.

Be sure to use the included AC adapter and micro USB cable to charge.

WARNING



- **Do not allow JINS MEME ACADEMIC PACK to get wet or expose it to moisture or rain while charging.**
Exposing to moisture while charging can cause an electric shock, short circuit, or fire.
- **Turn off JINS MEME ACADEMIC PACK while charging.**
- **Use the included AC adapter and micro USB cable to charge JINS MEME ACADEMIC PACK.**
Otherwise, it may cause an electric shock, short circuit, fire, malfunction or failure.
- **Keep out of the reach of small children while charging.**
Otherwise, it may cause an electric shock or other accident.

- Important**
- When charging for the first time, do not use until JINS MEME ACADEMIC PACK is fully charged.
 - Always charge before using when use, for the first time or after an extended period of disuse.
 - If the LED is not lit when connected to via USB cable to the AC adapter, unplug the USB cable and plug it in again.

1. Insert the USB cable into the AC adapter.
2. Insert the USB cable into the micro USB terminal of JINS MEME ACADEMIC PACK.
3. Plug the AC adapter into the wall outlet.

The LED turns on red and charging starts. Charging is complete when the red LED turns off.

* The charging time depends on the remaining amount of battery and charging condition.

- Tip** JINS MEME ACADEMIC PACK can also be charged from a PC.
To charge from a PC, connect the micro USB terminal of JINS MEME ACADEMIC PACK to the USB terminal of the PC using a USB cable.

3. Using from a PC

3.1 Installing the Software

Customized software must be installed on your PC in order to check the data obtained with JINS MEME ACADEMIC PACK in real time.

3.1.1 Downloading the Software

Download the software from the separately described download page.

3.1.2 Installing

1. Extract the zip file and double-click the setup.exe file in the app folder.

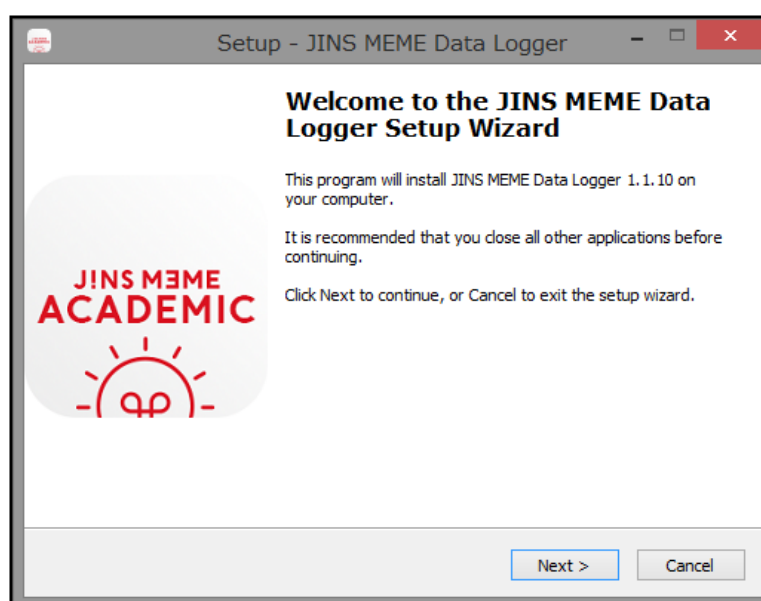
The installer starts and the initial window appears.

Important If you are logged in with a non-administrator account, the [User Account Control] window appears. Request the administrator to perform the installation if you wish to continue.

Tip

- See the separate email for the storage location of the setup.exe file.
- It may be shown as "setup" depending on the Windows display setting.

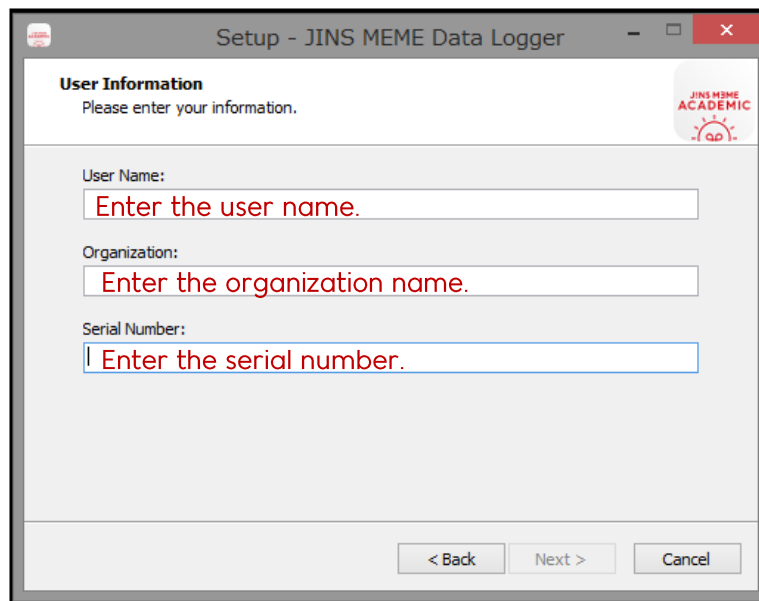
2. Check the software version and click the **Next >** button.



Initial window

The [User Information] window appears.

3. Enter the user name, organization name, and serial number and click the **Next >** button.

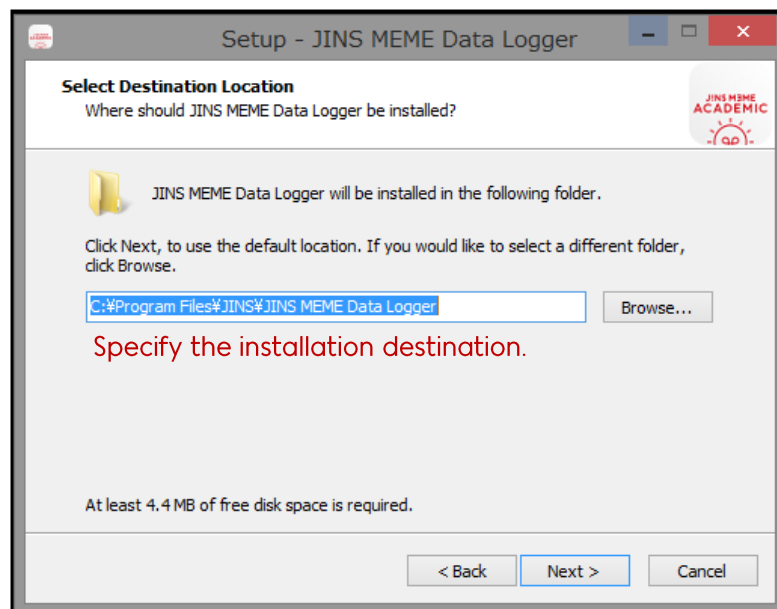


User Information Input window

The [Select Destination Location] window appears.

Important The **Next >** button will not operate if the serial number is incorrect.

