

6-1 Limited warranty / Repair Procedures

Repair Conditions

- Parts that can be repaired:
Internal electronic circuitry
(Dead pixel of the LCD, damage caused by using the product in an extremely high/low temperature or by incorrect connection, and damage of any competitors' products are not covered by the warranty.)
- Note that the product will not be covered by the warranty if the main body's case has been opened.
- Note that if the warranty (below) or the Repair Sheet (on the web site) is not properly filled out, repair and return of the product may be delayed.

Warranty

Item Manufacture no.	TAO II- Dedicated Program Card for "TACHYON AIRIA"		
Purchase date	(Y/M/D)	/	/
Distributor's name			
Warranty term	3 months from purchase date		
Address Telephone no.			
Name			

Repair Procedures

Note that if the date and location of the motor purchase are not entered on the warranty card, you will be charged for repairs even within the warranty term.

- If a failure occurs within three months of purchasing the motor, write the symptoms of the problem and operating conditions in the section below and attach this to the product. For repair, send the motor to the distributor where you purchased the product or directly to ACUVANCE (Technical Service Department).
- ACUVANCE assumes no responsibility for damage or loss occurring during transportation of the product. Please take note of this beforehand.
- When listing the symptoms for a repair request, you can conveniently use the repair sheet on the ACUVANCE homepage and then send this along with the warranty card. (Click the "repair" section located in the upper-right side of our homepage. Then click "repair sheet", located on the left side.)

Repair Card

1. Symptoms Write the symptoms of the problem, giving as much detail as possible.

2. Payment method : Consent is not required if repair costs are 5,400 yen or less. : Consent required if repair costs money.

0117-5

Contact below for inquiry about the product:

ACUVANCE CORPORATION Technical Service Dept.

7F, Shin-Osaka Marubiru Annex 1-18-22 Higashinakajima Higashiyodogawa-ku Osaka 533-0033 Japan.
www.acuvance.co.jp / E-mail support@acuvance.co.jp

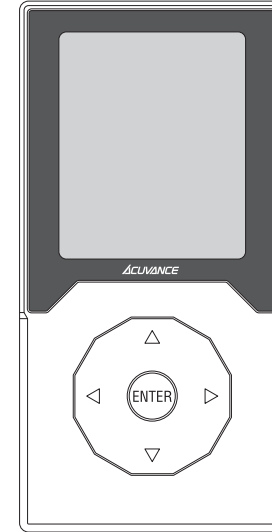
ACUVANCE

Aggressive Air Drive Effector

TAO II

INSTRUCTION MANUAL

Dear Customer,
Thank you for purchasing ACUVANCE / TAO II (Second). This product is a supreme device widening performance of TACHYON AIRIA endlessly. Please read this instruction manual to ensure a full experience of its potential. In addition, store this manual in a safe place for future use after reading.



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1-1 Caution before use

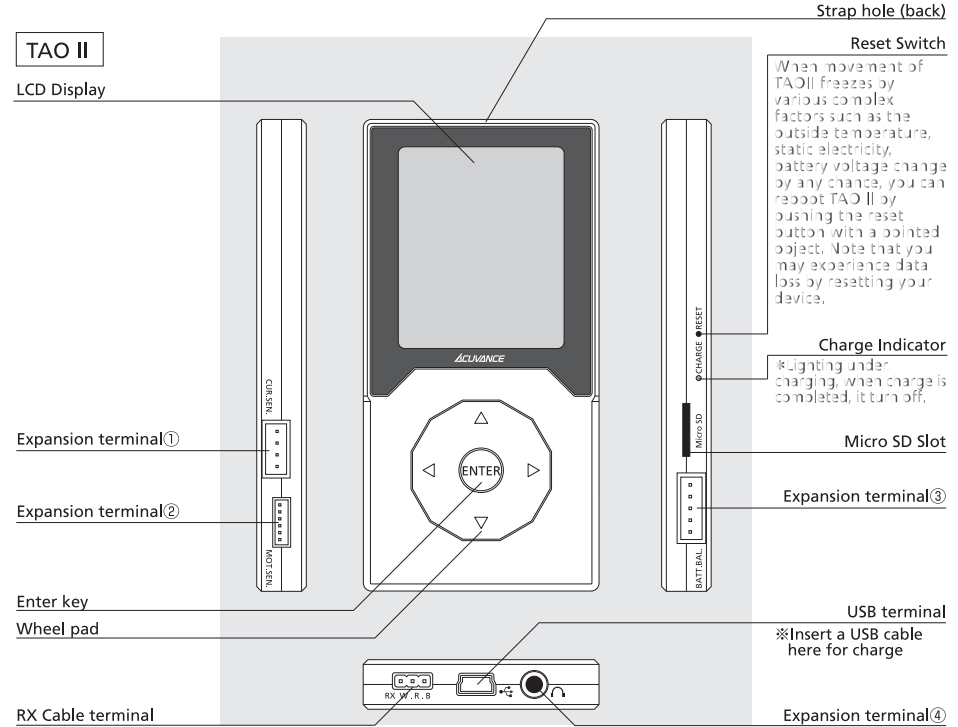
- Handling** This product is a precision instrument. A fall could result in permanent damage to the instrument. Fall damages will not be covered by the warranty.
- Avoid water and Humidity** Do not use the TAO II near liquid or in a rainy weather. If the device gets wet, turn the device off immediately, and wipe off water. Do not use blow dryer for drying. Water damages will not be covered by the warranty.
- Repair** In case of device malfunction, do not attempt to repair. If you are having problems with your device, please contact us for repair. Manufacturing defect will be covered by the warranty. However, warranty will be voided if the device has been tempered with, or if improper use caused the damage.
- Charging** When charging your device, please only use the AC adapter provided or a PC USB port. Not using these methods could result in permanent damages.
- Compatibility** This product is a programmer made exclusively for the TACHYON AIRIA. There is no compatibility with first generation TACHYON or any other company brushless products. We cannot take responsibility of damages due to combination of TAO II and incompatible devices. In addition, future updates will enable more features and expansion terminals. Please, use and enjoy the new features by all means.

