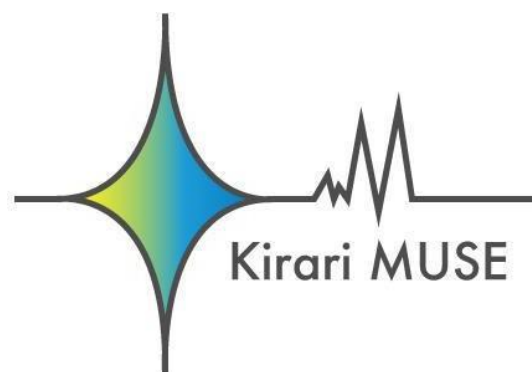


Kirari MUSE Electric Listening Rod Operating Instruction

"Kirari MUSE Listening Rod for Proper and Safe Use"



Nabtesco Corporation

MARINE CONTROL SYSTEMS COMPANY

(Ver. 0.2)

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1 Introduction

This Instruction Manual (hereinafter referred to as the manual) is intended to provide users of Kirari MUSE Electronic Listening Bar with the information they need to use it correctly and safely.

1.1 Important notice

Application of the Products

This product is designed and manufactured for the purpose of collecting sounds emitted by marine equipment and recording them as data.

Do not use this product for any other purpose or beyond the specifications described in this manual. When you receive a new product, refer to the latest instruction manual for each time.

Refer to the Electronic Listening Bar Specification (74SS49740-01J) for the specifications of this device.

Safety Precautions

Safe handling of this product is described below with items that seem to be particularly important. These matters apply to all workers, including the administrator and supervisor of this product. All safety precautions in this manual must be observed.

Be sure to read this manual

Read and understand this manual carefully before using the product.

Keep this manual in a safe place for easy reference whenever necessary.

Conditions of Operators

Handle this product only by personnel who meet the following conditions.

- Workers with mechanical and electrical expertise
- Workers trained in safe work
- Workers with expertise in measuring objects

Disclaimer

- Defects during the warranty period (1 year) will be replaced by a substitute product. (Basically, we will not investigate the cause of defects or repair the product.)
- The sound data recorded by this product may include measurement errors caused by the way the stick is pressed and individual variations.
- Please back up the recorded sound data periodically in case of PC crash.
- Nabtesco does not guarantee the data recorded by this product under any circumstances.
- Nabtesco assumes no responsibility for any failure diagnosis performed using this product.

1.2 About This Book

Subjects of this manual

This manual is intended for crew members of marine equipment mechanics, shipyards and shipping companies.

About copyright

Nabtesco Corporation and MTI Corporation have all rights to this document. Unauthorized copying or reprinting of this information or any part of this information to a third party is prohibited without our prior consent.

In the event of loss of this document or damage to this document



If you lose the data in this manual, promptly re-obtain it.

If this product is handled without this manual, an accident may occur.

1.3 For your safety


Warning Types and Meaning

To prevent personal injury or property damage, the following warning classifications are used to explain how to comply.


 Caution	<p>" CAUTION" indicates a potentially hazardous condition which, if not avoided, could result in minor or moderate injury.</p>
--	---

General Conditions


Read through and understand this manual before installing or operating the product.

 Caution	<p>Use the product within the operating conditions described in the electronic hearing rod specifications sheet (74SS49740-01J). If it is not used, it may ignite or malfunction.</p>
--	---

Safety Compliance with Wiring

 Caution	<p>Installation and removal of wiring must be carried out by qualified personnel meeting the following requirements.</p> <ul style="list-style-type: none"> • Workers with mechanical and electrical expertise • And before any personnel who have been trained in safety work related to them, turn off the power. Otherwise, an electric shock or explosion may be caused. <p>Do not apply excessive force when handling wiring and connectors. Be careful not to short-circuit the wires by rubbing them together.</p>
---	---

Smartphone Compliance

 Caution	<ul style="list-style-type: none"> • This manual only lists points that appear to be important. However, for further information, refer to the enclosed Instruction Manual "arrowsBZ01 Instruction Manual". <p>In particular, be sure to observe the "Safety precautions" as they are important for preventing damage to the user and property due to fire or malfunction.</p> <ul style="list-style-type: none"> • Do not use the call function for safety reasons.
--	--

Legal Compliance

<ul style="list-style-type: none"> • Although Wi-Fi, Bluetooth function of this terminal has been certified to meet technical standards only in Japan, the use of this function may be restricted in some countries/regions. When using the product overseas, check the laws and regulations of the country/region where the product is used. • Many laws and regulations in each country and region regulate the disposal of this product and replacement parts. Dispose of the product in accordance with the ordinances or regulations relating to disposal or consign to a specialist to dispose of it.