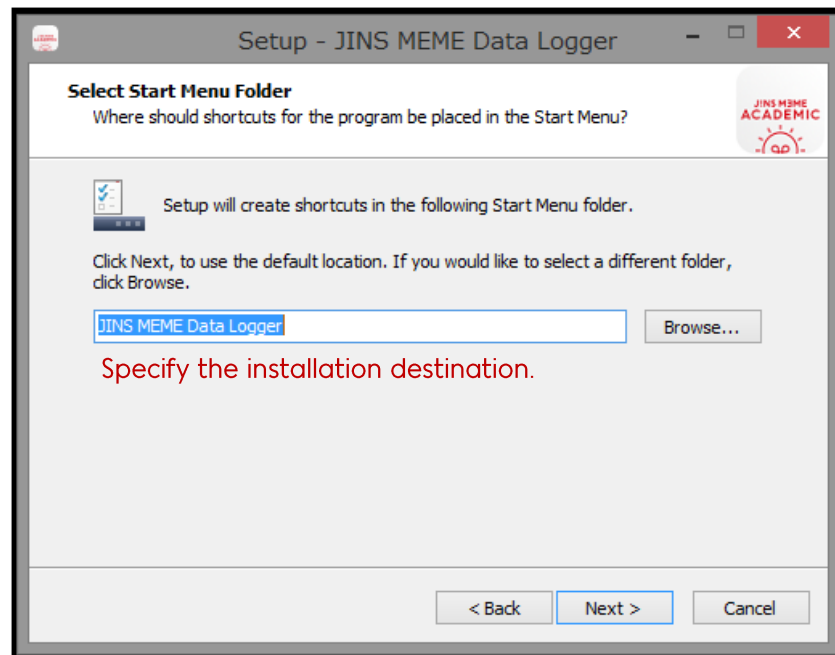
4. Specify the software installation destination and click the **Next >** button.



Select Destination Location window

The [Select Start Menu Folder] window appears.

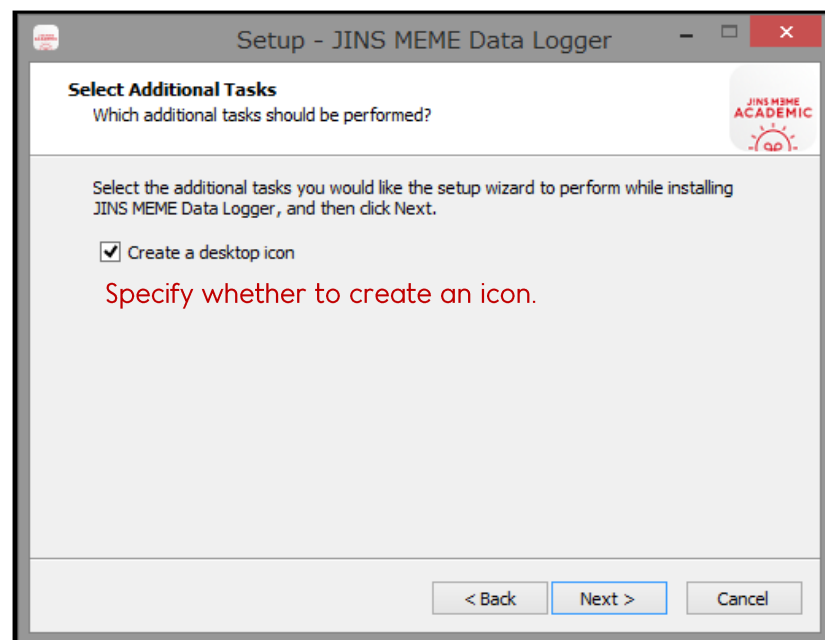
5. Specify the folder name to register on the Start menu and click the **Next >** button.



Select Start Menu Folder window

The [Select Additional Tasks] window appears.

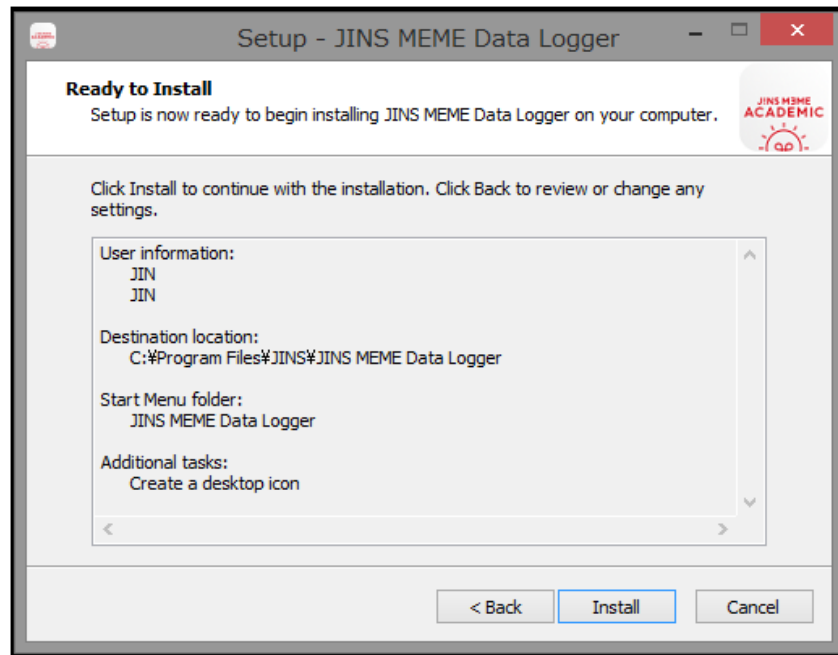
6. Specify creation of desktop icon and click the **Next >** button.



Select Additional Tasks window

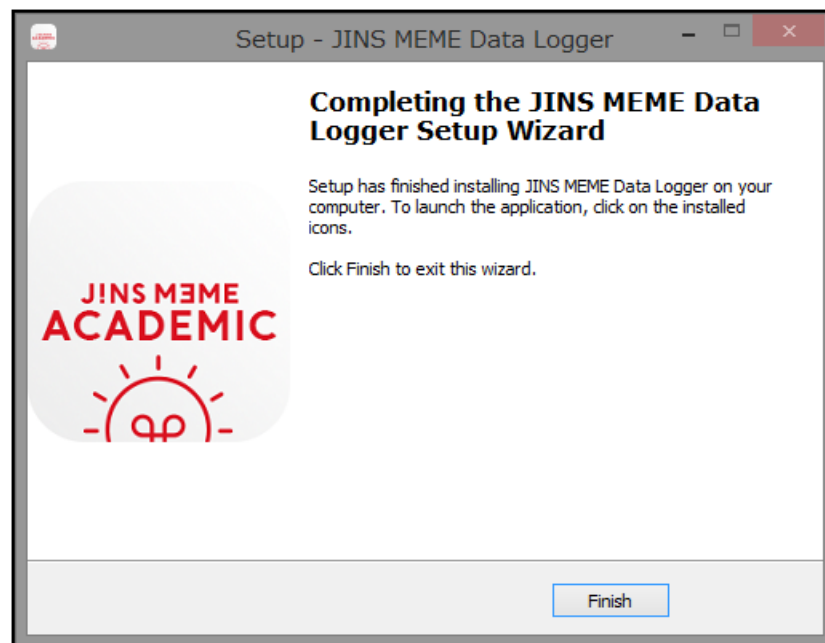
The [Ready to Install] window appears.

7. Check the input information and click the **Install** button.



Ready to Install window

8. When the Installation Completed window appears, click the **Finish** button.



Installation Completed window

When software installation is finished, the Installation Completed window closes.

3.2 Establishing Communication with JINS MEME ACADEMIC PACK

In order to use the functions of JINS MEME ACADEMIC PACK, communication must be established between the dongle connected to the PC and JINS MEME ACADEMIC PACK.

3.2.1 Connecting the Dongle

Establish communication between JINS MEME ACADEMIC PACK and the dongle.

1. Insert the dongle in any USB port on the PC.

2. Click **JINS MEME ACADEMIC** icon and start the software.

The Data Acquisition window appears.