1-2 About TAO II (Second)

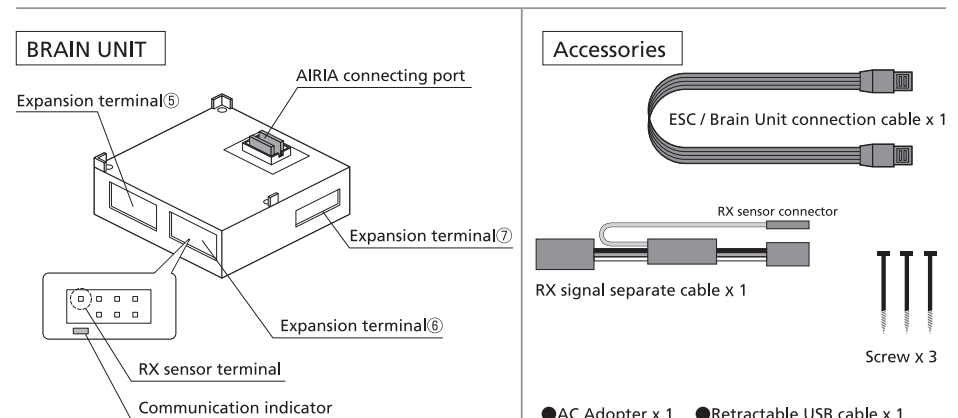
Main Features

- ① Visibility improves by 2.2 inches color LCD display.
- ② A setting menu and the adjustment range of AIRIA were enlarged.
- ③ Ability to collect actual survey data** running by interactive radio data communication with AIRIA in real time.
 **(Temperature of ESC & motor, RPM, Battery voltage etc.)
- ④ Analyzing various phenomenon while running by a data logger function.
- ⑤ A micro SD card to save unlimited configuration data setting for each course and chassis. The data exchange is possible between drivers via Micro SD card.
- ⑥ In combination with release planned a great variety of expansion apparatuses, you can use it as a multi-function system in future.

1-3 Parts list / Specification



Specifications	Outer dimensions	52(W) x 105(H) x 11(D)mm	Operation time	Consecutive use 5 hours
	Weight	78g	Display	2.2 Inches TFT Color LCD
	Battery	Li-Po, DC3.7V, 500mAh	Bluetooth	Class1
	Charge Voltage	DC5V / 2hours to full charge	SD Card Capacity	Up to 32GB



1-4 Preparation before use / Installation

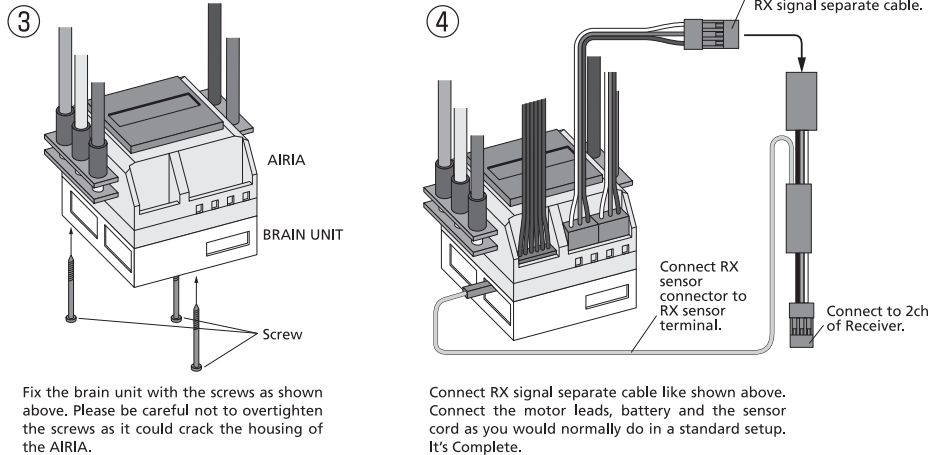
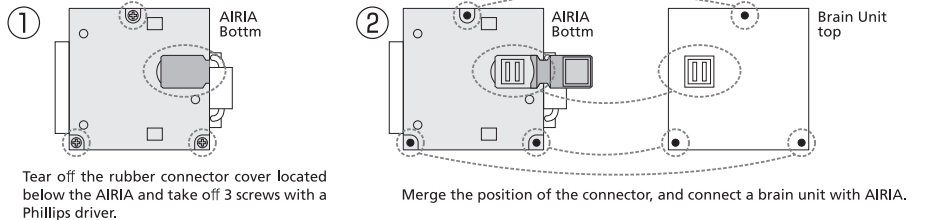
Charging

To charge the TAO II use the provided power AC adapter in a standard 110V home outlet. When charging from a home outlet, you have to use the attached AC adapter and USB cable. The charge indicator will light up when charging and turn off when charge is complete.

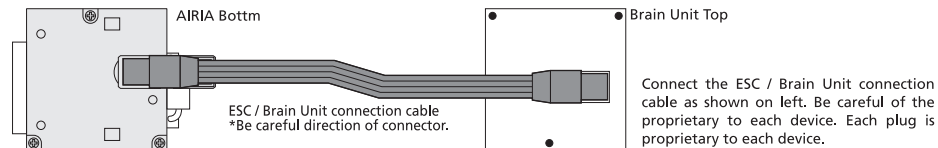
Connect Brain unit and AIRIA

There are 2 connection options available. Take off battery to prevent an electric shock or shortstop while you work on a connection.

《Connection method ① Direct connection AIRIA and brain unit.》

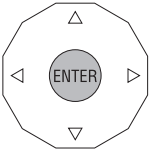
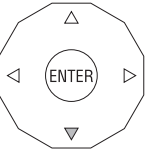
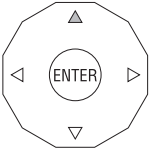
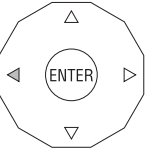
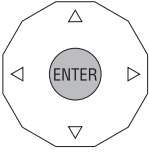
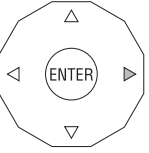
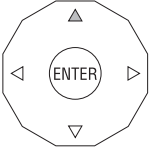
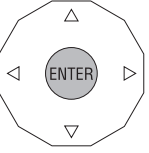


《Connection method ② Connection AIRIA and brain unit separately.》

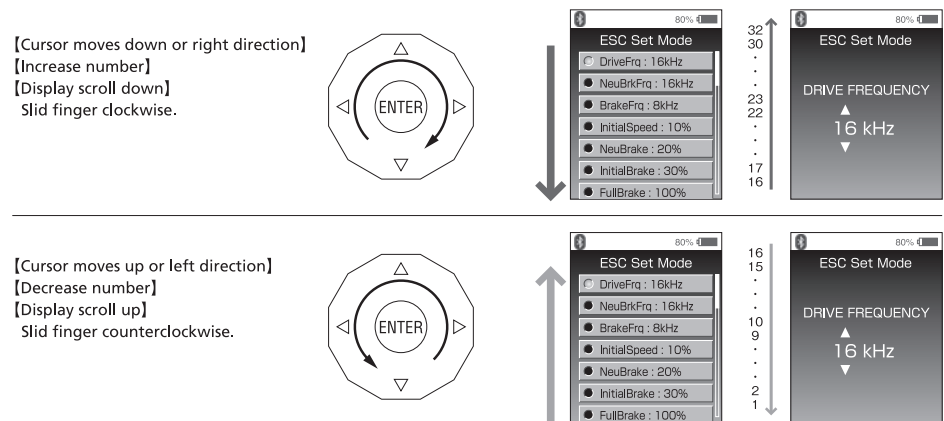


1-5 Basic Operation

Operation Basic operation of Enter key and Wheel pad.