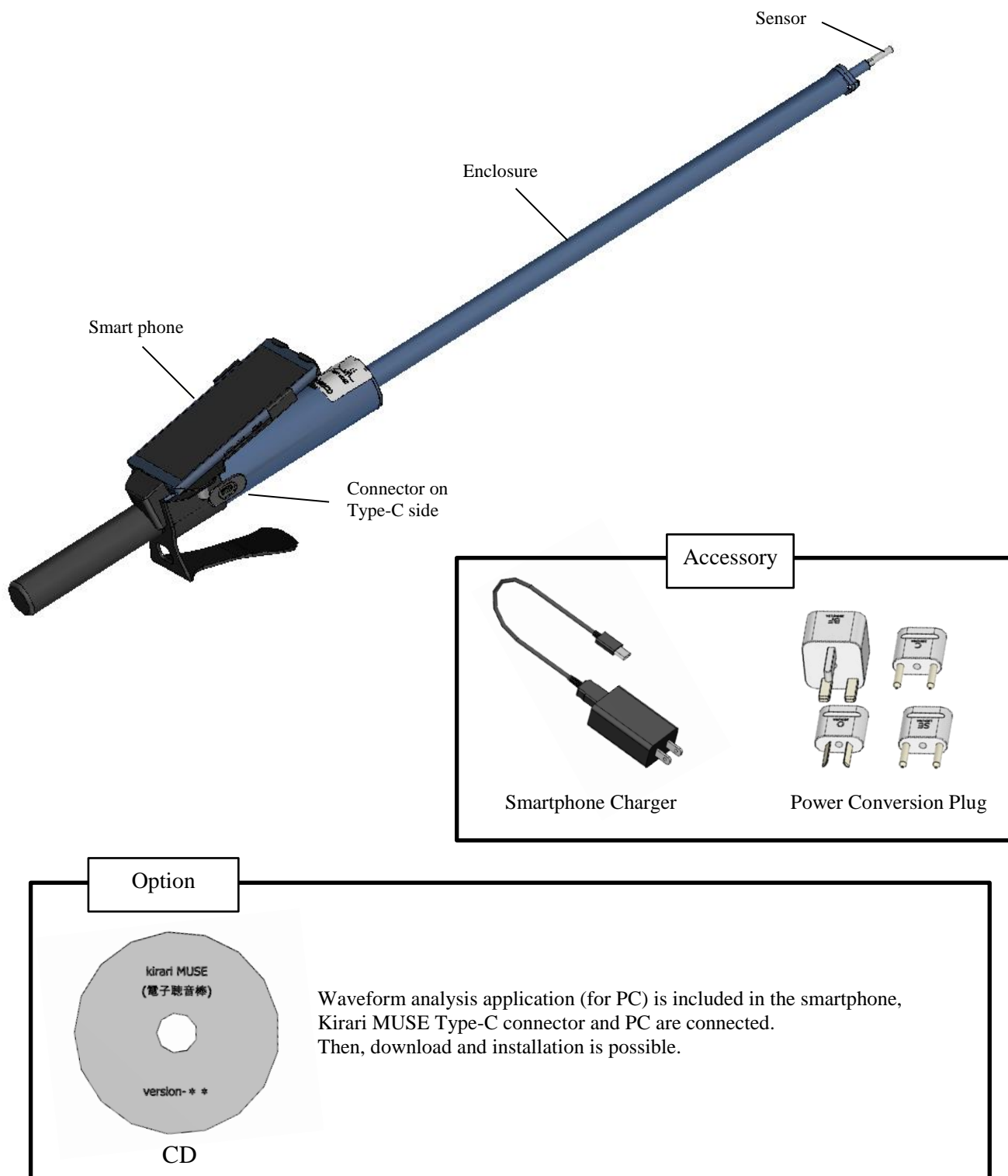
1.4 About the product

Product Overview

Kirari MUSE electronic listening rods are measuring instruments that collect operational sounds and vibrations from ship engines, generators, and other devices. When the sensor tip is brought into contact with an object to be measured, the operation sound and vibration collected are recorded on the smartphone.

Configuration and Part Names

Kirari MUSE electronic listening bar consists of a sensor, a housing, and a smartphone.



1.5 Measurement



Do not expose the sensor to strong impact when it is exposed to a measuring object, as it may cause a sensor failure.

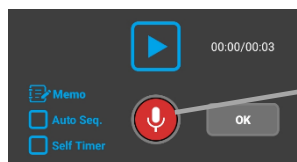
*This section explains the series of flow to measurement. For detailed usage of the measurement app, refer to Section 4 (How to record (Android app control)(p.57)).

Step 1. Press the power key on the smartphone to start the Measuring Terminal app.

Step 2. Bring the sensor tip into contact with the object to be measured.

※1 Depending on the measurement method, it may not be possible to measure accurately. Therefore, in order to measure accurately, it is recommended that the pressing force is approximately 1.0~2.0kg to the object to be measured and the pressing angle is approximately 90° (perpendicular to the object to be measured).

Step 3. Press the REC button.

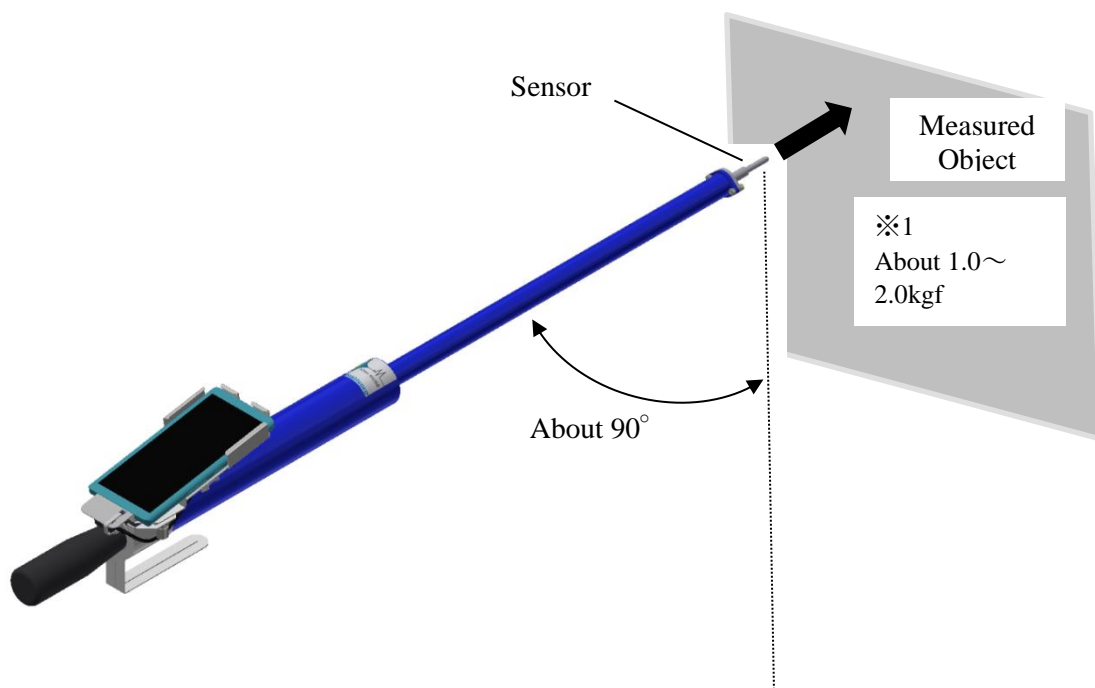


Record button


※2 Approximately 20GB of memories are available from the factory. The operation of the smartphone may become heavy if it is fully used. Therefore, check the available storage space on your device periodically and delete unnecessary data periodically.

※3 SD card slot in your smartphone is structurally unusable.

Be sure to set the app data-saving destination setting (upper-right menu ⇒ Setting ⇒ Data Storage Destination) to Built-in storage.