Tip Refer to "3.6.1 Data Acquisition Window" for the details of the screen to be displayed.



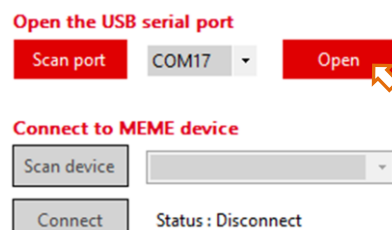
3. Click the **Scan port** button to search the dongle.

The combo box shows the port number of the USB.

Important If the dongle driver is not found, try the CP210x USB - UART bridge VCP driver provided by Silicon Labs.

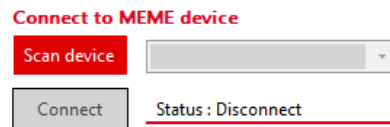
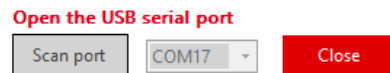


4. Select the destination port number from the list and click the **Open** button.



Before establishing dongle communication from any port

The **Open** button changes to the **Close** button and dongle communication is established.



After establishing dongle communication from any port

3.2.2 Connecting with JINS MEME ACADEMIC PACK

Establish communication between JINS MEME ACADEMIC PACK and the dongle.

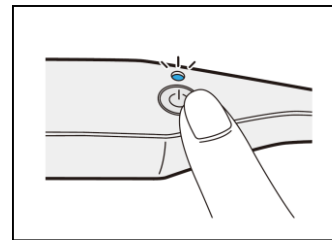
■ Turning ON JINS MEME ACADEMIC PACK

Refer to section "2.1 Switching Operations" and turn on JINS MEME ACADEMIC PACK.

■ Enabling JINS MEME ACADEMIC PACK connection (advertising mode)

1. With JINS MEME ACADEMIC PACK's power turned ON, press and hold JINS MEME ACADEMIC PACK power button for 2 seconds and then release.

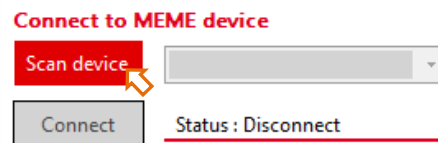
Advertising mode is enabled when the LED quickly flashes blue.



■ Connecting JINS MEME ACADEMIC PACK

1. When a connectable JINS MEME ACADEMIC PACK is nearby, click the **Scan device** button.

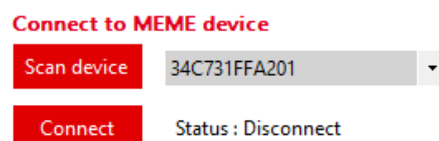
This will start scanning for a connectable JINS MEME ACADEMIC PACK.



JINS MEME ACADEMIC PACK not found

Tip Select the ID that is on the seal included with the package at the time of purchase.

The combo box shows the ID of the connectable JINS MEME ACADEMIC PACK.



JINS MEME ACADEMIC PACK is found

2. Select JINS MEME ACADEMIC PACK to connect to and click the **Connect** button.

The **Connect** button changes to the **Disconnect** button and communication is established.

When successfully connected, JINS MEME ACADEMIC PACK's LED turns blue then turns off after 10 seconds.

Connect to MEME device

Scan device 34C731FFA201

Connect Status : Disconnect

Before connecting to JINS MEME ACADEMIC PACK

Connect to MEME device

Scan device 34C731FFA21F

Disconnect Status : Connected

Connected to JINS MEME ACADEMIC PACK

3.3 Measuring with JINS MEME ACADEMIC PACK

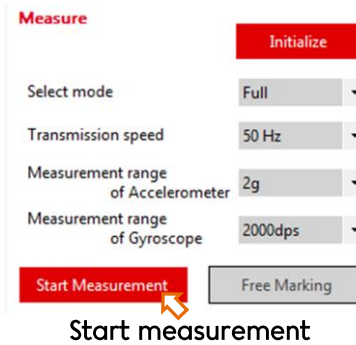
Start measuring with JINS MEME ACADEMIC PACK.

3.3.1 Starting Measurement

Specify the Select mode, Transmission speed, Measurement range of Accelerometer, and Measurement range of Gyroscope, and click the [Start Measurement] button to send measurement values from JINS MEME ACADEMIC PACK and start drawing graphs.

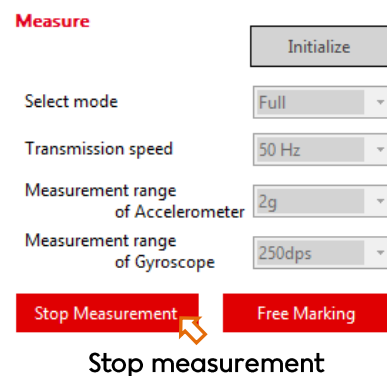
Tip Refer to "3.6.2 Review Data Window" for the details of each item.

Important No graph is drawn when Quaternion is selected for Select mode.



3.3.2 Stopping Measurement

Click the [Stop Measurement] button while measuring to stop measurement.



3.4 Disconnecting Communication

3.4.1 Disconnecting Communication with JINS MEME ACADEMIC PACK

1. Click the **Disconnect** button while measurement with JINS MEME ACADEMIC PACK is stopped.

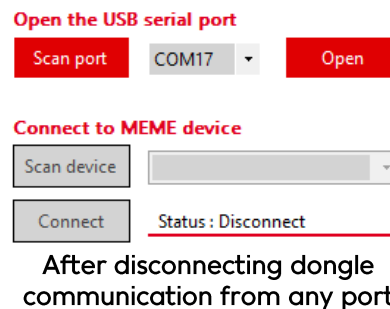
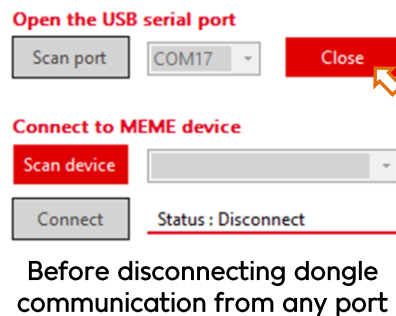
The **Disconnect** button changes to the **Connect** button and communication is disconnected.



3.4.2 Disconnecting Communication with the Dongle

1. While dongle communication is established from any USB port, click the **Close** button.

The **Close** button changes to the **Open** button and dongle communication is disconnected.

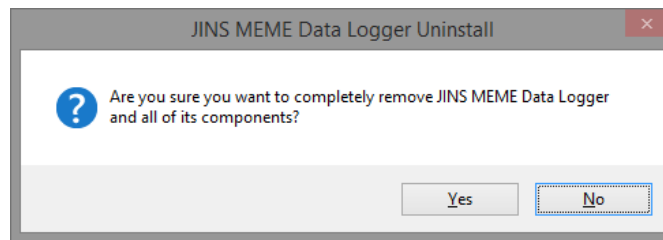


3.5 Uninstalling the Software

Select Control Panel>Program>Program and Function.

Select "JINS MEME Data Logger *****" from the program list and uninstall.

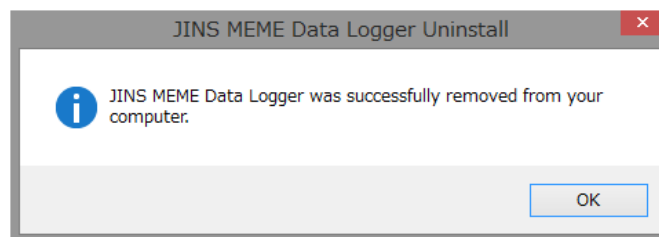
1. Click the [Yes] button to start uninstalling.



