

U-WAVEPAK-BW

Setup Manual

Read this Setup Manual thoroughly before using the application.
After reading, retain it close at hand for future reference.

Mitutoyo

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Notice: Please make sure to confirm the following before installation

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Notice: About U-WAVE-TCB/U-WAVE-TMB and U-WAVEPAK-BW

-This application operates on Windows10/11. Please ensure to run it on a PC with Windows10/11 installed.

-This application can use the Bluetooth function that comes with the device. The terminal without Bluetooth function purchases commercial Bluetooth receiver, and please use it.

-This application and U-WAVE-TCB/U-WAVE-TMB do not guarantee the connection with all Bluetooth apparatuses.

※ This application has been confirmed to work with windows10 Pro/windows11.

-When using a higher application such as USB-ITPAK, be sure to start this application before starting the higher application.

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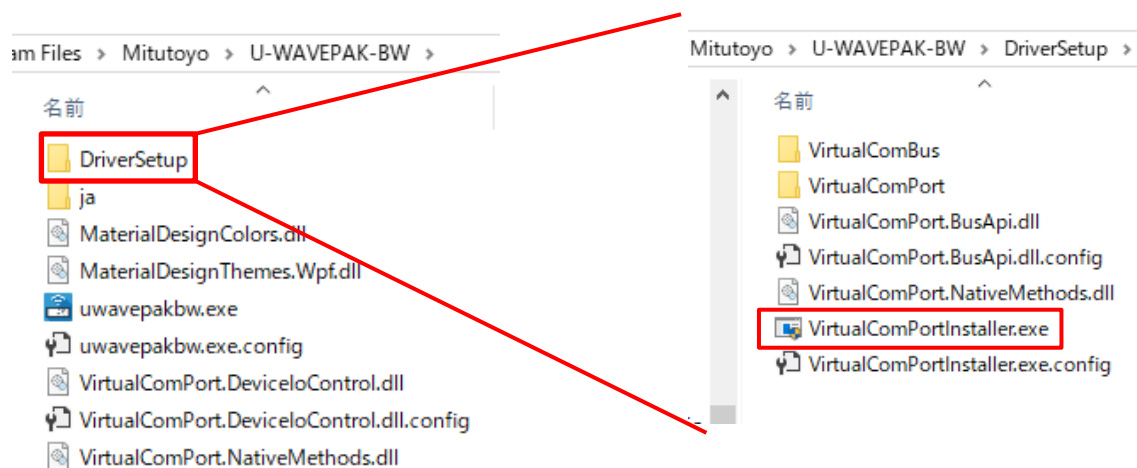
1. Installation

- (1) Double-click on [uwavepakble_setup.exe]
- (2) Complete the installation following the installation guidance displayed on the window.

Note1

If "Driver not found" is displayed when launching the U-WAVEPAK-BW, install it using the following procedure.

- ① Restart your computer.(Do not uninstall the U-WAVEPAK-BW.)
- ② Start "VirtualComPortInstaller.exe" device in "DriverSetup" folder in "U-WAVEPAK-BW" folder(Initial setting "C:¥Program Files¥Mitutoyo¥U-WAVEPAK-BW").

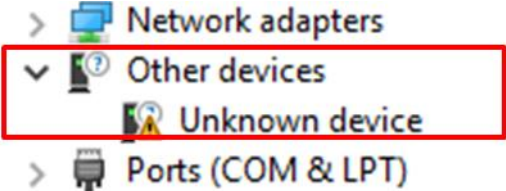


Note2 : If the problem is not resolved by Note1.

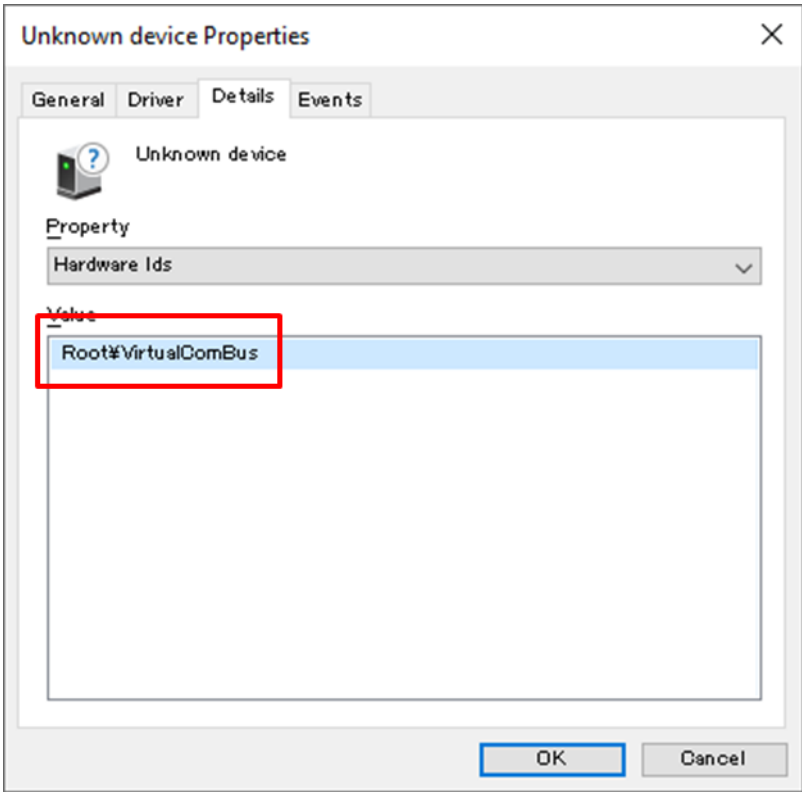
If the method of Note1 does not solve the problem, there may be the following devices in "Device Manager".

Please uninstall the following devices, restart the PC, and then install U-WAVEPAK-BW again.

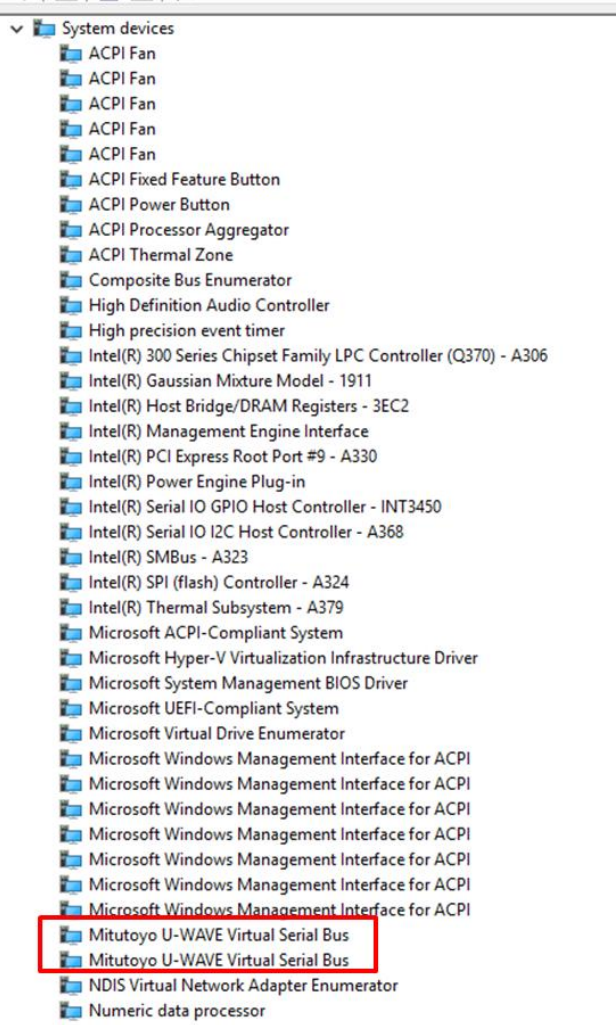
- ① Devices with "!" in "Other devices"



※ For devices related to "Virtual COM", "Hardware ID" is displayed on the "Properties" screen as shown below.