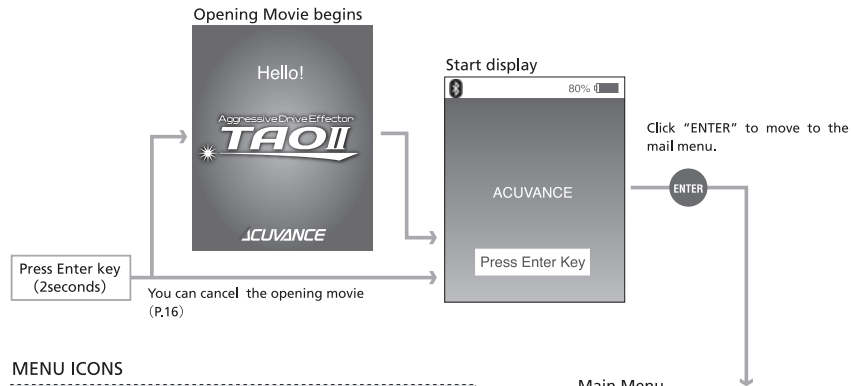
<p>[Turn on] Press and hold Enter key over 2 seconds</p> 	<p>[Cursor moves down] [Decrease number] Tap ▼</p> 
<p>[Turn off] Press and hold ▲ over 3 seconds.</p> 	<p>[Cursor moves left] Tap ◀</p> <p>[Lowering numerical value at high speed] Keep tapping "◀" of the wheel pad. While tap it, numerical value continues a high-speed drop.</p> 
<p>[Selecting item] Click Enter key.</p> 	<p>[Cursor moves right] Tap ▶</p> <p>[Raising numerical value at high speed] Keep tapping "▶" of the wheel pad. While tap it, numerical value continues a rise in high speed.</p> 
<p>[Cursor moves up] [Increase number] Tap ▲</p> 	<p>[Back to previous display] Double Click Enter key.</p> 

Wheel pad By sliding your finger around the wheel, you can choose menu or number quickie.



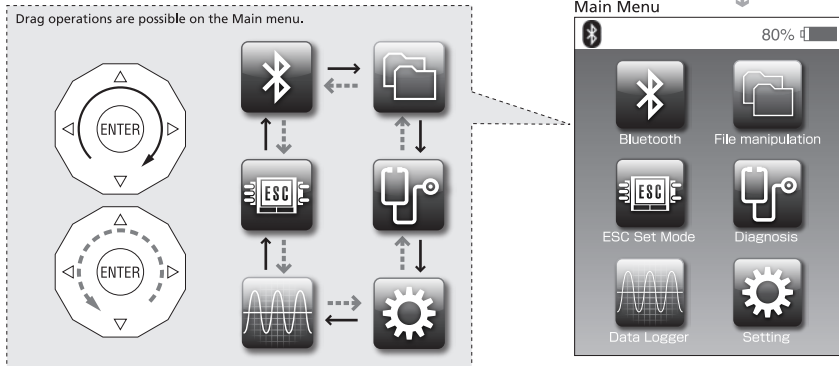
2-1 Start up / Main Menu

An opening movie begins when pushing and holding the ENTER key for a few seconds from the OFF state, and shifts to a menu screen. All commands start from this main menu.



MENU ICONS

Drag operations are possible on the Main menu.



1. Bluetooth Set-up
2. ESC Set-up
3. Data Logging (Via Bluetooth)
4. Edit File name
5. Automatic self diagnosis (Sensor, Signal, Motor and Cable etc)
6. Setting
 - 6-1. User name setting
 - 6-2. Opening display setting
 - 6-3. Version Information (Programmed card, ESC)

Energy save function
Energy saving functions act in power supply ON.

[Auto Sleep]

When no operation for 1 minute, LCD display becomes OFF automatically. By either operation of the enter key or the wheel pad, it return to an original state.

[Auto power off]

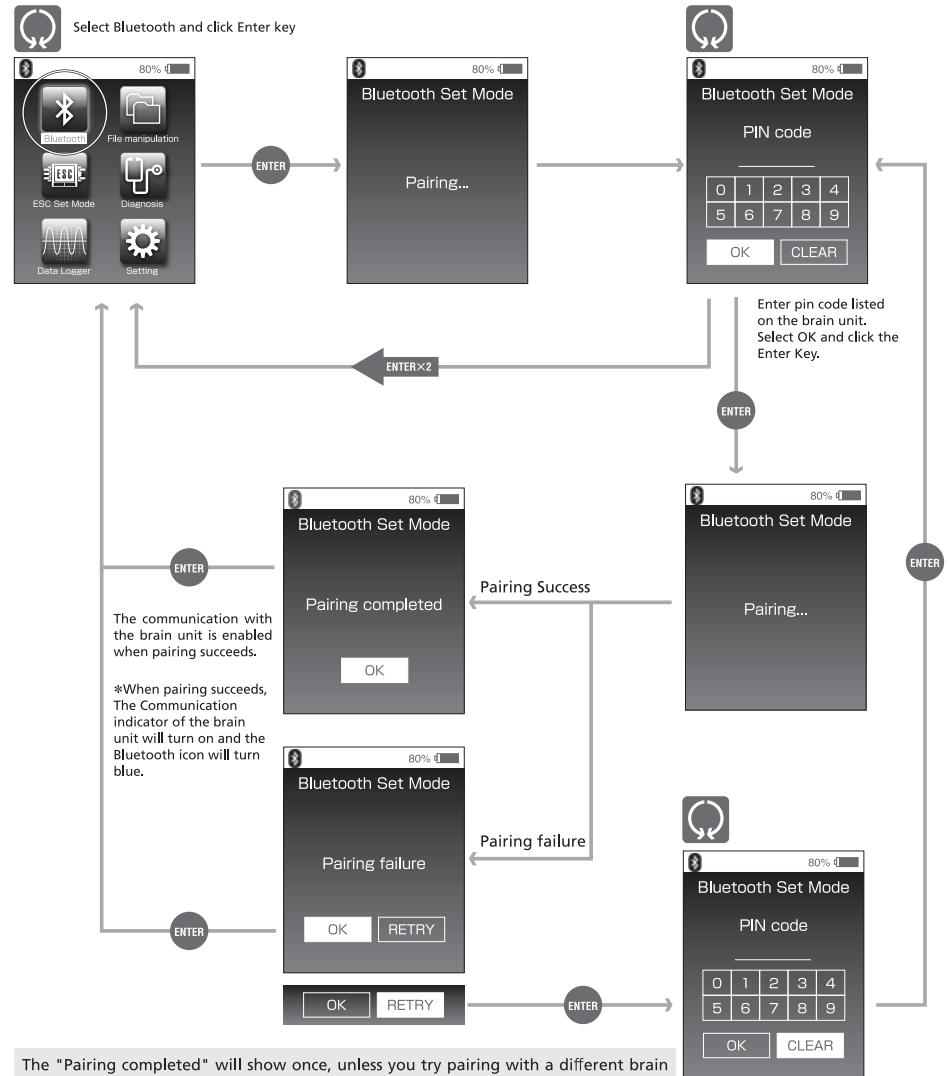
Under no operation for 15 minutes, the device turns OFF automatically.