Uninstall window

Wait until uninstall completes.

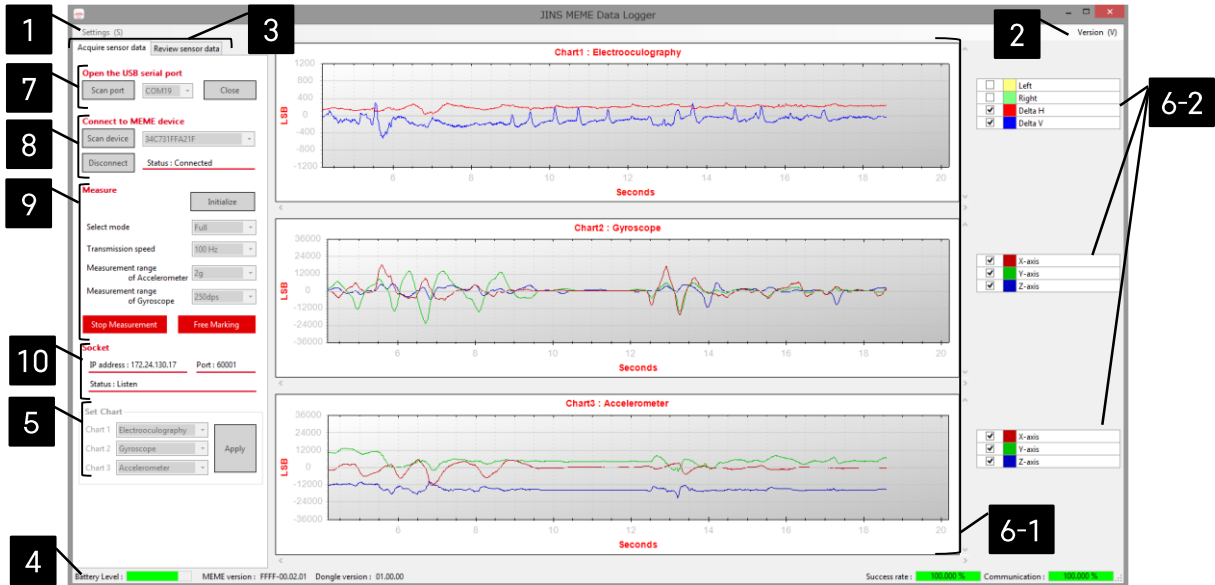
2. Click the [OK] button to close the Uninstall window.



Uninstall Completed window

3.6 Windows

3.6.1 Data Acquisition Window



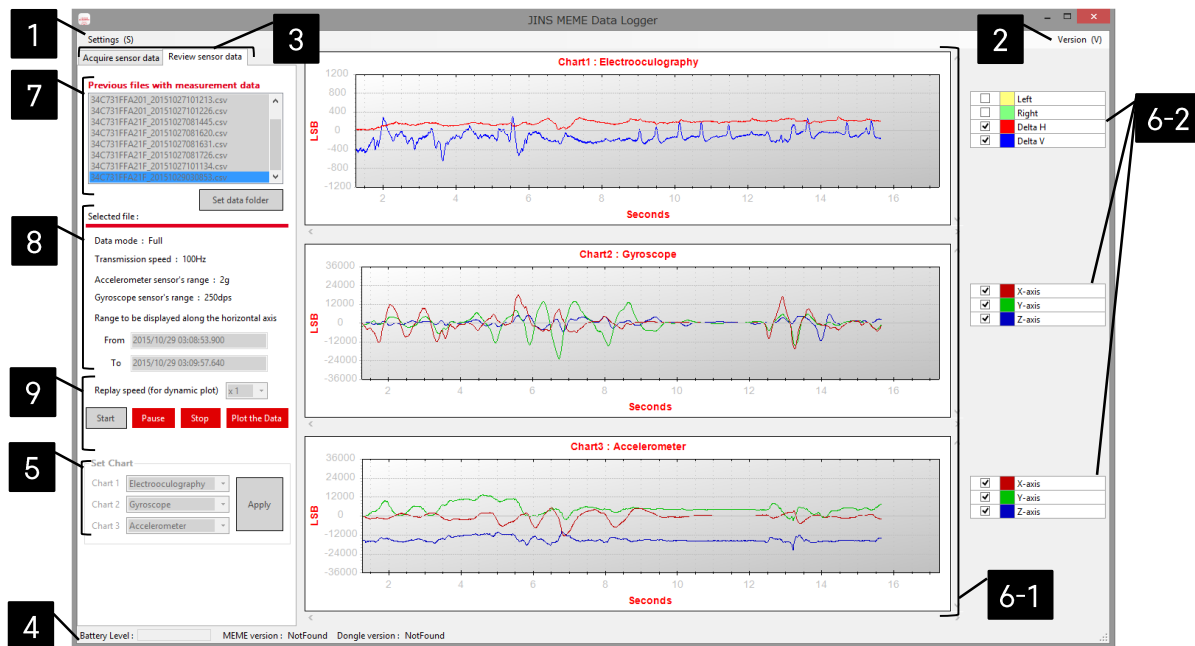
Data Acquisition window

No.	Name	Description
1	Settings (S)	Displays the Settings window (described later). (* Disabled during dongle communication.)
2	Version (V)	Displays the Version Information window.
3	Switch tab	Switches between the Acquire Sensor Data tab and the Review Sensor Data tab.
4	Status bar	<p>Battery Level Displays the five step battery level of the measuring instrument during measurement.</p> <p>MEME Version Displays the version information of the connected JINS MEME ACADEMIC PACK.</p> <p>Dongle Version Displays the version information of the connected dongle.</p> <p>Success rate Displays the data acquisition rate from the start of the measurement.</p> <p>Communication Displays the data acquisition rate for the last 200m seconds.</p>

No.	Name	Description						
5	Graph type setting	<p>Sets the type of graph to display. Select one of the following types from the combo box and click the [Apply] button to apply to the graph.</p> <p>Hide: Hide the graph.</p> <p>Accelerometer: Display the accelerometer sensor values.</p> <p>Gyroscope: Display the gyroscope sensor values.</p> <p>Electrooculography: Display the electrooculography sensor values.</p>						
6-1	Graphs	<p>Displays the graphs. Use the mouse to zoom or scroll while the measurement is stopped.</p> <p>Zoom Left click the mouse on the graph and use the mouse wheel to zoom in/out.</p> <p>Scroll Left click the mouse on the graph and drag the mouse to scroll.</p>						
6-2	Graph Legend data selection	<p>Displays/hides legend data graph.</p> <p>Checked: Display the graph.</p> <p>Unchecked: Hide the graph.</p>						
7	Dongle connection	<p>Connects the dongle.</p> <p>Scan port Scan for the dongle port.</p> <p>Combo box Display and select from the dongle port list.</p> <p>Connect/Close Connect/disconnect the dongle.</p>						
8	JINS MEME ACADEMIC PACK connection	<p>Connects JINS MEME ACADEMIC PACK.</p> <p>Scan Device Scan for JINS MEME ACADEMIC PACK.</p> <p>Combo box Display and select JINS MEME ACADEMIC PACK list.</p> <p>Connect / Disconnect Connect/disconnect JINS MEME ACADEMIC PACK. The connection status appears in [Status].</p>						
9	Data Acquisition Control	<p>Sets and controls the measuring instrument.</p> <p>Initialize Initialize the measuring range and communication speed setting.</p> <p>Select Mode Select the measurement mode. The operating sensor and sampling frequency in each mode are as follows: Full mode</p> <table style="margin-left: 40px;"> <tr> <td>Electrooculography sensor</td> <td style="text-align: right;">100Hz</td> </tr> <tr> <td>Accelerometer sensor</td> <td style="text-align: right;">100Hz</td> </tr> <tr> <td>Gyroscope sensor</td> <td style="text-align: right;">100Hz</td> </tr> </table>	Electrooculography sensor	100Hz	Accelerometer sensor	100Hz	Gyroscope sensor	100Hz
Electrooculography sensor	100Hz							
Accelerometer sensor	100Hz							
Gyroscope sensor	100Hz							