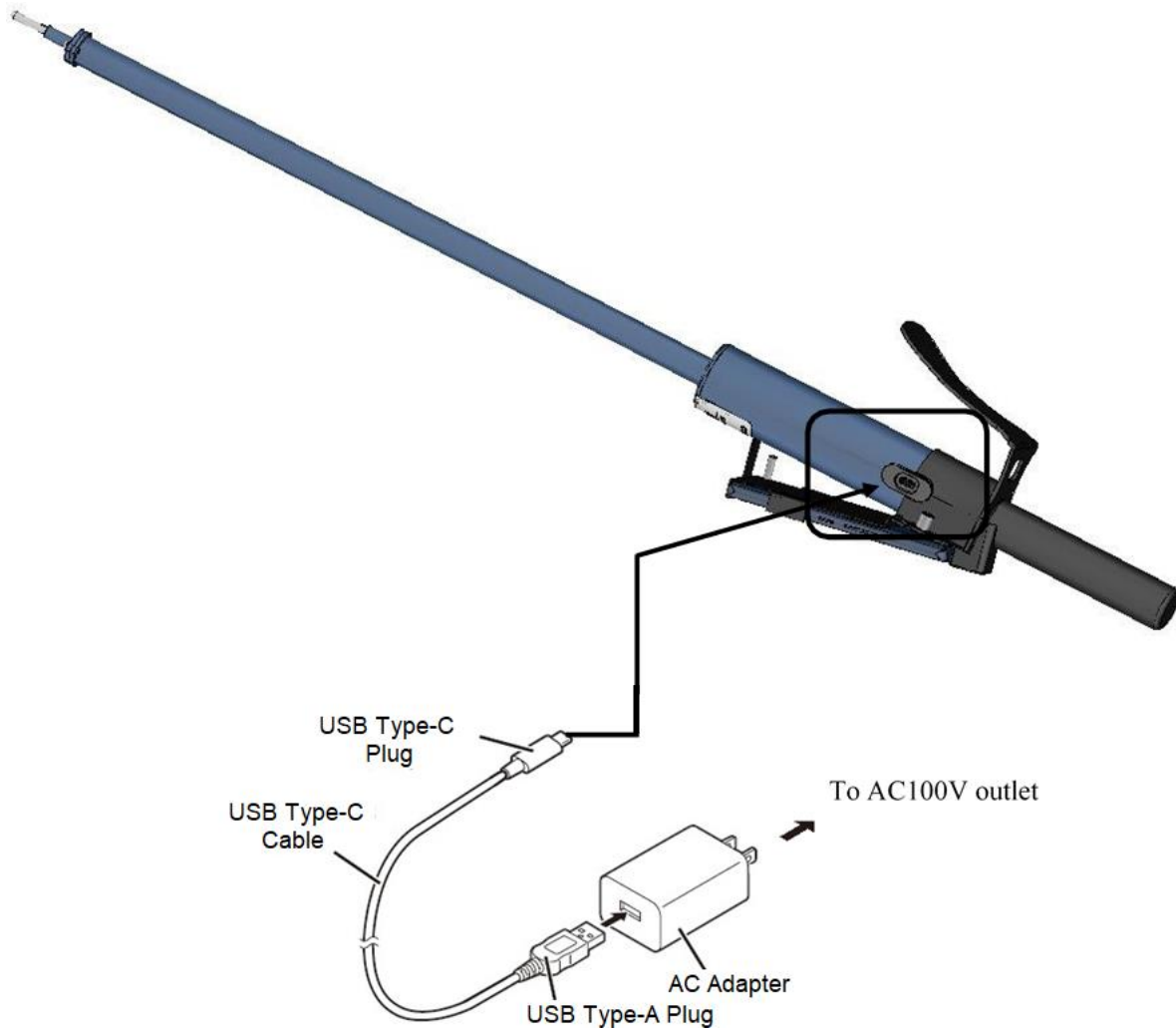
1.6 How to Charge the Smartphone

 Caution	<ul style="list-style-type: none">• Do not use chargers other than the supplied chargers (74769430-02 AC adapters and USB Type-C cabling) when charging. Failure to do so may cause malfunction of the smartphone, fire or electric shock.• The supplied charger (74769430-02 AC adaptor, USB Type-C cabling) is not waterproof or dustproof. Never charge the battery if it is wet, including the smartphone. Failure to do so may result in fire or malfunction due to electric shock or short-circuiting of electronic circuits.• If the battery level reaches 0% and the battery is not charged for a long time, the date and time settings are reset. Charge the battery by connecting the charger before the battery level reaches 0%.
--	--

*For more information, Refer to the Smartphone instruction manual at the URL below.

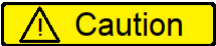
https://www.fcmt.com/support/manual/assets/pdf/CA92005-0590_Android12.pdf

Procedure . Connect the provided charger (74769430-02), AC adaptor, USB Type-C cabling.

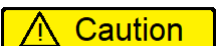


1.7 Handling and storage

Safety precautions concerning handling

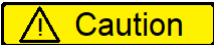
	<ul style="list-style-type: none">• Do not subject to strong impact or drop. Otherwise, malfunction or failure may occur.• Be careful not to drop or step on the floor.• Normally, use within an ambient temperature range of 5°C to 35°C and an ambient humidity range of 45% to 85%. Avoid prolonged use in high-temperature environments.• Failure to do so may result in malfunction, fire, explosion, or electric shock of the smartphone.
---	---

Safety Compliance with Storage

	<ul style="list-style-type: none">• Avoid long-term storage. If long-term storage is required, store in a clean environment, avoiding dust, high humidity, adhesion of condensation, and high temperature.• Do not leave the smartphone with the battery level at 0%. Charge the battery by connecting the charger (74769433-02) before reaching 0%.• Store within an ambient temperature range of 5°C to 35°C and an ambient humidity range of 45% to 85%.• Failure to do so may result in malfunction, fire, explosion, or electric shock of the smartphone.
---	---

1.8 Maintenance

Safety compliance items for maintenance

	<p>Always shut off the power before performing work that involves cable plugging or plugging.</p> <p>This product must be maintained by personnel who meet the following conditions: The administrative manager should not bring anyone who does not meet this condition close to this product during each operation.</p> <ul style="list-style-type: none">• Person with basic expertise in the Products• A person who knew the danger of work and was trained to avoid it
---	--

Pre-measurement inspection

Perform the following inspections before measurement to check for any abnormalities.

Pre-measurement inspection		
Part	Product Number	Inspection details and measures
Smart phone	74767906-01	If the monitor, screen or switch connector is damaged, if the power is not turned on, if there is an unusual noise, a strange odor, or if the battery loses some time, stop using it immediately.

If there is no problem with the inspection items above, press the record button and confirm that the sensor (rod) is moving with your finger to measure. If measurement is not possible, follow the 6 Troubleshooting and take the necessary measures. [bookmark89](#)

Maintenance cycle

This product does not have a maintenance period. However, discontinue use immediately if there is any abnormality during daily inspection.

2 Preferences

2.1 Preparing the installer

Install or update PC app from one of the following two methods: [A] and [B].

Caution !

- Installation should be carried out by logging in as a user with Administrator rights.
- If a confirmation of user account control is displayed during installation, click “Yes” to continue the process.

[A] Transferring Installer Files from Your Phone (USB)

Connect the rod body to your PC.

The function selection screen for connecting to USB appears on the smartphone screen.

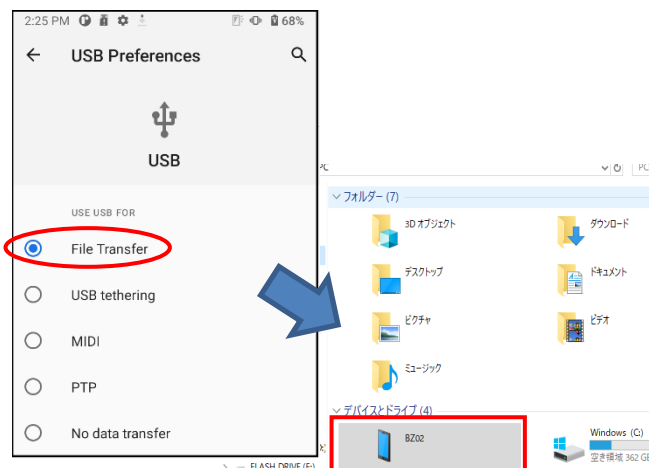
Select "File Transfer".

When the "BZ〇〇" is recognized on PC ,

Copy the installer file "MUSE_Web_app_v〇_〇_〇.zip" inside, and paste it in the workspace on PC such as the desk top.

※Folder names cannot contain more than 2 bytes.

After the copy is complete, extract the installer file.



[B] Booting the installer from the included ROM disc ()

Load ROM disc into PC's CD/DVD drivers that will boot the installer from the included ROM disc.

※If it does not start automatically, open the disk drive from "Explorer".