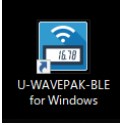
② "System device" ⇒ "Mitutoyo U-WAVE Virtual Serial Bus"



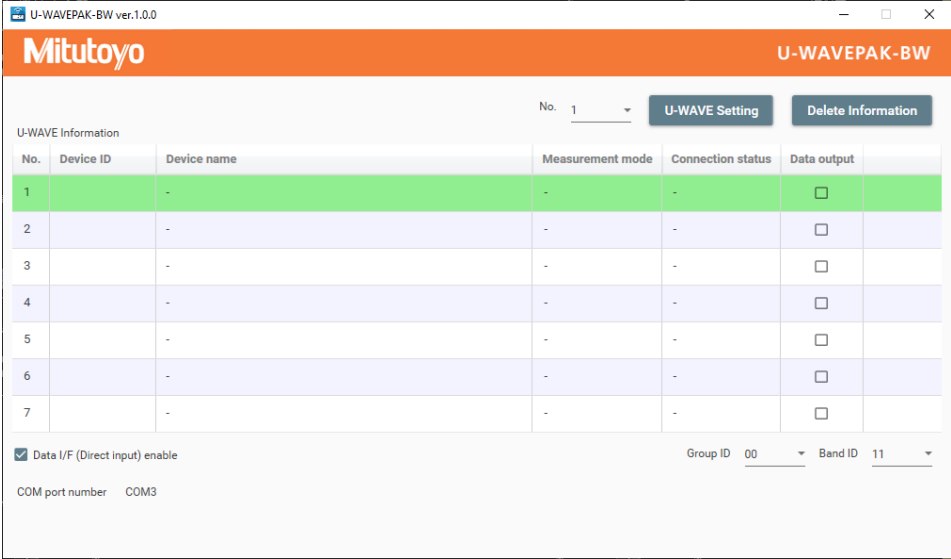
2. Setting up the U-WAVE-TCB/U-WAVE-TMB

2.1. How to connect the U-WAVE-TCB/U-WAVE-TMB to the U-WAVEPAK-BW

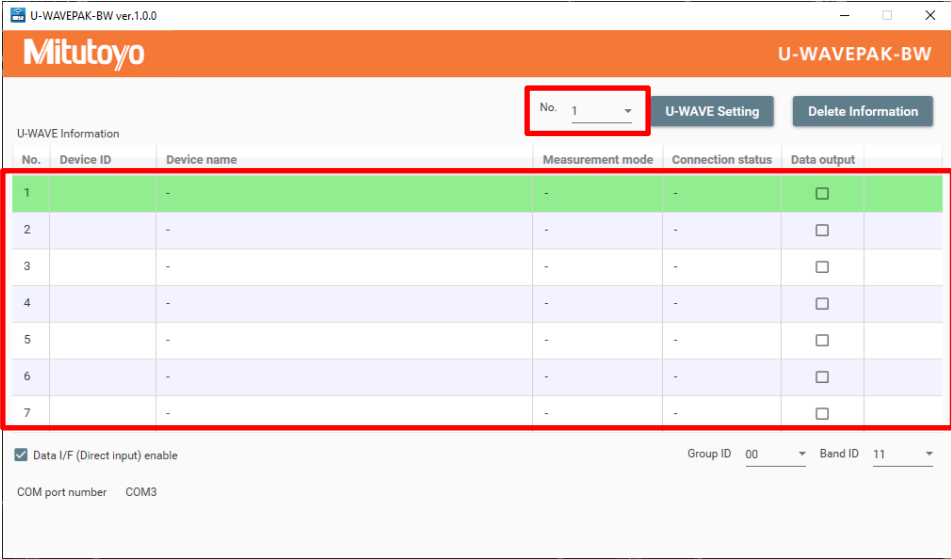
(1) Double-click on [U-WAVEPAK-BW] to run the application, U-WAVEPAK-BW.



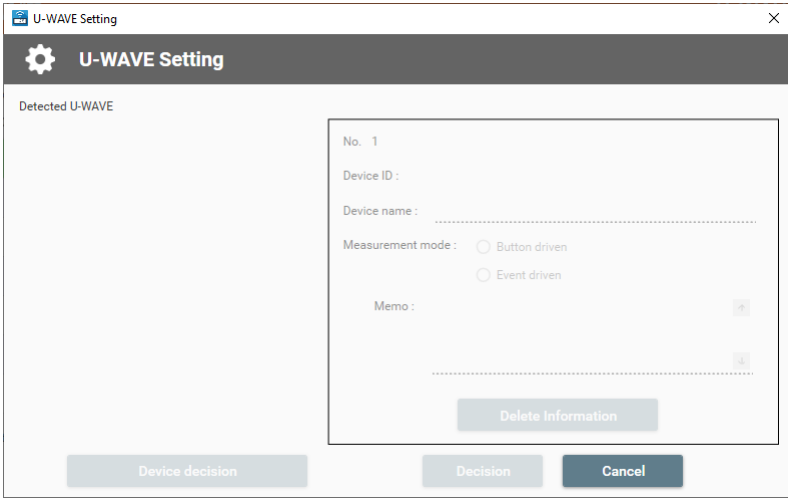
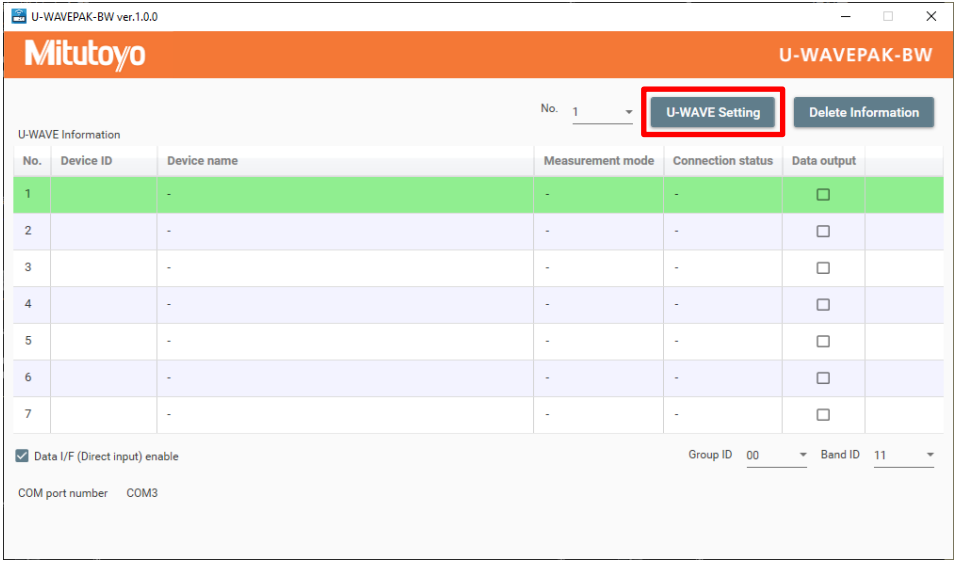
The following window will be displayed, signaling the completion of the starting up of the application.