No.	Name	Description
		<p>Standard mode</p> <p style="padding-left: 20px;">Electrooculography sensor 200Hz</p> <p style="padding-left: 20px;">Accelerometer sensor 100Hz</p> <p style="padding-left: 20px;">Quaternion 100Hz</p> <p>* No graph is drawn when Quaternion is selected. The measurement mode can be selected.</p> <p>Transmission speed Select the Bluetooth communication speed between JINS MEME ACADEMIC PACK and the dongle. Select 100Hz or 50Hz. 50Hz enables more stable data acquisition.</p> <p>Measurement range of Accelerometer Select the accelerometer sensor measurement range: ± 2, ± 4, ± 8, or $\pm 16g$.</p> <p>Measurement range of Gyroscope Select the gyroscope sensor range: ± 250, ± 500, ± 1000, or $\pm 2000dps$.</p> <p>Start Measurement / Stop Measurement Instruct JINS MEME ACADEMIC PACK to start/stop measurement. The acquired data is stored in the following location: \Documents\JINS\MEMEacademic\SensorData Refer to section "3.6.4 TCP Socket Communication Receive Format" for the content of the recorded data.</p> <p>Free Marking Add artifacts to the measurement data. "x" will be entered in the Column A of the csv file containing the measurement data.</p>
10	TCP socket communication	<p>Displays the TCP socket communication status.</p> <p>IP address IP address for the TCP socket communication.</p> <p>Port Port number for the TCP socket communication.</p> <p>Status Displays the status of the TCP socket communication.</p>

3.6.2 Review Data Window

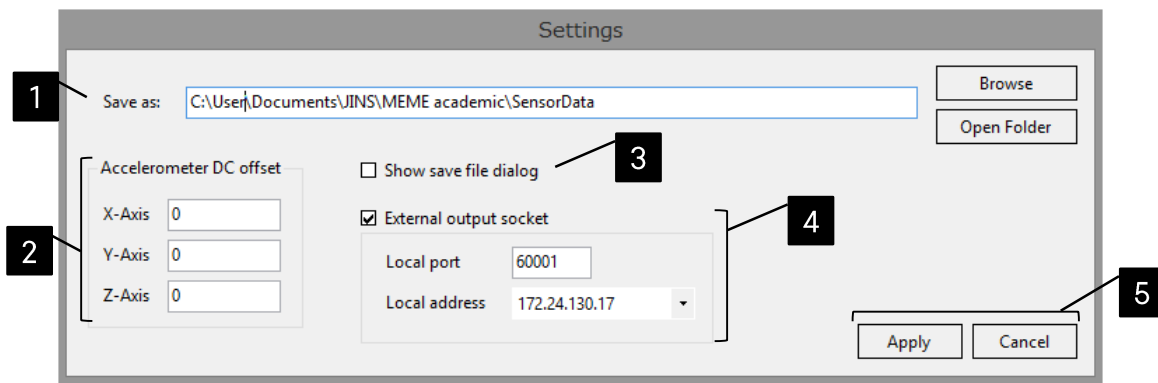


Review Data window

No.	Name	Description
1	Settings (S)	Displays the Settings window (described later). (* Disabled during dongle communication.)
2	Version (V)	Displays the Version Information window.
3	Switch tab	Switches between the Acquire Sensor Data tab and the Review Sensor Data tab.
4	Status bar	<p>Battery Level Displays the five step battery level of the measuring instrument during measurement.</p> <p>MEME Version Displays the version information of the connected JINS MEME ACADEMIC PACK.</p> <p>Dongle Version Displays the version information of the connected dongle.</p>
5	Graph type setting	<p>Sets the type of graph to be displayed. Select one of the following types from the combo box and click the [Apply] button to apply to the graph.</p> <p>Hide: Hide the graph.</p> <p>Accelerometer: Display the accelerometer sensor values.</p> <p>Gyroscope: Display the gyroscope sensor values.</p> <p>Electrooculography: Display the electrooculography sensor values.</p>

No.	Name	Description
6-1	Graphs	<p>Displays the graphs. Use the mouse to zoom or scroll while measurement is stopped.</p> <p>Zoom Left click the mouse on the graph and use the mouse wheel to zoom in/out.</p> <p>Scroll Left click the mouse on the graph and drag the mouse to scroll.</p>
6-2	Graph Legend data selection	<p>Displays/hides the legend data graph. Checked: Display the graph. Unchecked: Hide the graph.</p>
7	Acquire/Select File	<p>Acquires and displays a list of files containing measurement data. (* Disabled during dongle communication.)</p> <p>Previous files with measurement data Displays a list of acquired file names.</p> <p>Set data folder Displays a dialog box to specify the file acquisition destination folder.</p>
8	Selected file information	<p>Displays information of the file selected from the file list.</p> <p>Data mode Displays the measurement mode.</p> <p>Transmission speed Displays the Bluetooth communication speed between JINS MEME ACADEMIC PACK and the dongle.</p> <p>Accelerometer sensor's range Displays the accelerometer sensor measurement range.</p> <p>Gyroscope sensor's range Displays the gyroscope sensor measurement range.</p> <p>From Displays the date and time (GMT) the measurement is started.</p> <p>To Displays the date and time (GMT) the measurement is stopped.</p>
9	File review	<p>Reviews the selected file.</p> <p>Replay speed Set the dynamic review replay speed.</p> <p>Start Start the dynamic review.</p> <p>Pause / Resume Pause or resume the dynamic review.</p> <p>Stop Stop the dynamic review.</p> <p>Plot the Data Click the [Start] button and then the [Plot the Data] button to batch load the file data and display statically.</p>

3.6.3 Settings Window



Settings window

No.	Name	Description
1	Sensor data Save folder	Specifies the folder in which to save the sensor data. Browse Display the folder selection dialog and specify the save destination. Open Folder Open the save destination folder in Explorer.
2	Acceleration DC offset	Specifies the offset to display the acceleration sensor data as graph. The sensor raw data will be saved as a file. (offset is excluded) X-Axis: Specify the X-axis offset. Y-Axis: Specify the Y-axis offset. Z-Axis: Specify the Z-axis offset.
3	Show save file dialog	Displays/hides Change Save File Name dialog when the measurement is complete. Checked Display the Change Save File Name dialog. Unchecked Hide the Change Save File Name dialog. The default name is used. (BLT address_record_start_date_time.csv)
4	TCP socket communication	Enable/disable TCP socket communication. Checked Enable TCP socket communication and setting of IP address and Port number. Unchecked Disable TCP socket communication. Refer to section "3.6.4 TCP Socket Communication Receive Format" for the content of the recorded data.
5	Apply/Cancel	Saves or cancels the parameters specified in this window.