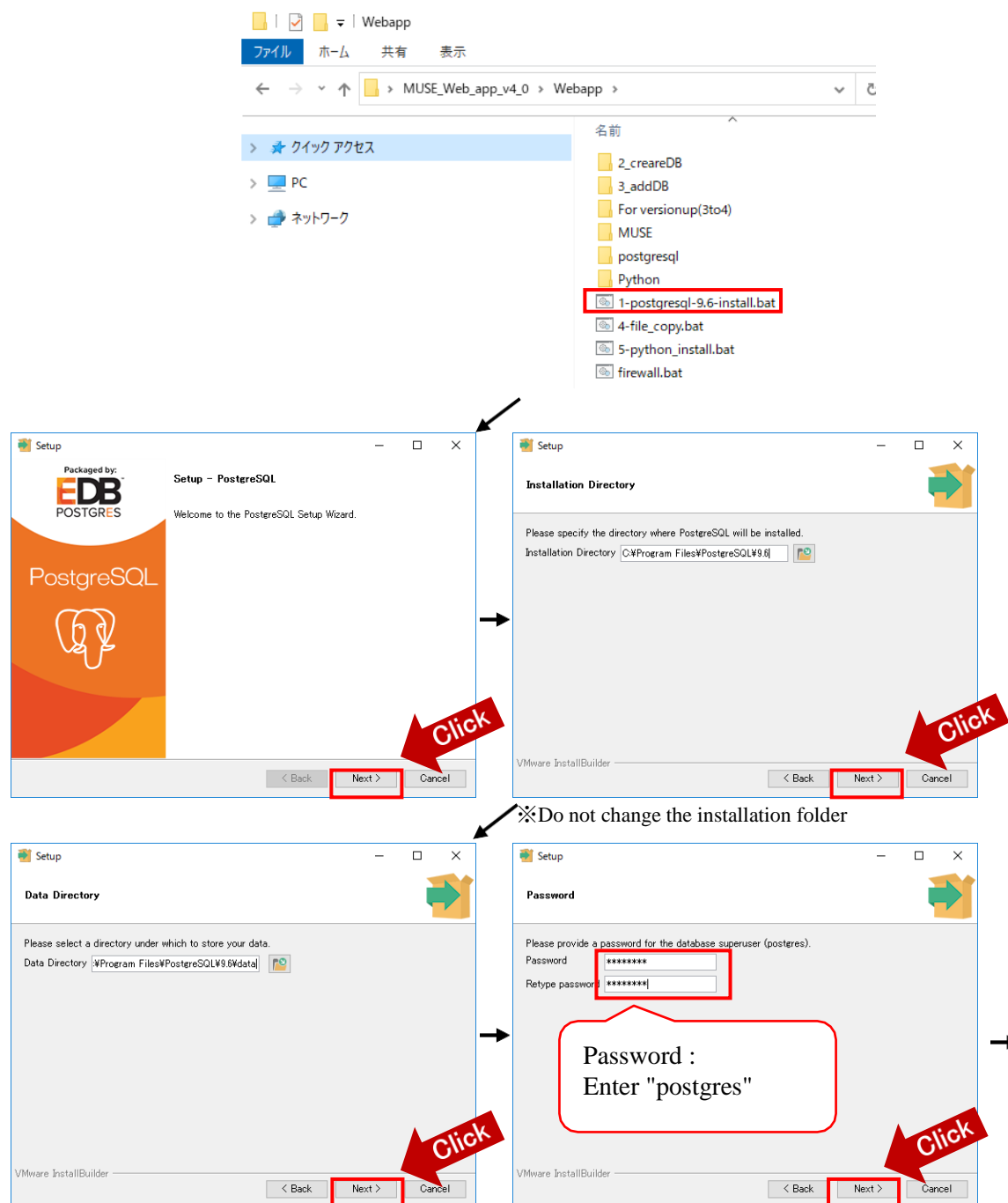
Extract the installer file "MUSE_Web_app_v_〇_〇_〇.zip" from the folders on the disc.

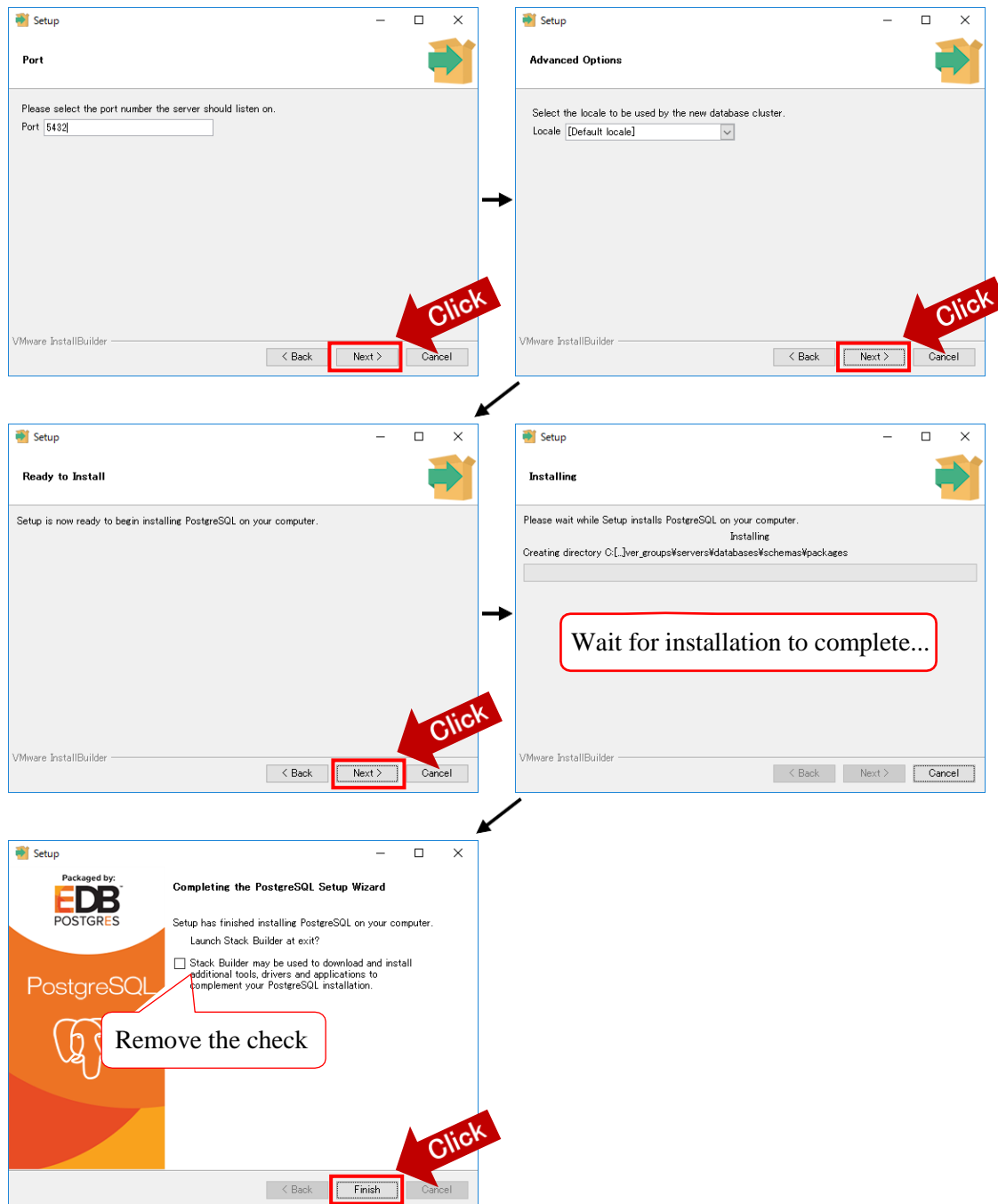
• For installation in a new environment
⇒ 2.2 Proceed to Install New Infrastructure Management (Web Server(IIS))

• To update to an existing environment
⇒ 2.9 Proceed to Updating Infrastructure Management (Web Server(IIS))

2.2 New installation of Infrastructure Management (PostgreSQL)

Double-click “1-postgresql-9.6-install.bat” to complete the install process as shown in the following illustration.
The .bat is a file in the webapp folder in the unzip folder.