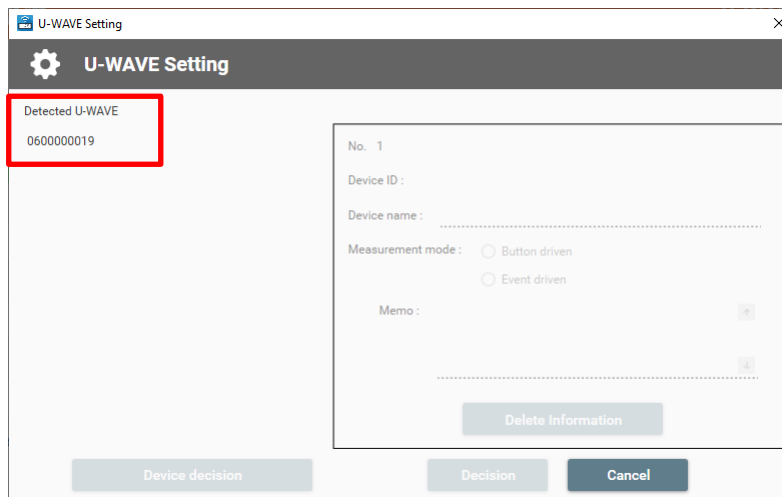
(2) The maximum number of units of U-WAVE-TCB/U-WAVE-TMB to be set up is seven. To set up a U-WAVE-TCB/U-WAVE-TMB, click on a number in the table [U-WAVE Information]. You can also select a number from the drop-down list at the top-right of the window.



(3) Click on the [U-WAVE Setting] button to open the setting window.



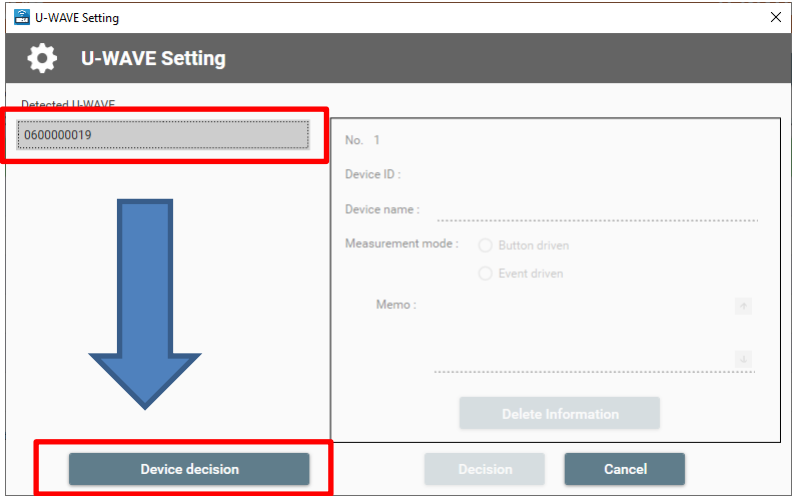
(4) Press the “Data” button (orange button) attached to the connection unit of the U-WAVE-TCB/U-WAVE-TMB. The LED of the U-WAVE-TCB/U-WAVE-TMB will flash in orange. After the U-WAVE-TCB/U-WAVE-TMB has been detected by the U-WAVEPAK-BW, its ID number will be displayed in the item [Detected U-WAVE].



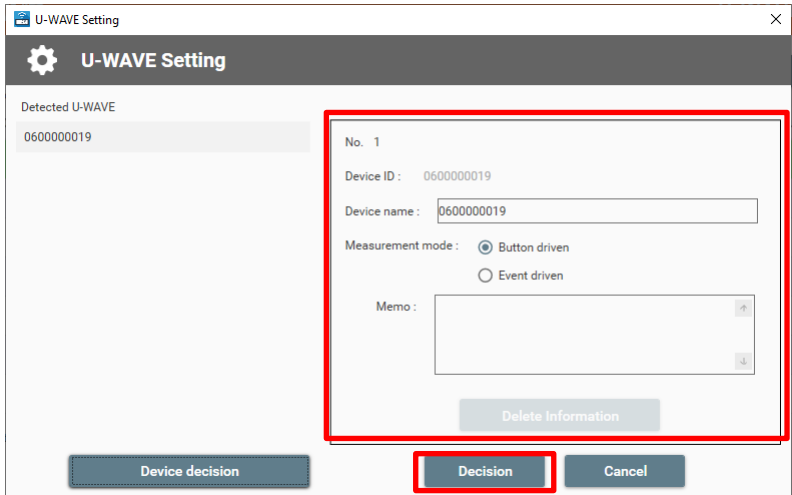
Tips:

- The detected ID number can be found on the label stuck on the body of a U-WAVE-TCB/U-WAVE-TMB.
- If the U-WAVE-TCB/U-WAVE-TMB cannot be detected, press the “DATA” button again. There will be cases where it cannot be detected depending on the timing at which you press the button. If it is not still detected, turn off the Bluetooth communication of the OS, turn on the Bluetooth communication again, and try detection.
- When the [U-WAVE Setting] window is open, the red LED of the U-WAVE-TCB/U-WAVE-TMB will either start flashing, or its buzzer will start beeping, regardless of whether the connection is successful or not.
- If a U-WAVE-TCB/U-WAVE-TMB has already been set up, its ID number will not be detected.
- If the U-WAVE-TCB/U-WAVE-TMB is connected to applications other than this application, its ID number will not be detected.

(5) Click on the detected ID number, and then click the [Device decision] button.



(6) Confirm that the ID number has shown up in the item [Device ID] at the right of the window, and then click on the [Confirm] button.

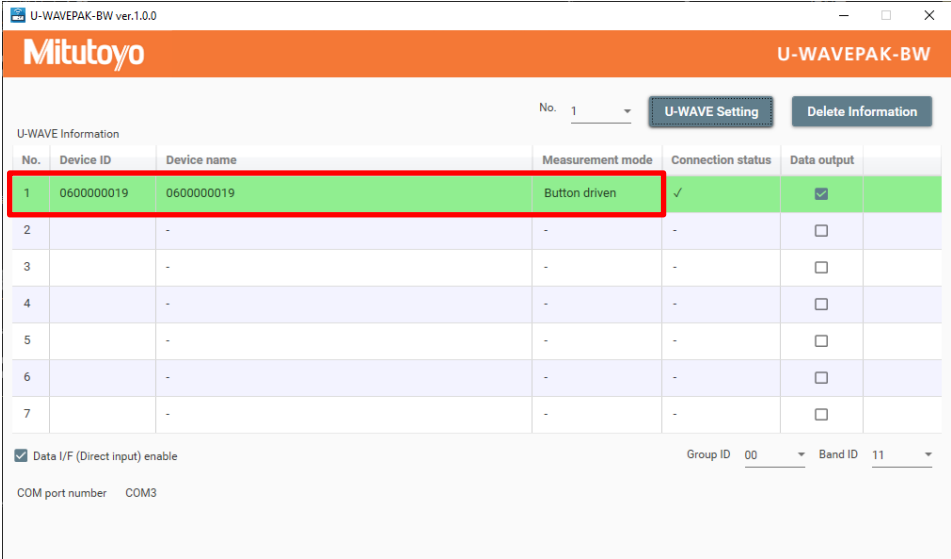


Tips:

- A device name can be changed voluntarily.
- Any message can be stored in the item [Memo].