3.6.4 TCP Socket Communication Receive Format

The socket communication log file consists of two parts: the header containing the measurement information and the body containing the sensing data. The header contains the measurement information "Data mode, Transmission speed, Accelerometer sensor's range, Gyroscope sensor's range, and data rank" respectively.

Example: For Select mode "Full", Transmission speed "100Hz", Measurement range of Accelerometer " $\pm 4g$ ", and Measurement range of Gyroscope "1000dps"

```
// Data mode : Full
// Transmission speed : 100Hz
// Acceleration sensor's range : 4g
// Gyroscope sensor's range : 1000dps
//
//ARTIFACT,NUM,DATE,ACC_X,ACC_Y,ACC_Z,GYRO_X,GYRO_Y,GYRO_Z,EOG_L,
EOG_R,EOG_H,EOG_V
```

■ Data Rank in each Measurement Mode

1) When Measurement Mode is "Standard"

```
//ARTIFACT,NUM,DATE,ACC_X,ACC_Y,ACC_Z,EOG_L1,EOG_R1,EOG_L2,EOG_
R2,EOG_H1,EOG_H2,EOG_V1,EOG_V2
```

Description

Artifact, Total count, Measurement date/time, Acceleration sensor value (X-axis), Acceleration sensor value (Y-axis), Acceleration sensor value (Z-axis), EOG sensor value 1 (left), EOG sensor value 1 (right), EOG sensor value 2 (left), EOG sensor value 2 (right), EOG sensor value 1 (horizontal difference), EOG sensor value 2 (horizontal difference), EOG sensor value 1 (vertical difference), EOG sensor value 2 (vertical difference)

Example:

```
// Data mode : Standard
// Transmission speed : 50Hz
// Acceleration sensor's range : 2g
// Gyroscope sensor's range : 250dps
//
//ARTIFACT,NUM,DATE,ACC_X,ACC_Y,ACC_Z,EOG_L1,EOG_R1,EOG_L2,EOG_
R2,EOG_H1,EOG_H2,EOG_V1,EOG_V2
,1,2016/03/15 01:25:10.85,790,329,16523,-59,-189,-21,-165,130,144,124,93
,2,2016/03/15 01:25:10.87,746,369,16503,-42,-158,-7,-153,116,146,100,80
,3,2016/03/15 01:25:10.89,801,302,16553,-48,-161,-16,-152,113,136,104,84
```

2) When Measurement Mode is "Full"

```
//ARTIFACT,NUM,DATE,ACC_X,ACC_Y,ACC_Z,GYRO_X,GYRO_Y,GYRO_Z,EOG_
L,EOG_R,EOG_H,EOG_V
```

Description

Artifact, Total count, Measurement date/time, Acceleration sensor value (X-axis), Acceleration sensor value (Y-axis), Acceleration sensor value (Z-axis), Angular velocity sensor value (X-axis), Angular velocity sensor value (Y-axis), Angular velocity sensor value (Z-axis), EOG sensor value (left), EOG sensor value (right), EOG sensor value (horizontal difference), EOG sensor value (vertical difference)

Example:

```
// Data mode : Full
// Transmission speed : 100Hz
// Acceleration sensor's range : 2g
// Gyroscope sensor's range : 250dps
//
//ARTIFACT,NUM,DATE,ACC_X,ACC_Y,ACC_Z,GYRO_X,GYRO_Y,GYRO_Z,EOG_
L,EOG_R,EOG_H,EOG_V
,1,2016/03/15 01:26:07.23,780,254,16542,0,33,-66,4,-171,175,83
,2,2016/03/15 01:26:07.24,737,293,16559,-7,11,-79,12,-150,162,69
,3,2016/03/15 01:26:07.25,896,249,16539,15,34,-58,-9,-196,187,102
```

3) When Measurement Mode is "Quaternion"

```
// Data mode : Quaternion
// Transmission speed : Standard
// Acceleration sensor's range : 2g
// Gyroscope sensor's range : 2000dps
//
//ARTIFACT,NUM,DATE,QUATERNION_W,QUATERNION_X,QUATERNION_Y,Q
UATERNION_Z
```

Description

Artifact, Total count, Measurement date/time, Quaternion (W) Quaternion (X) Quaternion (Y) Quaternion (Z)

Example:

```
// Data mode : Quaternion
// Transmission speed : 50Hz
// Acceleration sensor's range : 2g
// Gyroscope sensor's range : 2000dps
//
//ARTIFACT,NUM,DATE,QUATERNION_W,QUATERNION_X,QUATERNION_Y,QUATERNION_Z
,1,2016/3/21 15:51:53.32,13931501,1065299619,133555066,-5213924
,2,2016/3/21 15:51:53.34,13930073,1065376001,132938877,-5356280
,3,2016/3/21 15:51:53.36,13922096,1065454235,132305442,-5497571
```


4. Using with an Android Device

The data acquired with JINS MEME ACADEMIC PACK can be saved on an Android device.

In order to check the realtime data, copy the data from the Android device to the PC.

Data save destination: /sdcard/JINS/MEME_academic

Important No graphs will be drawn with the software for Android devices.

4.1 Installing the Software

Customized software must be installed on your Android device in order to save the real time data obtained with JINS MEME ACADEMIC PACK.

4.1.1 Downloading the Software

Download the software from the download page.

4.1.2 Installing

1. From the software list on your Android device, tap on the ES File Explorer.

The ES File Explorer starts.

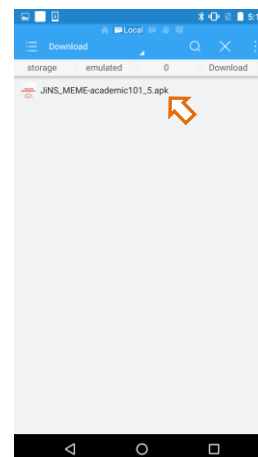
Tip If the ES File Explorer is not installed, open any file manager app.



ES File Explorer

2. Navigate to the Download folder and tap on the saved application file.

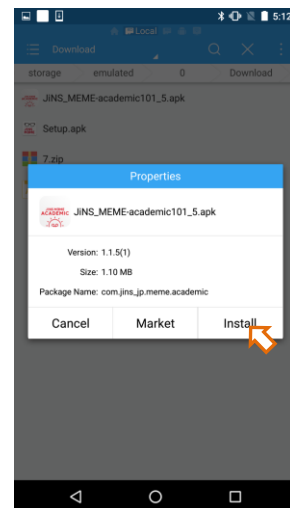
The Property dialog appears.



Download folder

3. Tap **Install**.

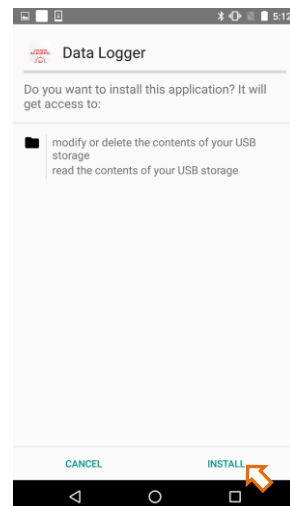
The Install screen appears.



Property dialog

4. Tap **Install**.

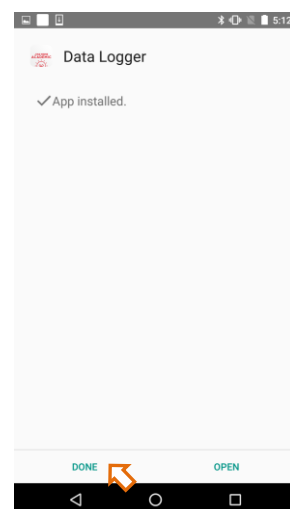
Software installation starts.
Wait until it completes.