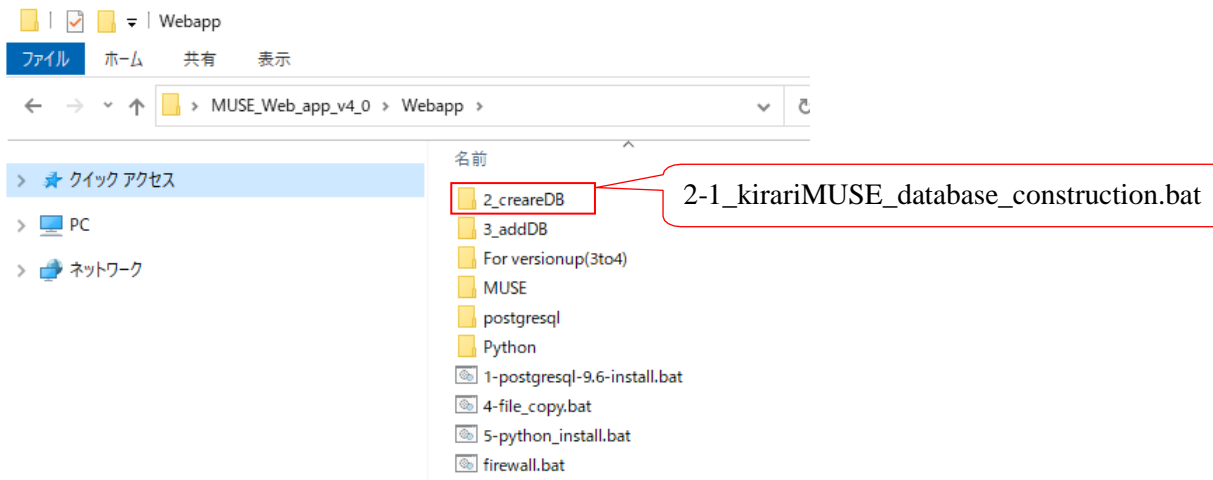
※Clear the checkbox for “Stack Builder may be....”

2.3 Creation of Infrastructure Management Database (batch file execution)

Double-click the batch file shown below in 2_createDB folders for database creation.

2-1_kirariMUSE_database_construction.bat

※The window closes automatically. (Do not operate until completion.)

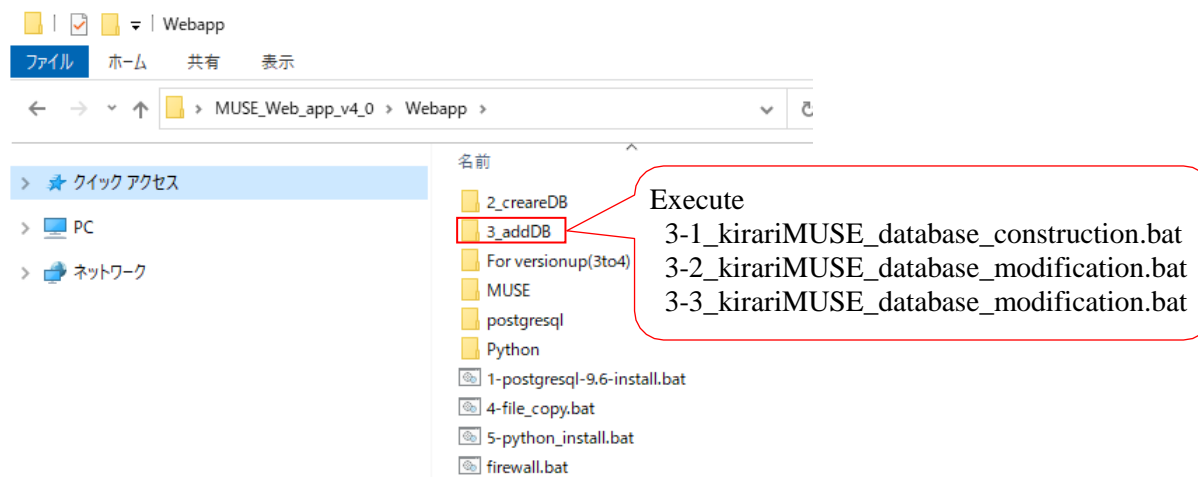


Next, execute each of the following batch files in the 3_addDB folder.

3-1_kirariMUSE_database_construction.bat

3-2_kirariMUSE_database_modification.bat

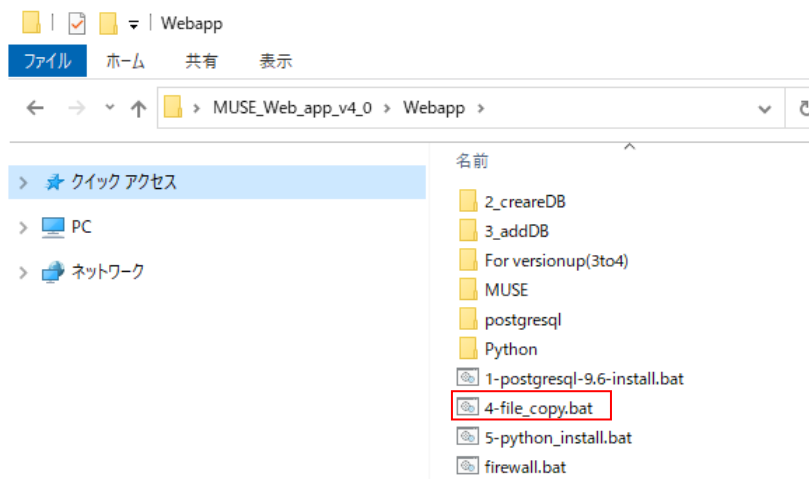
3-3_kirariMUSE_database_modification.bat



2.4 Copying the execution environment and creating shortcuts

Double-click “ 4-file_copy.bat “ to run it.

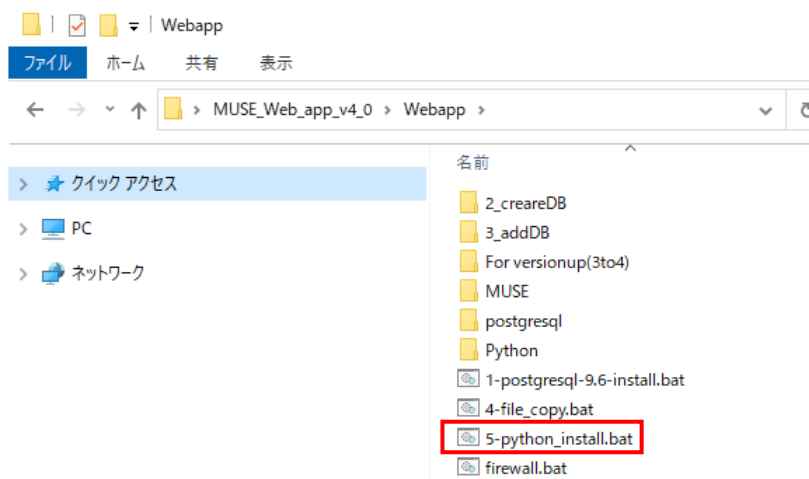
(The programme for running the web application copy to the C:\MUSE folder. A shortcut for starting the server application will also be created.)



2.5 Installing Python

Double-click “ 5-python_install.bat “ to run it.

※May take a few minutes to complete.



This completes the installation. Restart your PC.