※ACUVANCE will update the firmware anytime a new apparatus is released in the future. Functions will be increased as new firmwares are released. In the event of an update, the update kit (OP87052) will be required. Please confirm the update methods on our web page.

2-2 Bluetooth / Pairing

Your Brain unit comes with an individual ID. The Bluetooth communication is enabled by letting the TAO II pair with this unique ID. To Pair your devices, please follow the chart below.

- *Connect the brain unit with the AIRIA beforehand(P3), turn on your transmitter and the power source of the AIRIA.
- *The communication indicator of the brain unit will start blinking when the AIRIA power source is turned on.



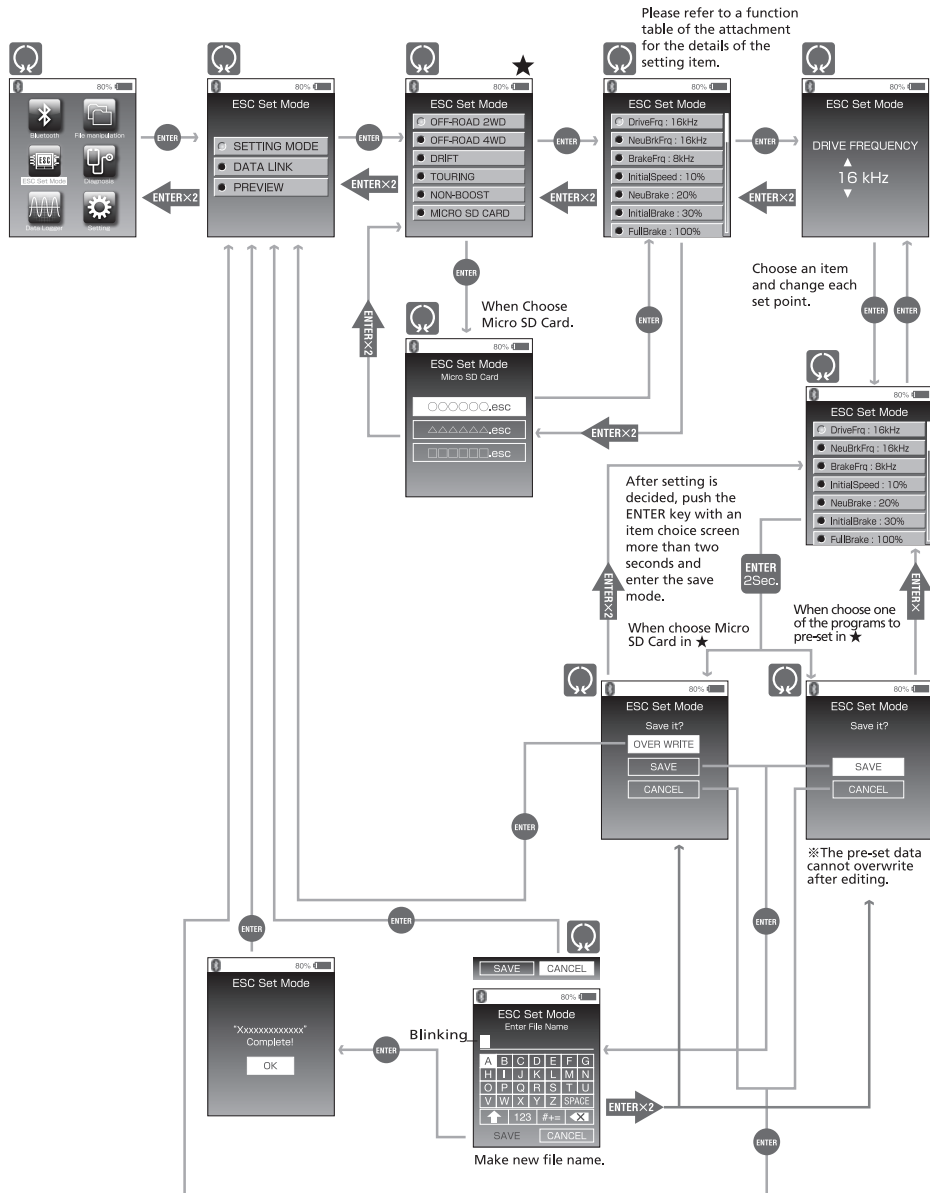
The "Pairing completed" will show once, unless you try pairing with a different brain unit after the first pairing already succeeded. It is not abnormal for the TAO II to continue pairing if you enter a random or incorrect PIN.

Drag operations are possible in the

ENTER×2 You can return to the last screen by pushing ENTER key twice quickly.

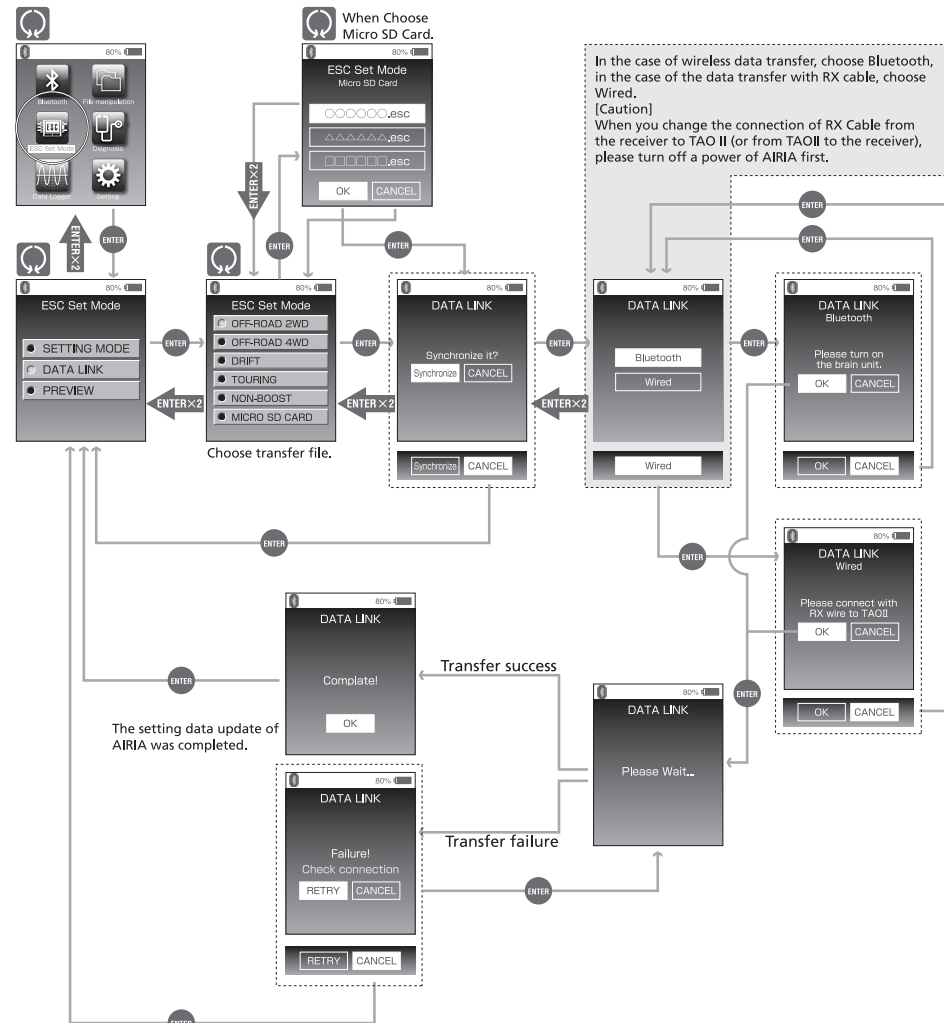
2-3 Change and Save setting

There are five kinds of driving profiles installed in the TAO II. You can change each setting within each profile to your liking, and save them in the Micro SD card as "user setting". Furthermore, you can change each item within the "user setting" already stored, overwrite it, or save it by another name.