Install screen

5. When the Installed screen appears, tap **Done**.

The Installed screen closes when the software is installed.



Installed screen

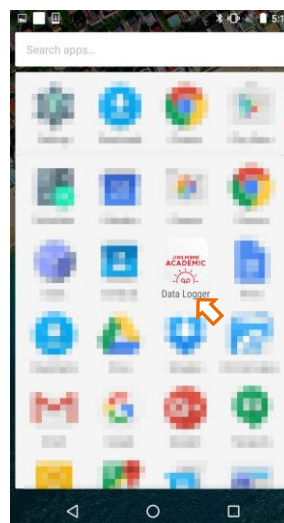
4.2 Establishing Communication with JINS MEME ACADEMIC PACK

In order to use the functions of JINS MEME ACADEMIC PACK, a communication must be established between the dongle connected to the Android terminal and JINS MEME ACADEMIC PACK.

4.2.1 Connecting the Dongle

Establish communication between JINS MEME ACADEMIC PACK and the dongle.

1. From the list of applications, tap **Data Logger** and start the program.



Starting the program

The Opening screen appears.



Opening screen

2. Tap on the Opening screen to display the main screen and insert the dongle in the USB connector of the Android terminal.

A dialog to check the dongle connection appears.

Tip In order to use JINS MEME ACADEMIC PACK's function from an Android terminal, you must connect the dongle using a USB connector conversion cable (sold separately).

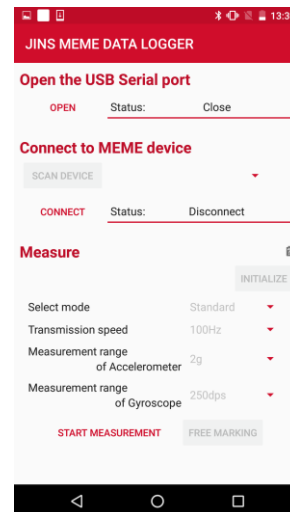
3. Tap **OK**.

Tapping **Cancel** returns you to the screen in step 2.

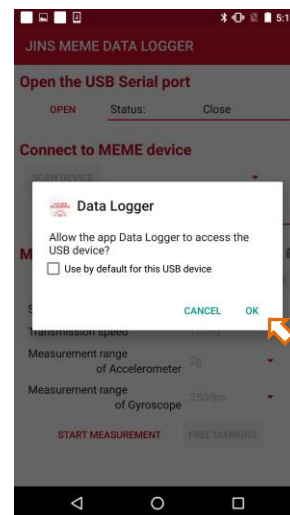
4. Tap **OPEN**.

Communication with the dongle is established.

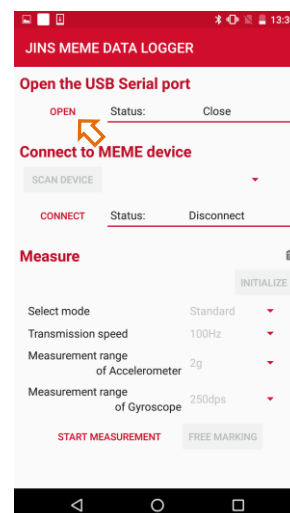
When the inserted dongle becomes available, a screen indicating that the dongle is connected appears.



Main screen



Check Dongle connection screen



Connecting the Dongle

4.2.2 Connecting with JINS MEME ACADEMIC PACK

Establish communication between JINS MEME ACADEMIC PACK and the dongle.

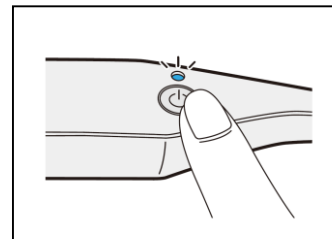
■ Turning ON JINS MEME ACADEMIC PACK

Refer to section "2.1 Switching Operations" and turn on JINS MEME ACADEMIC PACK.

■ Enabling JINS MEME ACADEMIC PACK Connection (advertising mode)

1. With JINS MEME ACADEMIC PACK's power turned ON, press and hold JINS MEME ACADEMIC PACK power button for 2 seconds and then release.

Advertising mode is enabled when the LED quickly flashes blue.



■ Connecting JINS MEME ACADEMIC PACK

1. Check that the screen indicates that the dongle is connected and tap **SCAN DEVICE**.

A scan for JINS MEME ACADEMIC PACK starts.

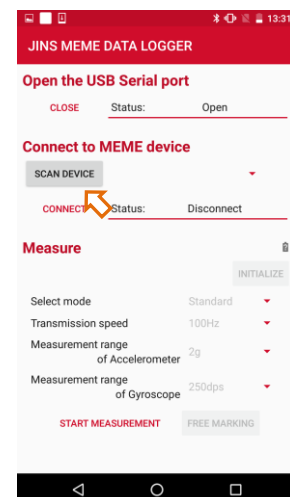
This scan for JINS MEME ACADEMIC PACK continues for approximately 6 seconds.

Tip Select the ID on the seal included with the package at the time of purchase.

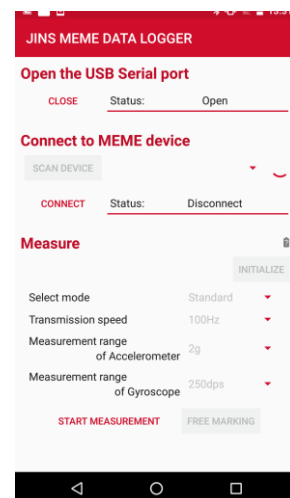
Tip While the software is scanning for JINS MEME ACADEMIC PACK, all functions except for a part of the Main screen are disabled and a progress ring appears (figure at right).

If one or more JINS MEME ACADEMIC PACK is found as a result of scanning for JINS MEME ACADEMIC PACK, the IDs of the found JINS MEME ACADEMIC PACKS will appear in the list of measuring instruments.

If no JINS MEME ACADEMIC PACK is found, the screen at top right appears.



Start scanning for JINS MEME

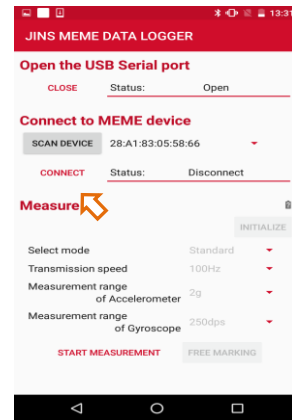


Scanning JINS MEME

Tip If the dongle is disconnected from the USB connector of the Android, the Main screen (step 2 in section "4.2.1 Connecting the Dongle") appears.

2. Select JINS MEME ACADEMIC PACK to connect and tap **CONNECT**.

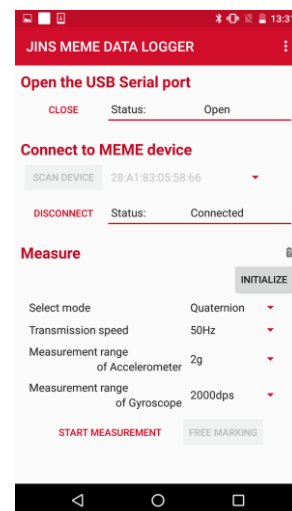
Tap **CONNECT** while the screen is showing the image at right.



Connection with JINS MEME

The screen at right appears when connection is completed.

In addition, JINS MEME ACADEMIC PACK's LED turns blue then turns off after 10 seconds.