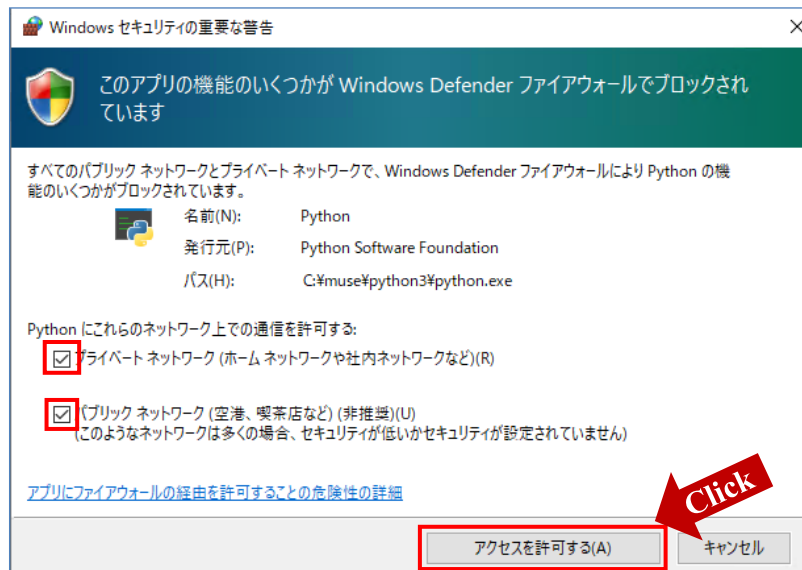
2.6 Launching PC app

When the power is switched on, the following window will automatically open and the server will be ready to start up when the display as shown in the diagram appears.

※Start-up may take some time. Please wait for a while until it is completed.

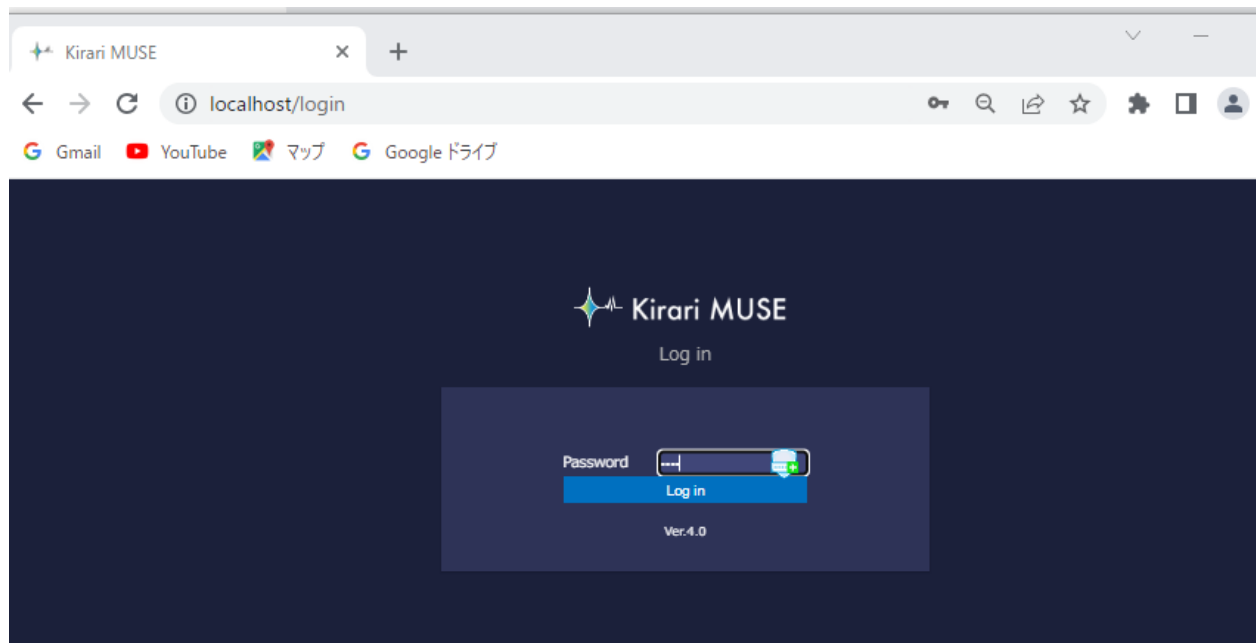
```
C:\Windows\System32\cmd.exe
2022-09-26 17:51:07.745 apscheduler.scheduler:171 start [INFO]: Scheduler started
* Serving Flask app "app" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
2022-09-26 17:51:08.089 werkzeug:113 _log [INFO]: * Restarting with stat
2022-09-26 17:51:10.074 apscheduler.scheduler:171 start [INFO]: Scheduler started
2022-09-26 17:51:10.074 apscheduler.scheduler:444 add_job [INFO]: Adding job tentatively -- it will be properly schedule
d when the scheduler starts
C:\Program Files\Python3\lib\site-packages\apscheduler\util.py:436: PytzUsageWarning: The localize method is no longer n
ecessary, as this time zone supports the fold attribute (PEP 495). For more details on migrating to a PEP 495-compliant
implementation, see https://pytz-deprecation-shim.readthedocs.io/en/latest/migration.html
  return tzinfo.localize(dt)
2022-09-26 17:51:10.074 apscheduler.scheduler:885 _real_add_job [INFO]: Added job "timed_job" to job store "default"
2022-09-26 17:51:10.074 apscheduler.scheduler:171 start [INFO]: Scheduler started
2022-09-26 17:51:10.105 werkzeug:113 _log [WARNING]: * Debugger is active!
2022-09-26 17:51:10.153 werkzeug:113 _log [INFO]: * Debugger PIN: 294-472-780
2022-09-26 17:51:10.183 werkzeug:113 _log [INFO]: * Running on http://0.0.0.0:80/ (Press CTRL+C to quit)
2022-09-26 17:51:11.789 werkzeug:113 _log [INFO]: 127.0.0.1 - - [26/Sep/2022 17:51:11] " [32mGET / HTTP/1.1 [0m" 302 -
2022-09-26 17:51:12.151 werkzeug:113 _log [INFO]: 127.0.0.1 - - [26/Sep/2022 17:51:12] " [37mGET /login HTTP/1.1 [0m" 20
0 -
2022-09-26 17:51:12.286 werkzeug:113 _log [INFO]: 127.0.0.1 - - [26/Sep/2022 17:51:12] " [36mGET /static/jquery-3.6.0.mi
n.js?g=1656302594 HTTP/1.1 [0m" 304 -
2022-09-26 17:51:12.521 werkzeug:113 _log [INFO]: 127.0.0.1 - - [26/Sep/2022 17:51:12] " [36mGET /static/css/login.css?g
=1660608890 HTTP/1.1 [0m" 304 -
2022-09-26 17:51:12.531 werkzeug:113 _log [INFO]: 127.0.0.1 - - [26/Sep/2022 17:51:12] " [36mGET /static/css/common.css?
g=1663233034 HTTP/1.1 [0m" 304 -
2022-09-26 17:51:13.031 werkzeug:113 _log [INFO]: 127.0.0.1 - - [26/Sep/2022 17:51:13] " [33mGET /images/favicon.ico HT
TP/1.1 [0m" 404 -
```

※If the following screen appears, check both private and public network and click “Allow access”.



Start your browser and enter “ http://localhost/ “ in the address bar.

A login screen will appear, enter “Password : muse” and click the “Log in” button to log in.



The password for the login can be changed in the “ Change Password ” section at the bottom of the Master Maintenance System Information screen at the bottom of the 3.1 “ Ship’s name ” setting.



2.7 Connecting to Android app

Connect your smartphone to PC using one of the two methods described in the following A, B.