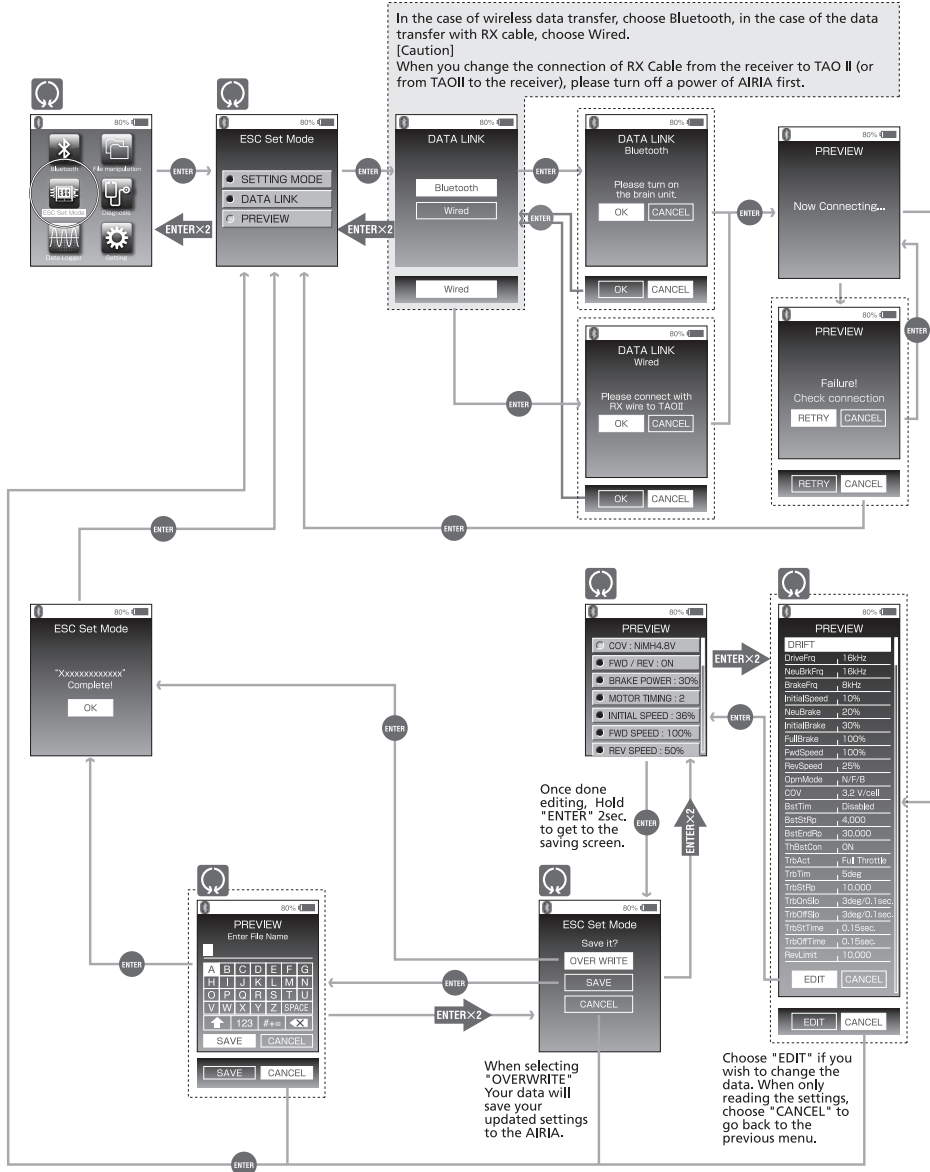
2-4 Forwarding setting data to AIRIA

The TAO II can update setting data in the AIRIA by the pre-set profiles included or "user setting" by making a transfer (= data link).



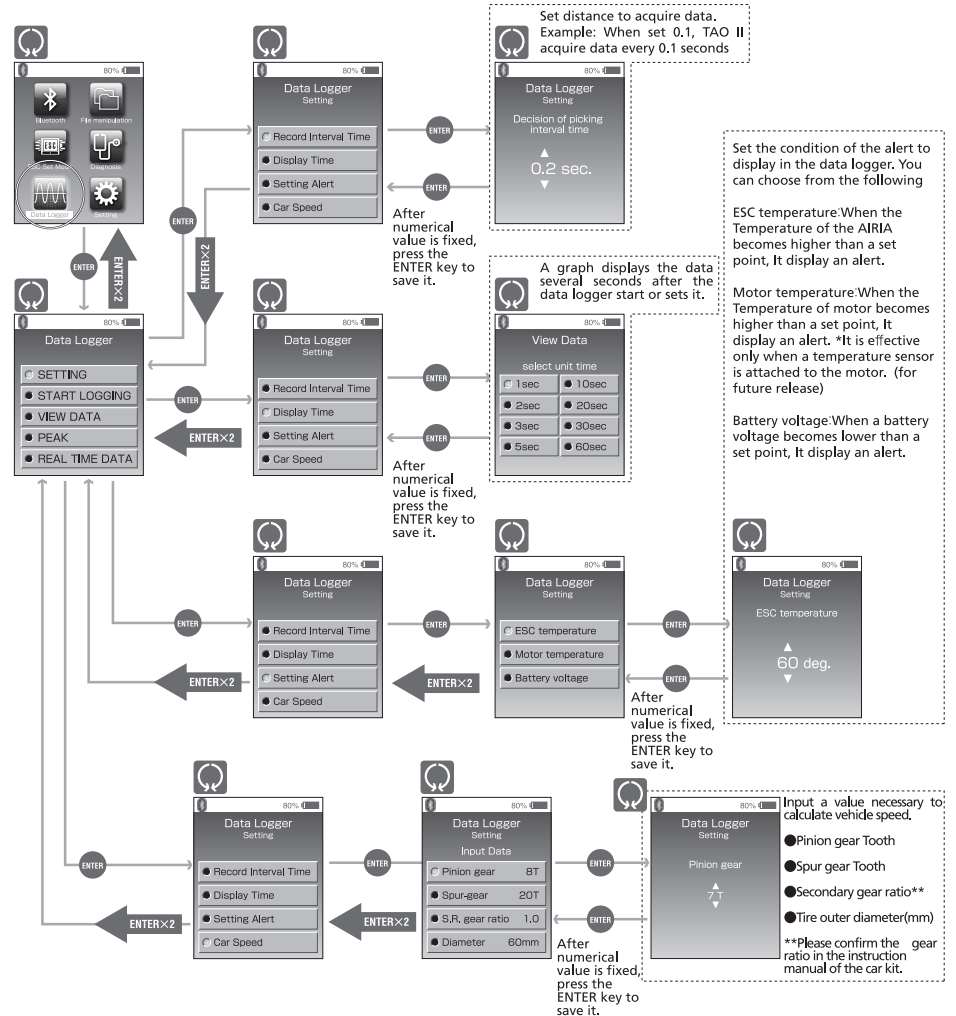
Drag operations are possible in the screens with this mark.