Connected screen

4.3 Measuring with JINS MEME ACADEMIC PACK

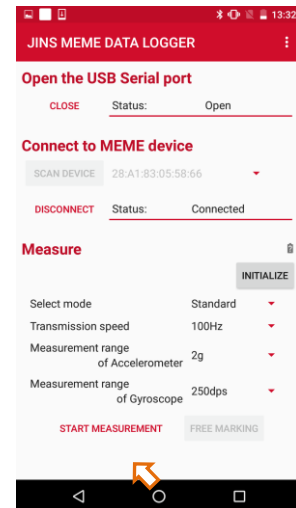
Start a measurement with JINS MEME ACADEMIC PACK.

4.3.1 Starting Measurement

1. Specify the Select mode, Transmission speed, Measurement range of Accelerometer, and Measurement range of Gyroscope, and tap **START MEASUREMENT**.

The Confirm Start of Measurement screen appears.

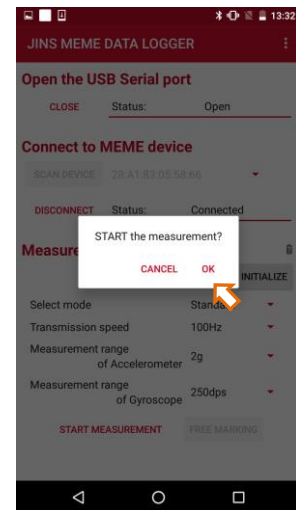
Tip Refer to "3.6.2 Review Data Window" for the detail of each item.



Setting measurement values

2. Tap **OK**.

Measurement data is sent from JINS MEME ACADEMIC PACK and saved.

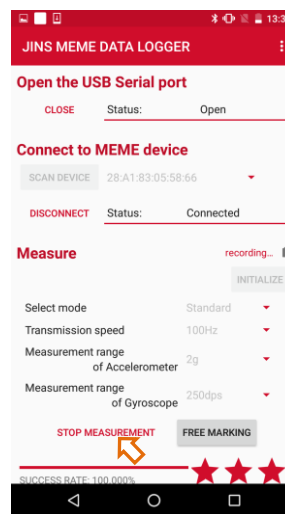


Confirm Start of Measurement screen

4.3.2 Stopping Measurement

1. Tap **STOP MEASUREMENT** during measurement.

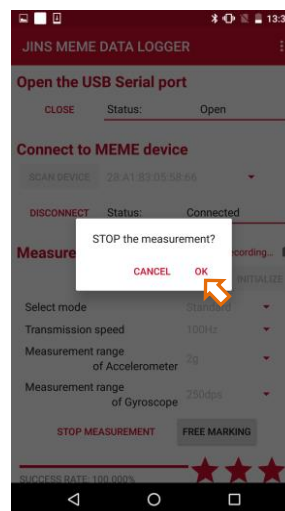
The Confirm Stop Measurement screen appears.



Stop Measurement

2. Tap **OK**.

Measurement values from JINS MEME ACADEMIC PACK are saved.



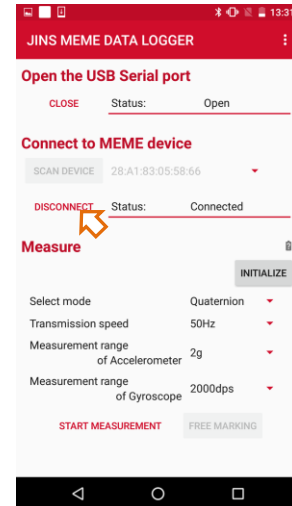
Confirm Stop Measurement screen

4.4 Disconnecting Communication

4.4.1 Disconnecting Communication with JINS MEME ACADEMIC PACK

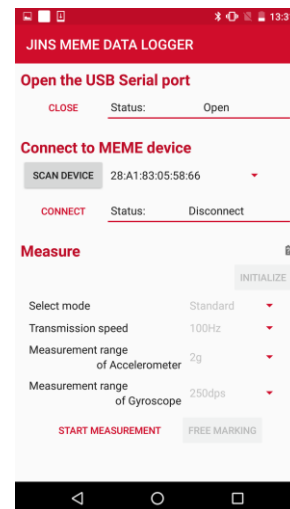
1. Tap **DISCONNECT** while measurement with JINS MEME ACADEMIC PACK is stopped.

Tap **DISCONNECT**. While the screen is showing the image at right (JINS MEME ACADEMIC PACK connection status is [Connected]).



Disconnecting communication

The screen at right appears when communication is disconnected.



Status after disconnecting communication

4.4.2 Disconnecting Communication with the Dongle

When the software is terminated, the connected dongle is disconnected.

Connection is also lost when the dongle is disconnected from the USB connector of the Android device. When the dongle is disconnected from the Android device and connection is lost, the Main screen (step 2 in section "4.2.1 Connecting the Dongle") appears.

5. Customer Service

■ Contact

Contact the following JINS MEME Customer Support Center if you have any questions regarding JINS MEME ACADEMIC PACK.

JINS MEME Customer Support Center

<https://jins-meme.com/support/>

* Have the warranty indicating the date of purchase ready if it is still within the warranty period.

6. Product Specifications

■ Main Unit Specification


Battery	Built-in rechargeable Lithium Ion Battery
Charging Time / Usage Time	Charging time: Approx. 2 hours Continuous use time: Up to 16 hours
Weight	Approx. 36g (UV cut lens without power)
Material	Plastic and SUS316L (Nose Pad)
Sensor	· 3-point electrooculography sensor · 3-axis accelerometer sensor · 3-axis gyro (angular) sensor
Data communication	Wireless communication via Bluetooth Low Energy
External interface	Micro USB terminal
Use environmental conditions	· Temperature: 0 to 40°C · Humidity: 10 to 90% RH (non-condensing)
Attachments	Dedicated receiver (dongle) x 2, USB cable (power) x 2, USB extension cable, AC adapter x 2, Bluetooth ID x 2, Case for JINS MEME x 2, cleaning cloth x 2, data loggers security key

* For the latest JINS MEME ACADEMIC PACK product specifications, refer to the "ACADEMIC" page of JINS MEME (<https://jins-meme.com/>).

■ Software Operating Environment

Supported OS (PC)	Microsoft Windows 8.1 64bit Processor: Intel Core i5 2.30GHz or above (Intel Core i7 recommended) Memory: 2GB or more (4GB recommended) Recommended screen resolution: 1024x768 or greater
Supported OS (Android device)	Android OS 4.4 (Nexus5)

■ Safety Standard

<p>CE Marking</p>	<p>This product complies with the EU Radio and Telecommunication Terminal (Equipment (R&TTE)) Directive. Hereby, [JIN CO., LTD], declares that this [JINS MEME ACADEMIC PACK] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.</p> <p>The Declaration of Conformity (DoC) is supplied with the product.</p> 
<p>FCC</p>	<p>This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.</p> <p>FCC CAUTION Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.</p> <p>Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:</p> <ul style="list-style-type: none"> - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/TV technician for help. <p>This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.</p> <p>This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).</p>

7. About Warranty

BLANK

Warranty

Warranty	
Product Name	JINS MEME ES ACADEMIC PACK
Your Name	
Your Address	
Date of Purchase	
Dealer	JINS MEME ES ACADEMIC PACK ONLINE SHOP

JIN CO.,LTD.

Tokyo Office

Idabashi Grand Bloom 30F

2-10-2 Fujimi Chiyoda-ku Tokyo

102-0071 Japan

Attach receipt here