(7) Make sure that the information for the U-WAVE-TCB/U-WAVE-TMB has shown up in the row of the number that you wish to set it to, and then press the "DATA" button (orange button) on the connection unit.

A successful connection will be indicated with the appearance of the mark "✓" in the [Connection] box.

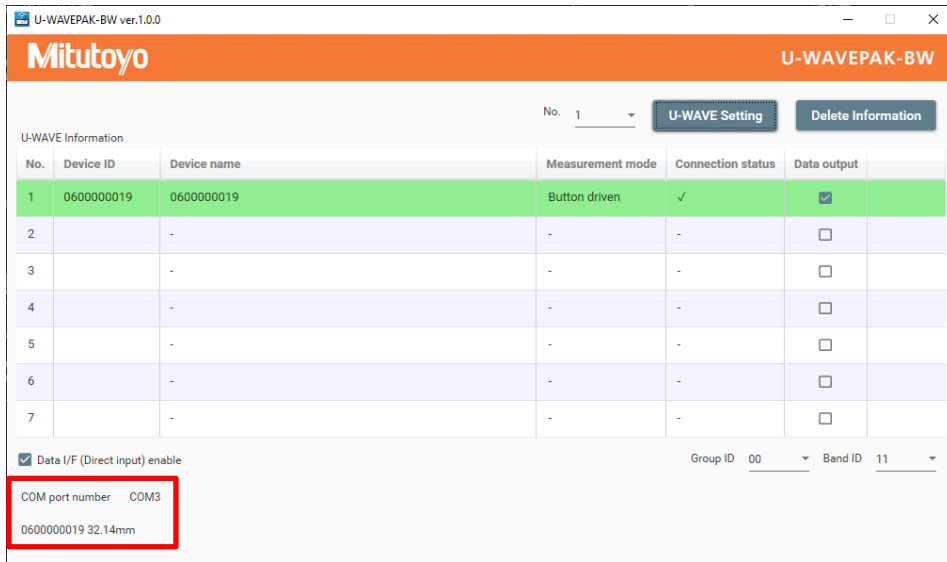


Tips:

- When the connection fails, press the "DATA" button again. There will be cases where the U-WAVE-TCB/U-WAVE-TMB cannot be detected depending on the timing you press the button.

(8) Press the "DATA" button on the connection unit again, and check if a measurement value can be transmitted.

If the value is displayed at the bottom-left of the window correctly, the setting up has been completed.

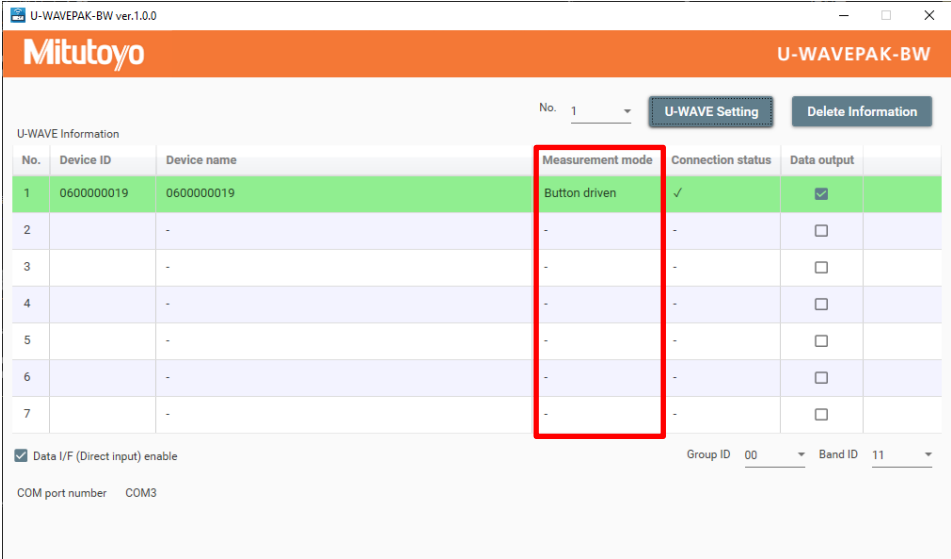


Tips:

In the period immediately after setting up the U-WAVE-TCB/U-WAVE-TMB, there will be cases where measurement values cannot be transmitted even if the connection is successful. If such a case occurs, please send the measurement values again after a gap of a few seconds.

2.2. How to disconnect the U-WAVE-TCB/U-WAVE-TMB from the U-WAVEPAK-BW

When you wish to disconnect the U-WAVE-TCB/U-WAVE-TMB from this application, double-click on the mark “✓” in the appropriate box in the “Connection” column. In order to establish a connection again, press the “DARA” button on the connection unit.



Tips:

If the mark “✓” in the “Connection” column does not disappear even a few seconds after double-clicking it, please double-click it again.

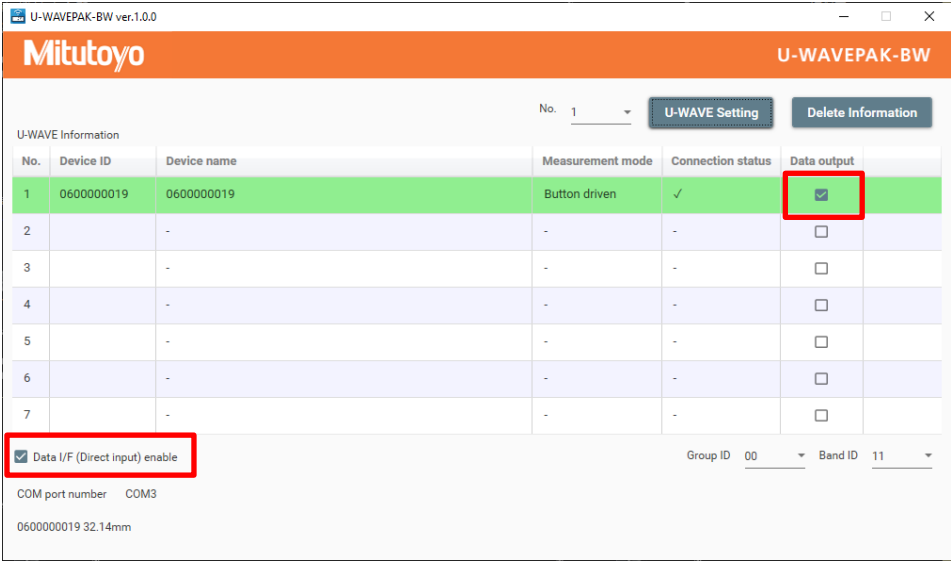
Note:

- With the U-WAVE-TCB/U-WAVE-TMB connected via Bluetooth, the battery power will be consumed even if you are not using it. In the case that you will not use it for a long time, please store it with the Bluetooth connection disconnected.
- Measurement data is not sent when communication is reconnected. When you are reconnected, you confirm that measurement data is input into a terminal by all means, and please use it.

3. Inputting measurement values

(1) In order to transfer measurement values received from the U-WAVE-TCB/U-WAVE-TMB to an Excel spreadsheet and the like, put the mark “√” in the “Data I/F (Direct input) enable” box.