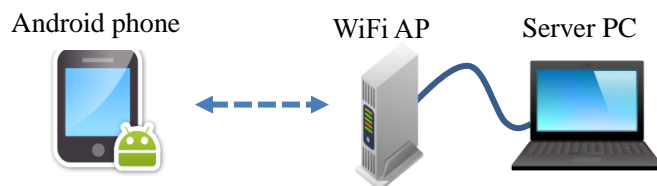
→ [A] LAN access

→ [B] USB tethering connection

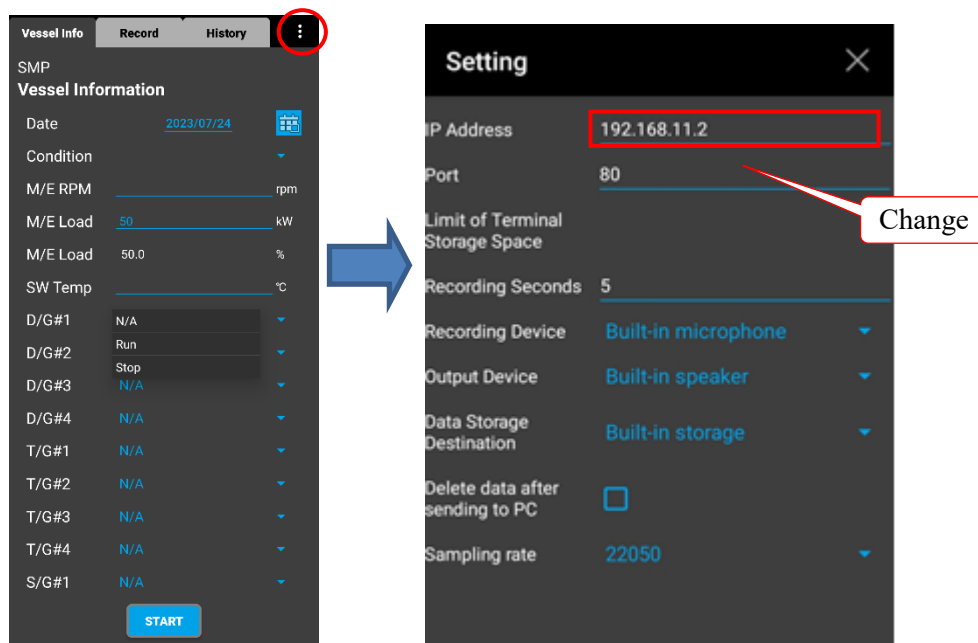
[A] LAN access

Make the smartphone and PC accessible to the same LAN as shown in the diagram. However, if it is not possible to construct a LAN, use the method “ [B] USB tethering connection ” to connect the device and PC directly.

※If a LAN is constructed using the method described in this section, no reconfiguration is required unless the configuration has changed, but with the “ [B] USB tethering connection ” method, settings must be made each time the connection is made.



Start Android app "KirariMUSE", tap "..." at the upper right corner of the screen, and enter IP address of PC from "Setting".

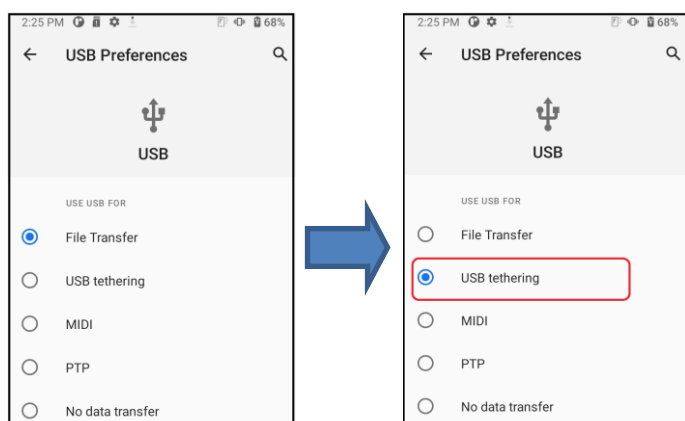


⇒To synchronization with PC

[B] USB tethering connection

Connect the smartphone to PC with USB cable (Type-C connector on the smartphone side) and the function selection screen of USB connection is displayed on the smartphone screen.

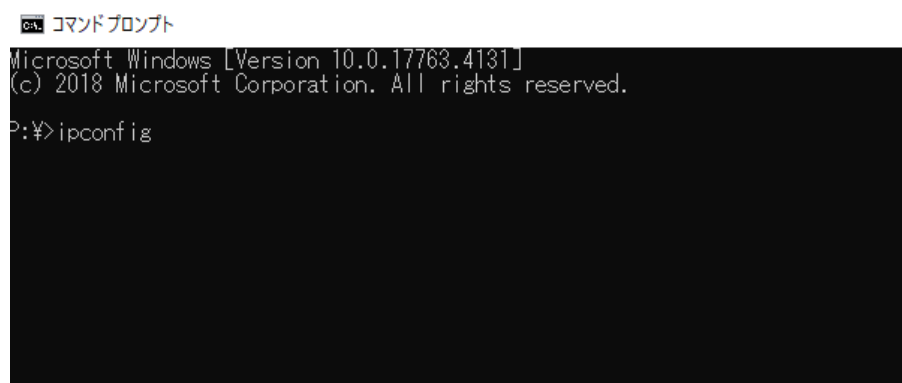
Select "USB tethering".



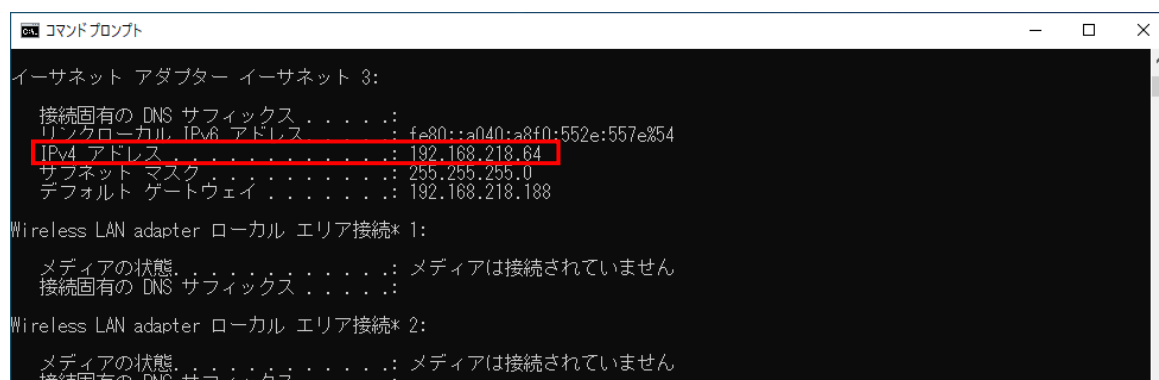
Then search for "cmd" from the Start menu and launch the command prompt.