ENTER×2 You can return to the last screen by pushing ENTER key twice quickly.



3-1 Prepare for data logging

The TAO II is equipped with "a data logger function" to record battery voltage and change s of the AIRIA motor temperature while running. In addition, the TAO II has an "Alert function" to display warning when the battery voltage of the AIRIA is low, or the motor temperature exceeds the alarm value. At first, set a parameter and update your data logger according to your environment.

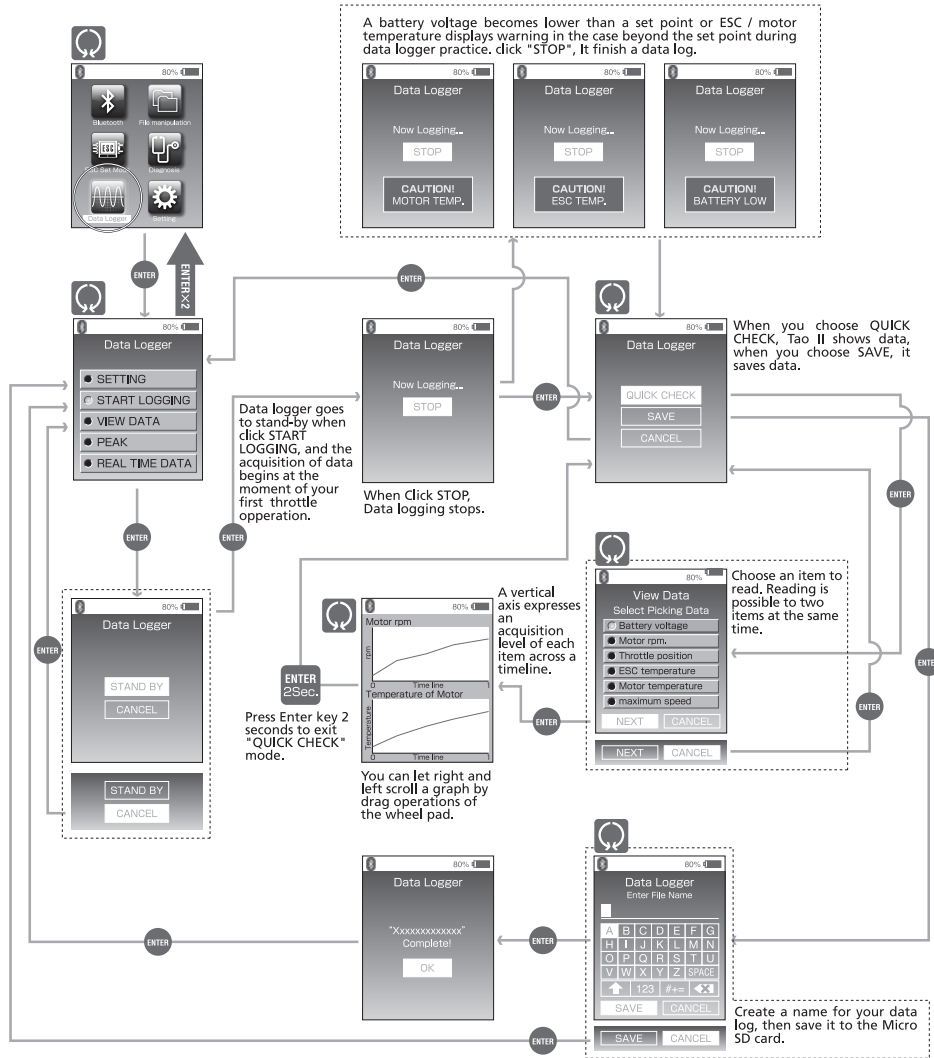


Drag operations are possible in the screens with this mark.

ENTERx2 You can return to the last screen by pushing ENTER key twice quickly.

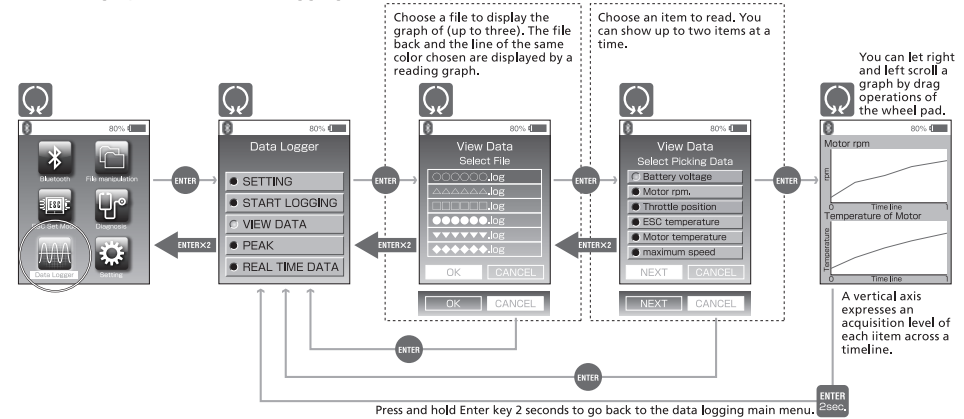
3-2 Data Log / Save Data

Based on the condition that you set in 3-1, the data logging will start recording. The Tao II creates 1 file from a data log start (START) to the end (STOP), you can add a name to every file and can save to the Micro SD Card. In addition, you can display the log immediately (quick check) without storing the file acquired.



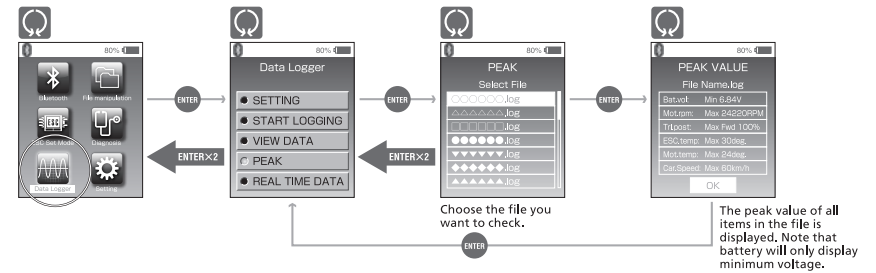
3-3 Read saved data by graph

Read the graph from the data logging saved in step 3-2.