(2) Measurement values received from the U-WAVE-TCB/U-WAVE-TMB can be transferred to an Excel spreadsheet and the like, only when the corresponding “Data out” box has been checked.



(3) When you wish to input measurement values in an Excel spreadsheet, activate cells in the spread sheet, and then send the measurement values from the U-WAVE-TCB/U-WAVE-TMB with the keyboard input mode enabled.

Tips:

- “Data I/F (Direct input) enable” and “Data out” is enabled in the initial settings.
- Received measurement values can be transferred to an Excel spreadsheet only with the keyboard input mode enabled.
- If the measurement mode is set to [button-driven], measurement values can be sent by pressing the [DATA] button of the connection unit.
- If the measurement mode is set to [event-driven], this application outputs a measurement value in response to a data request from higher-level application software.

4. Measurement modes

-In the case of the [button-driven] mode,

If you press the [DATA] button on the connection unit once, the U-WAVE-TCB/U-WAVE-TMB will then send a measurement value once.

-In the case of the [event-driven] mode,

The U-WAVE-TCB/U-WAVE-TMB automatically sends a measurement value every 0.5 seconds, when the measurement value of the measurement tool (connected to the U-WAVE-TCB/U-WAVE-TMB) changes.

This application keeps the latest received measurement value and sends the latest measurement value in response to a request from higher-level application software and the like.

Tips:

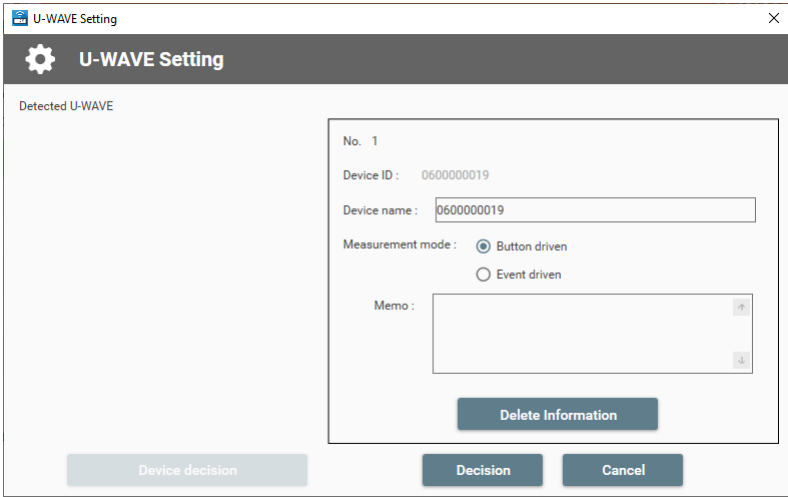
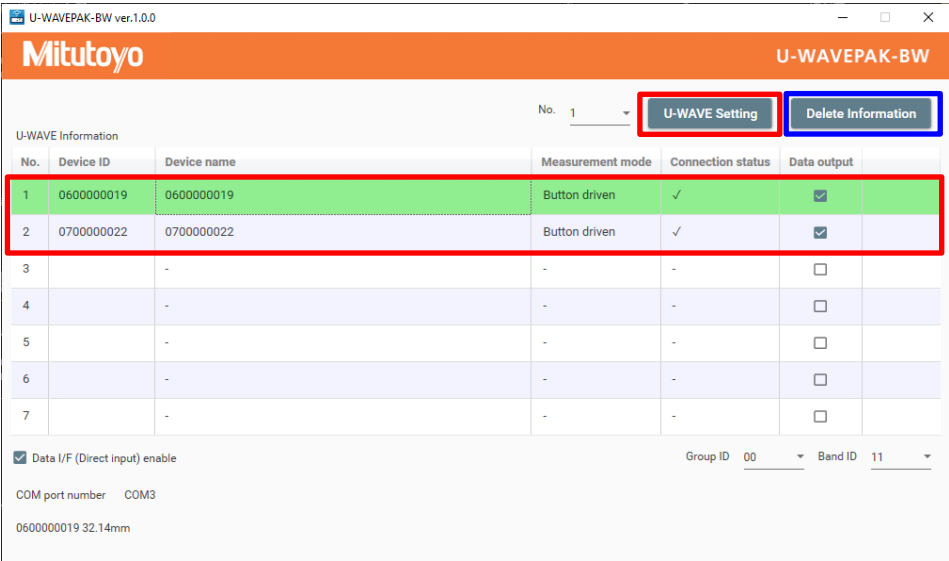
In the [event-driven] mode, the battery power drains faster than in the [button-driven] mode because more frequent communication occurs.

5. Editing the settings

5.1. Modifying the settings

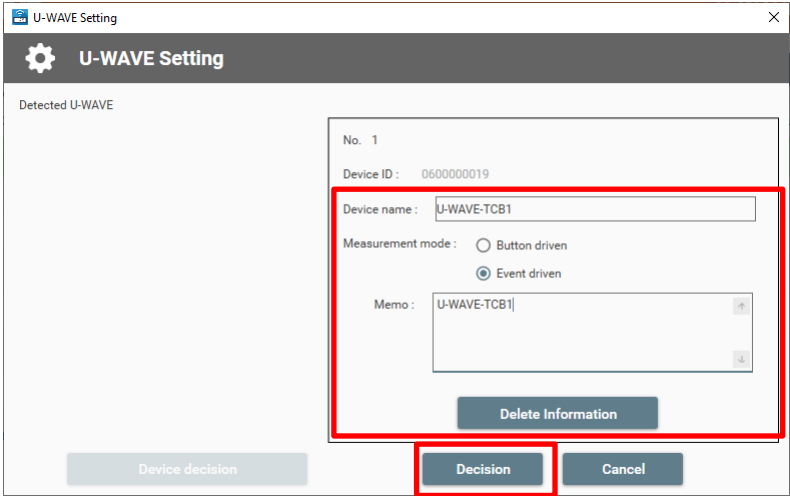
If you wish to change the settings information of a U-WAVE-TCB/U-WAVE-TMB set up in this application, please follow the procedure below.

(1) Double-click on the corresponding number for the information to which you wish to make changes in the table [U-WAVE Information] or select the number from the drop-down list at the top-right of the window. Then click on the [U-WAVE Setting] button.



(2) Change the settings information.

When having finished the change, click on the [Decision] button.

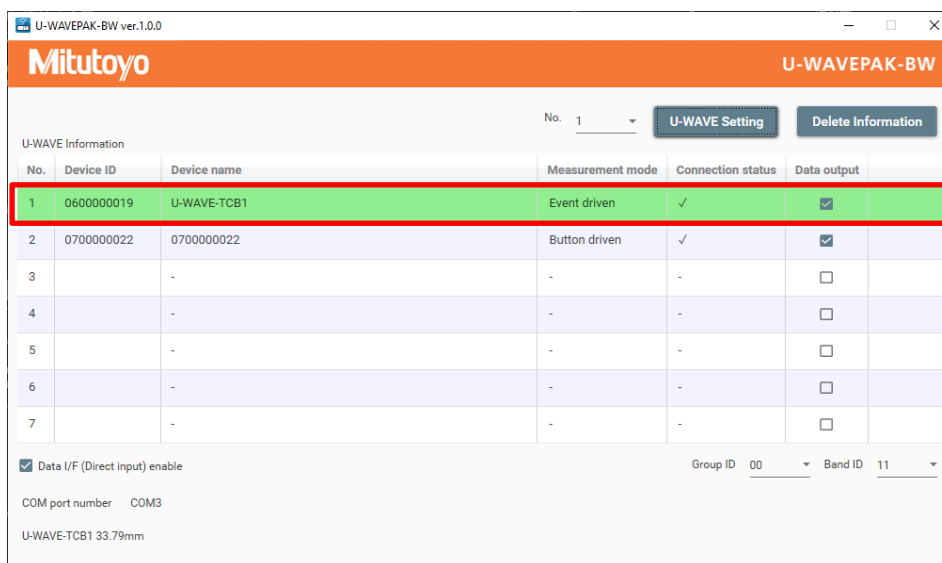


Items to be changed	Contents
Device name	Change the device name.
Measurement mode	Select either the [button-driven] mode or the [event-driven] mode.
Memo	Change the contents written here
Delete information	Delete the information of the selected U-WAVE-TCB/U-WAVE-TMB

Tips:

There are cases where units of U-WAVE-TCB/U-WAVE-TMB which are not currently registered can be detected during the changing of information.

(3) Confirm that the changed settings information is successfully reflected in the [U-WAVE Information] window.



Tips:

-If you have changed the measurement mode, please follow the instructions below:

From the [button-driven] mode to the [event-driven] mode: Change the measurement value in the measuring tool connected to the U-WAVE-TCB/U-WAVE-TMB.

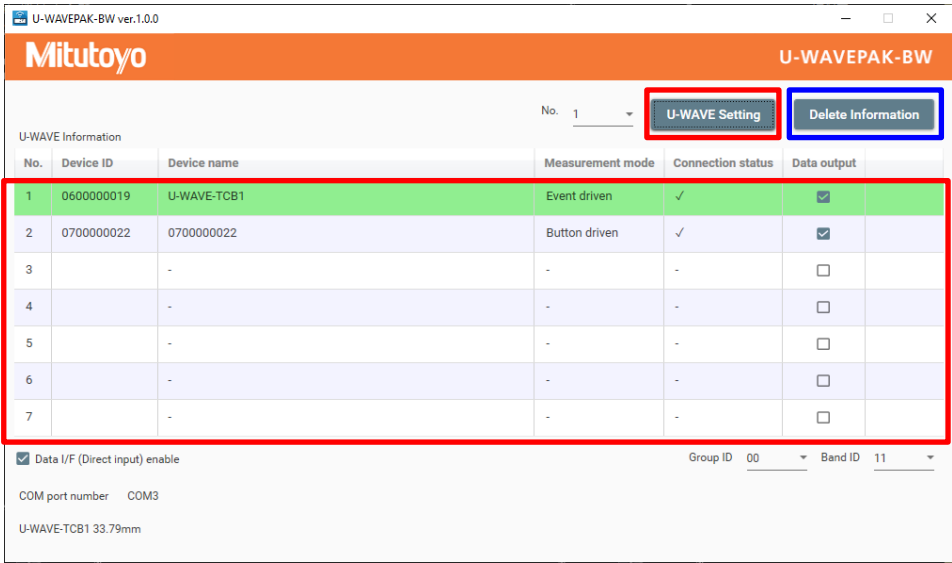
From the [event-driven] mode to the [button-driven] mode: Press the [DATA] button on the connection unit of the U-WAVE-TCB/U-WAVE-TMB.

5.2. Deleting the settings

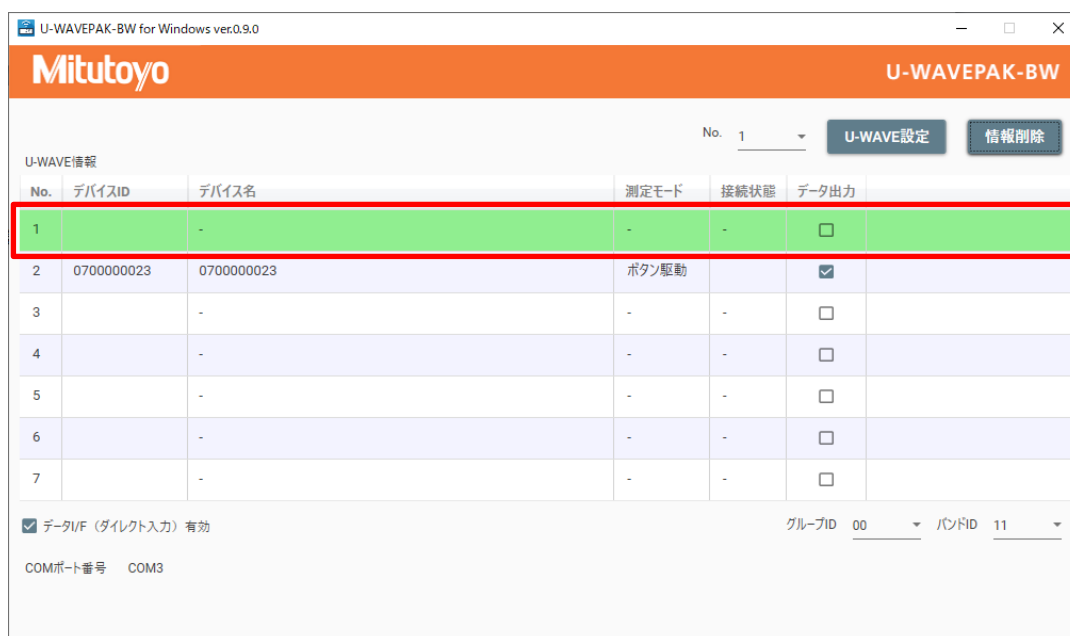
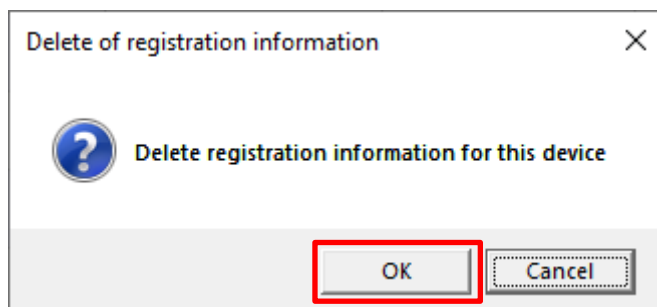
If you wish to delete the settings information of the U-WAVE-TCB/U-WAVE-TMB set up in this application, follow the procedure below.