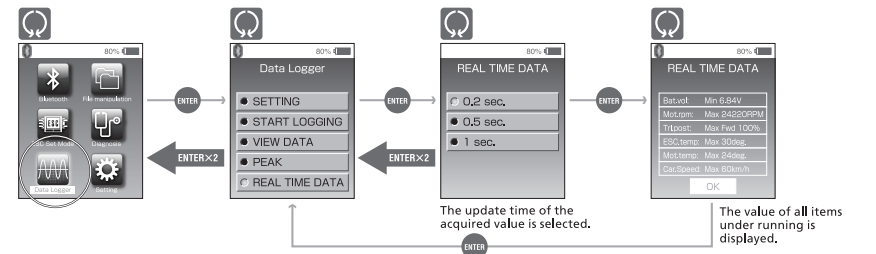


3-4 Check saved peak volume

Read the peak value of each measured value of the file saved in step 3-2.



3-5 The numerical value under running is in real time displayed.



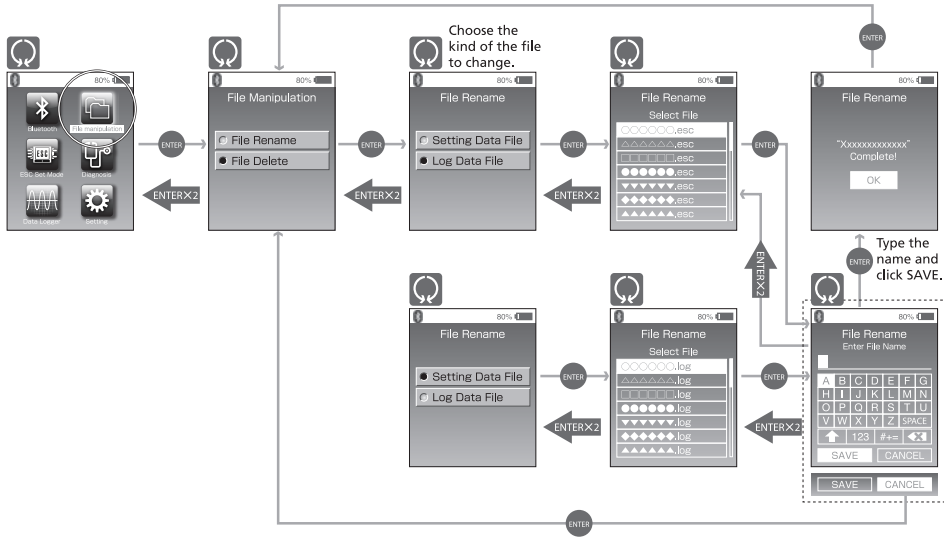
Drag operations are possible in the screens with this mark.

ENTERx2 You can return to the last screen by pushing ENTER key twice quickly.

4-1 Rename the saved data file and delete the file

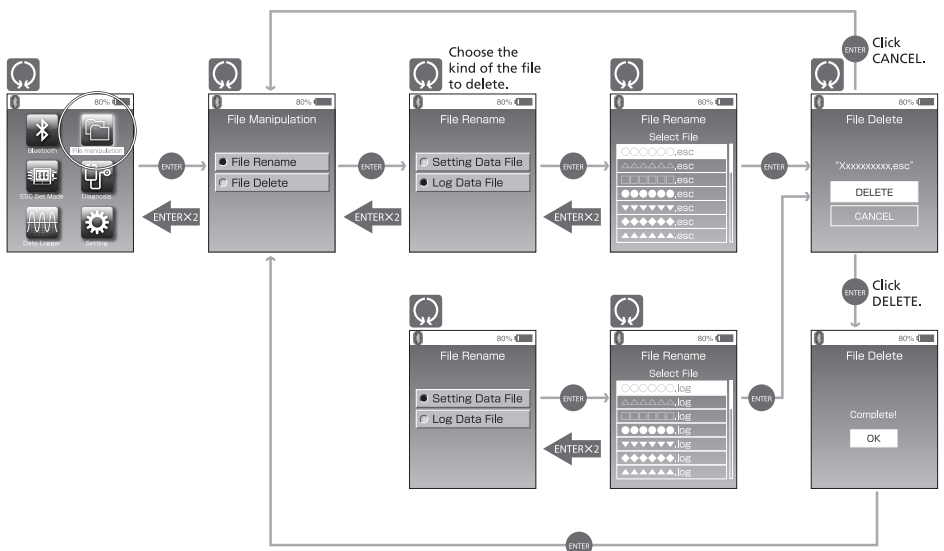
Change file name

You can edit the setting data file name and the data logging file name saved previously to the Micro SD Card.



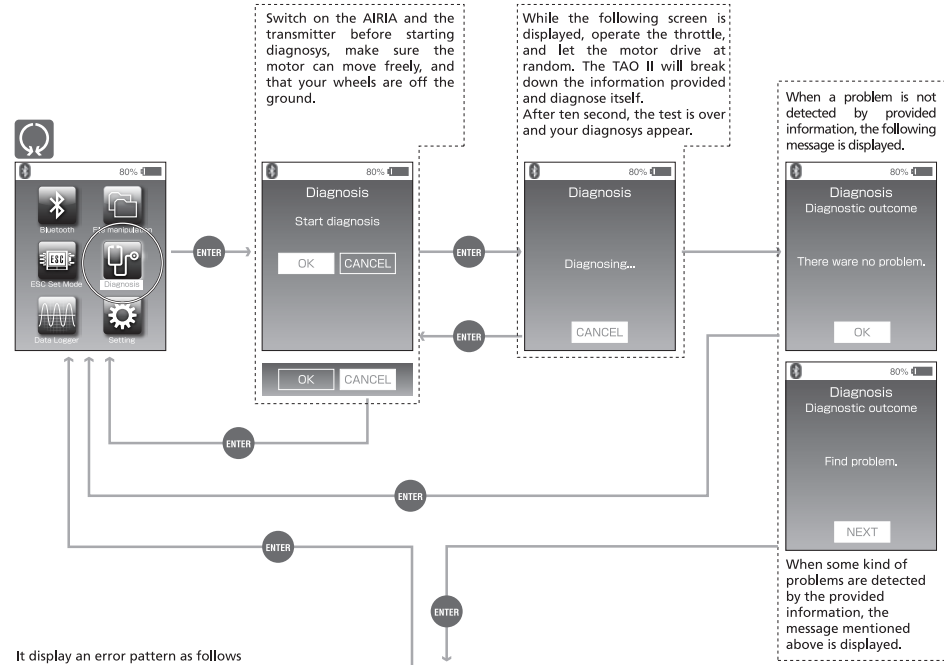
Delete saved file

The arrangement data file and the data logging file preserved to Micro SD Card are eliminated. A fact can be done.