-Delete the settings information from the [U-WAVE Information] window

(1) Double-click on the corresponding number for the information you wish to delete in the table [U-WAVE Information] or select the number from the drop-down list at the top-right of the window. Then click on the [Delete Information] button

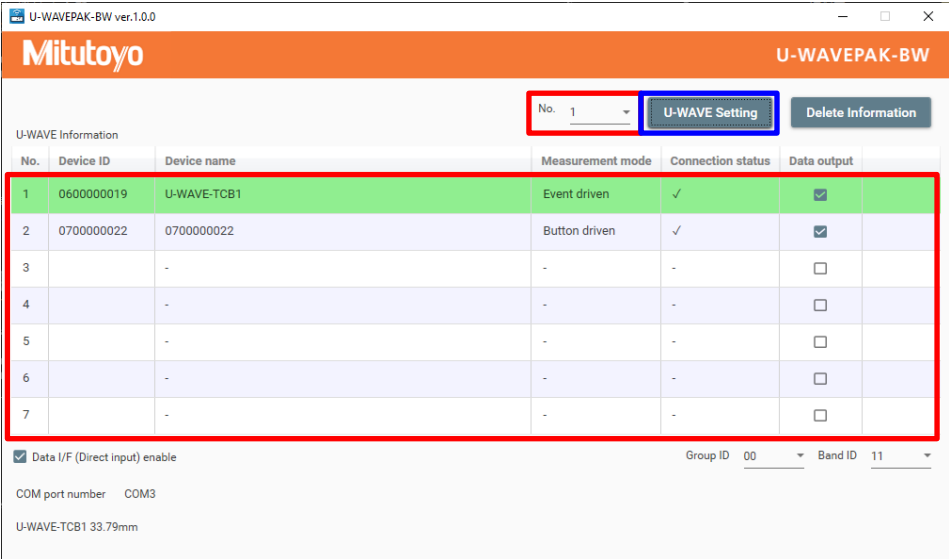


(2) After the dialog [Delete of registration information] has shown up, click on the [OK] button to delete the settings information.

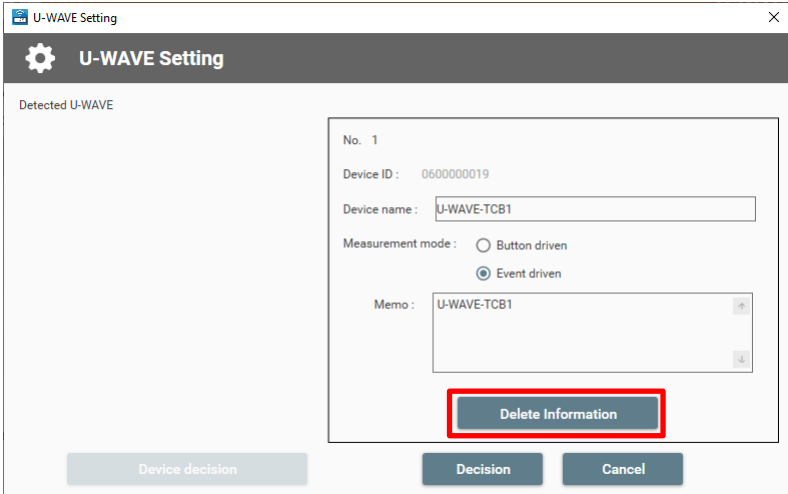


-Delete the settings information from the [U-WAVE Setting] window

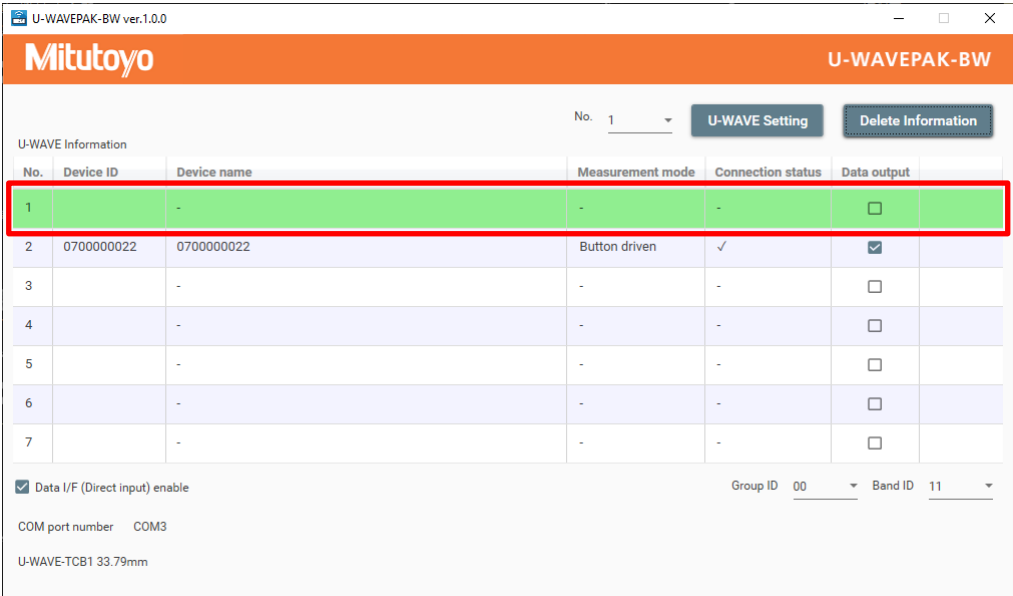
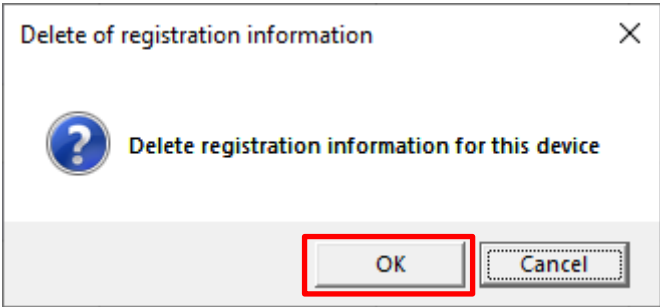
(1) Double-click on the corresponding number for the information you wish to delete in the table [U-WAVE Information] or select the number from the drop-down list at the top-right of the window. Then click on the [U-WAVE Setting] button



(2) Click on the [Delete Information] button in the [U-WAVE Setting] window.



(3) After the dialog [Delete of registration information] has shown up, click on the [OK] button to delete the settings information.



6. Setting the connection to a higher-level application software (MeasurLink, ITPAK, etc.)

When using a higher application such as USB-ITPAK, be sure to start this application before starting the higher application. If you do not start this application, the upper application software may not operate.

USB-ITPAK cannot be used together with U-WAVEPAK-BW and U-WAVEPAK (U-WAVE-R). When using USB-ITPAK with U-WAVEPAK (U-WAVE-R), uninstall U-WAVEPAK-BW.

To use this application with higher-level application software, please change the following numbers and IDs to be the same between this application and the higher-level application software.

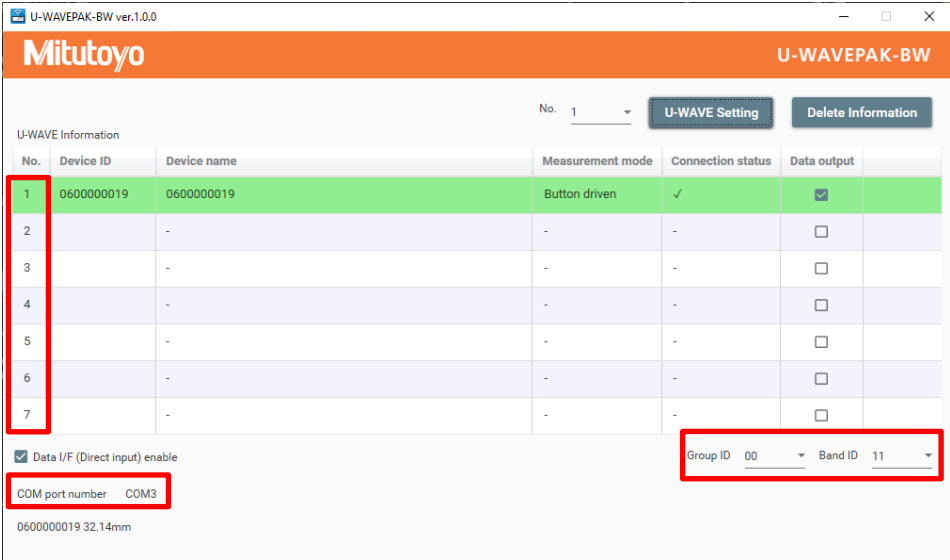
Port number: Match the Port number of the higher-level application software to [COM port number] displayed at the bottom-left of this application’s window.

Channel ID: Match the Channel ID of the higher-level application software to the number equal to the number in the table [U-WAVE Information] minus 1.

*Example: In the case that the number in the table [U-WAVE Information] is 1, the channel number will be 00 (Channel ID = 00)

Group ID: Change the Group ID displayed at the bottom-right of the window of this application to the same value as that of the higher-level application software.

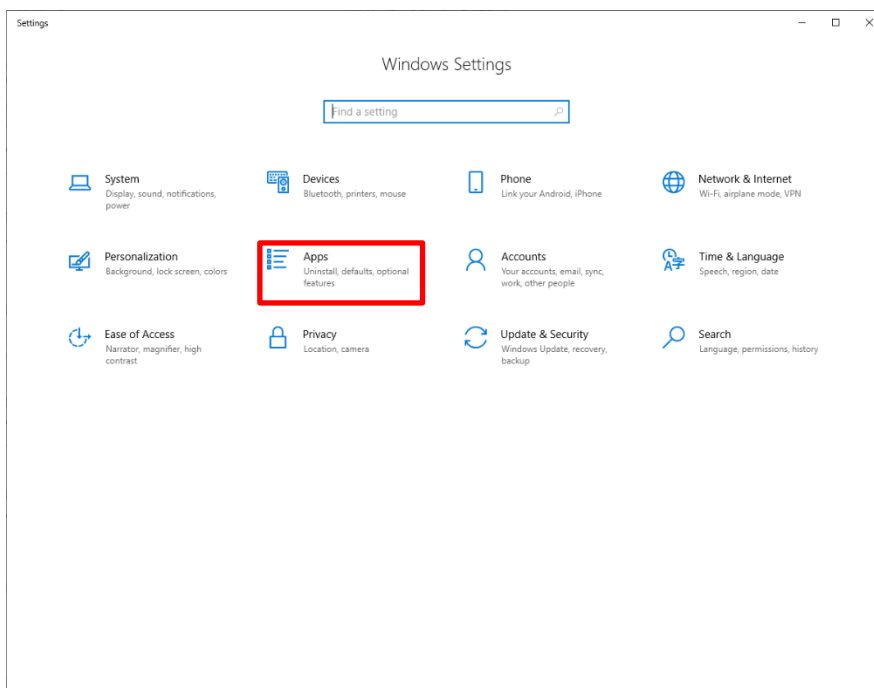
Band ID: Change the Band ID displayed at the bottom-right of the window of this application to the same value as that of the higher-level application software.



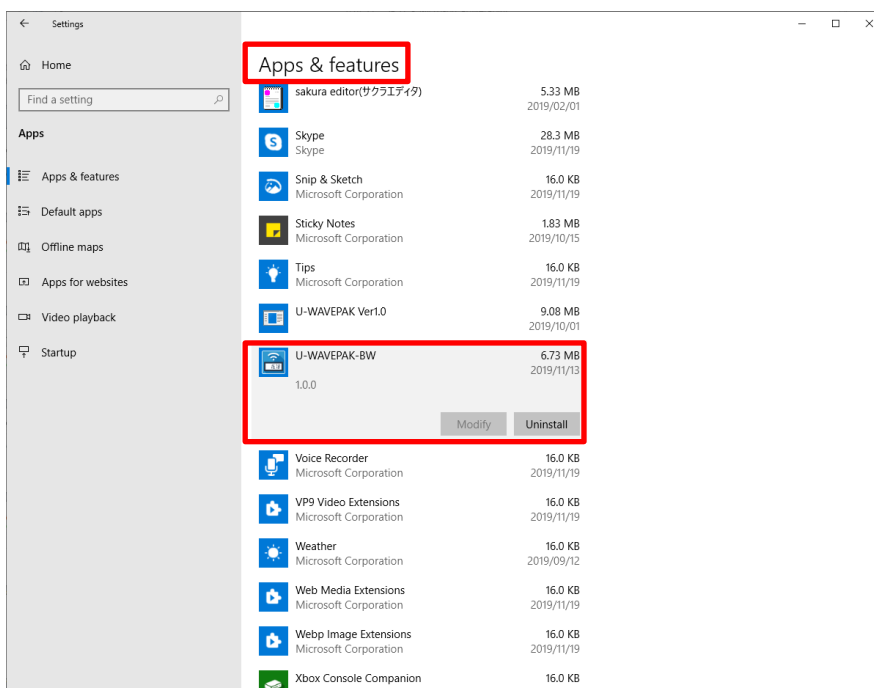
7. How to uninstall U-WAVEPAK-BW

If you wish to uninstall the U-WAVEPAK-BW set up in this PC, follow the procedure below.

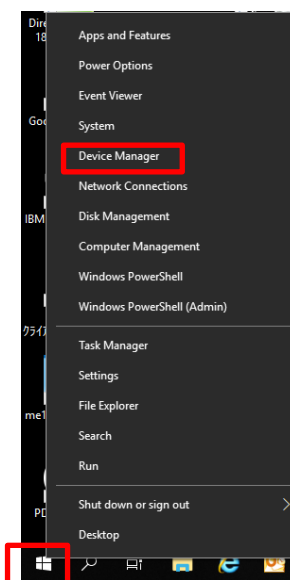
- ① Please select this 『Windows Settings』⇒『Apps』.



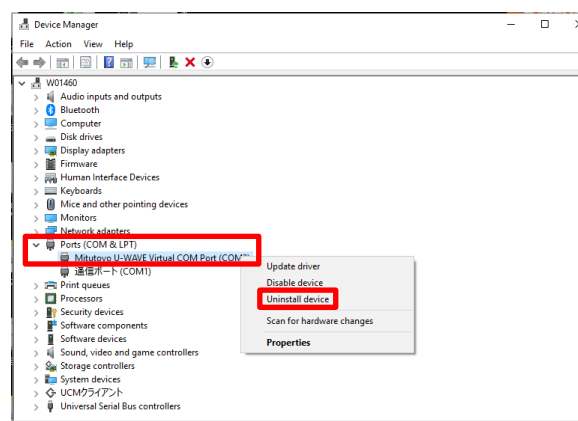
- ② Please uninstall 『U-WAVEPAK-BW』 in the 『Apps & features』.



- ③ Click on the windows mark at the bottom left of the screen.
Select the 『Device Manager』 in the item.



- ④ Right-click 『Mitutoyo U-WAVE Virtual COM Port』 in the 『Ports(COM & LPT)』.
Select the 『Uninstall device』 and delete it.



8. Revision History

Issue Date	Edition Number
Nov 7, 2019	First Edition
Apr 30, 2020	Revision 1
Jun 5, 2020	Revision 2
Sep 30, 2020	Revision 3
Aug 1, 2024	Revision 4

SERVICE NETWORK

Refer to the following URL.

<https://www.mitutoyo.co.jp/eng/corporate/network/overseas/index.html>