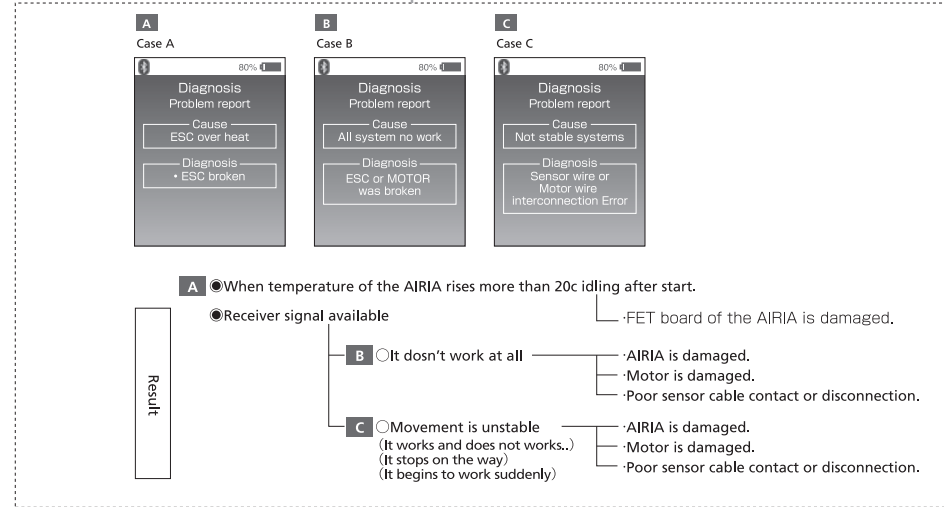


4-2 Check problem

When malfunction of the system occurs, the TAO II can analyze information from the AIRIA and motor to determine a probable cause of the malfunction. (The displayed malfunction is not a predictable thing. Please refer to the AIRIA troubleshooting chart for a more accurate diagnostic)



It display an error pattern as follows



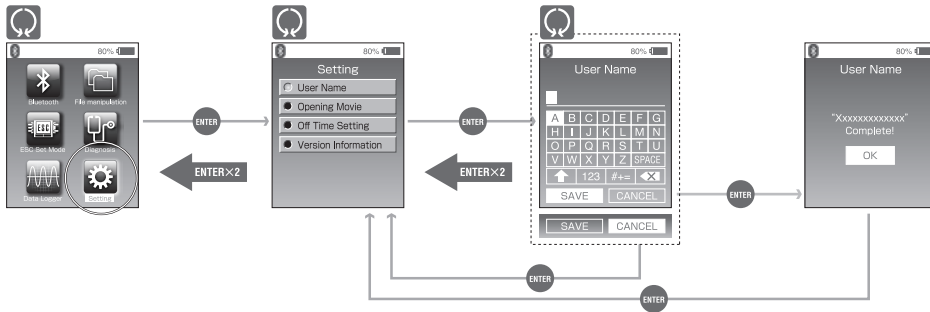
Drag operations are possible in the screens with this mark.

ENTERx2 You can return to the last screen by pushing ENTER key twice quickly.

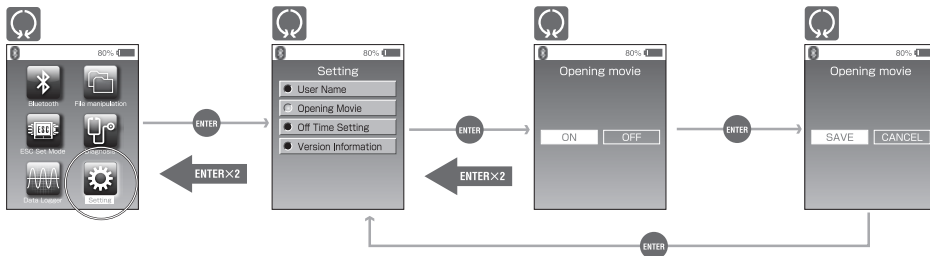
5-1 Change setting of TAO II

When future external equipment will be released, you will be able to update the TAO II firmware and functions. The newer functions will be added in the menu.

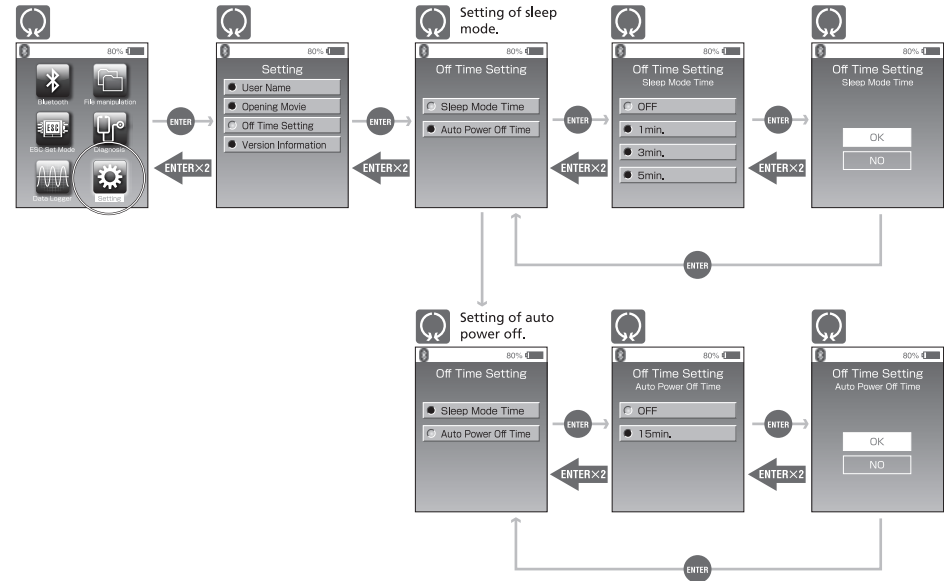
User Name Decide user name. The user name is displayed at the opening screen when starting the device.



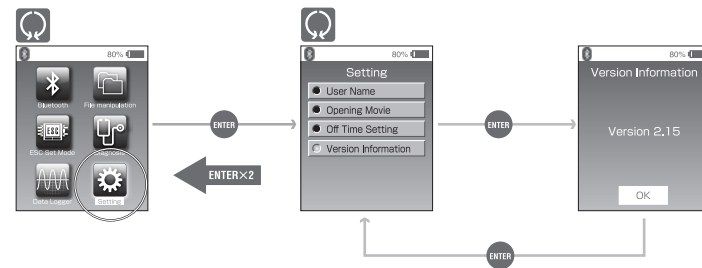
Opening Movie Choose OFF, if you want to skip the opening movie at power on.



Off Time Setting The time to screen sleep and a setup of automatic power off.



Version Information It display the current firmware version installed in your TAO II.



Drag operations are possible in the screens with this mark.

ENTER×2 You can return to the last screen by pushing ENTER key twice quickly.

NOTE