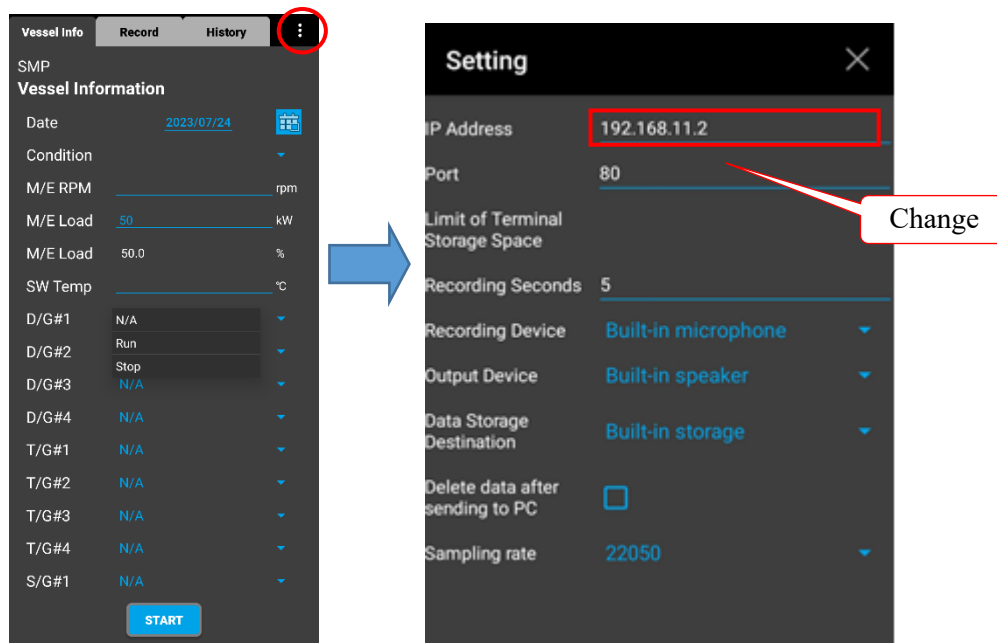


In the command window that appears, type " ipconfig " and press Enter.



Check this number because " IPv4 address " is set in the Ethernet connection column as shown below.
(In the diagram, 192.168.218.64 is IP addressing.)



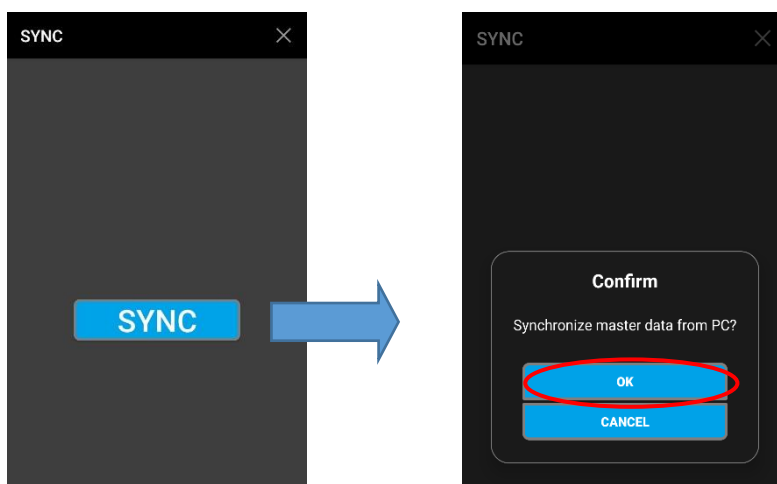


⇒ Proceed to Synchronize with PC

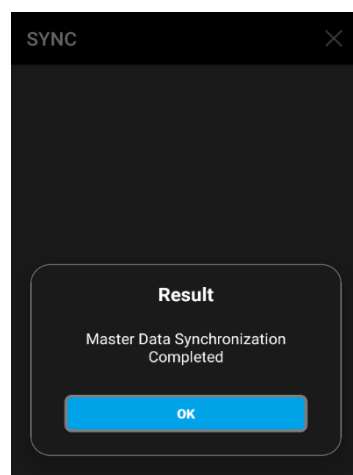
※[B] Since the address is updated once the connection is disconnected, it is necessary to follow the procedure in [B] each time the connection is reconnected. [A] In this method, once the address is set, there is no need to enter the address again.

Synchronizing with PC

Select "Setting"→"SYNC" and tap the middle key. Please tap " OK " in the message below.



If the connection is successful, the following message is displayed.

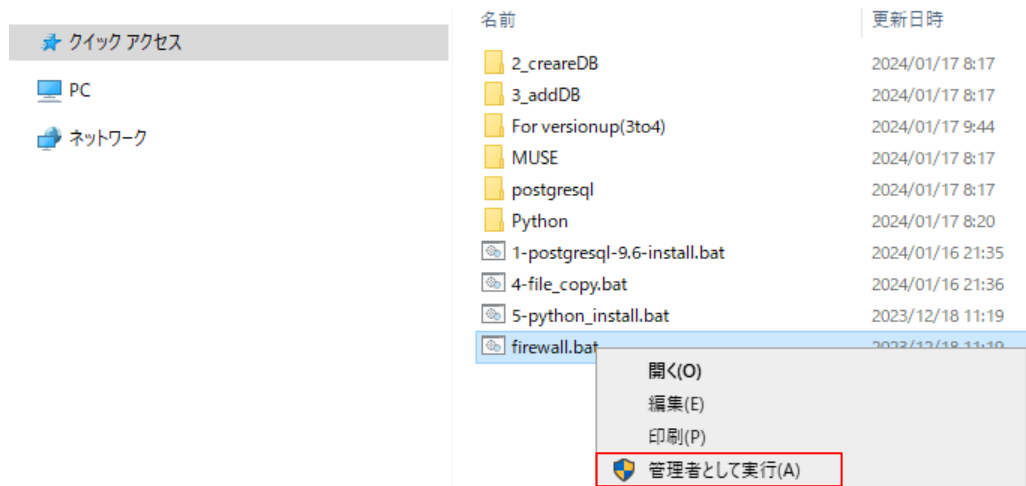


2.8 Firewall setup

This procedure is not mandatory.

Perform it when communication problems occur after installation.

- Right-click the batch file "firewall.bat" and select "Run with administrator privileges"



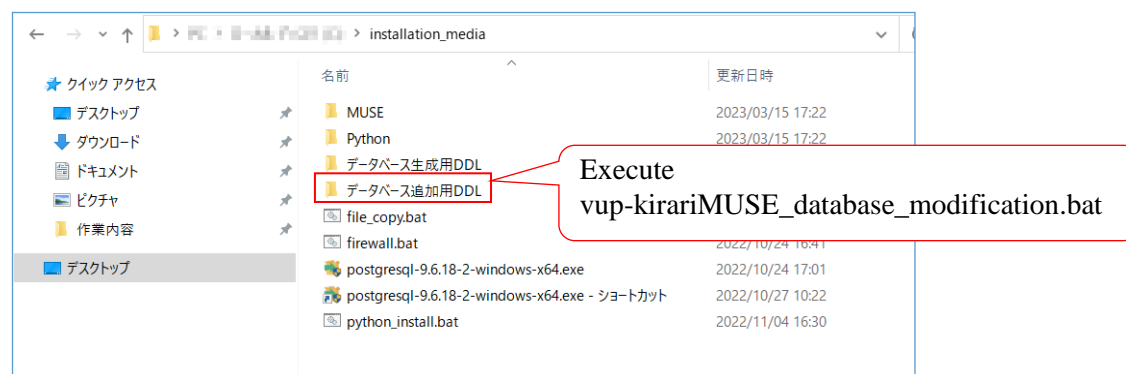
2.9 Updating Infrastructure Management Database (batchi file excution)

This section describes the procedure for updating on a PC on which the KirariMUSE application environment for Ver 3 has already been built.

Double-click the batch file shown below in For versionup(3to4) folder for adding a database.

vup-kirariMUSE_database_modification.bat

※ The window closes automatically. (Do not operate until completion.)



2.10 Procedure in case of installation failure

If an error or other problem occurs during the installation of the application, uninstall the application according to the following procedure and then install the application according to the procedure described in sections 2.1-2.5.

1. Uninstall Python3 and Python Launcher.
2. Uninstall PostgreSQL.
3. Delete the files in the C:\MUSE folder and folders.
4. Delete the files in the C:\ProgramFiles\PostgreSQL folder and folders.

3 How to set up PC application

3.1 Set "Vessel Name"

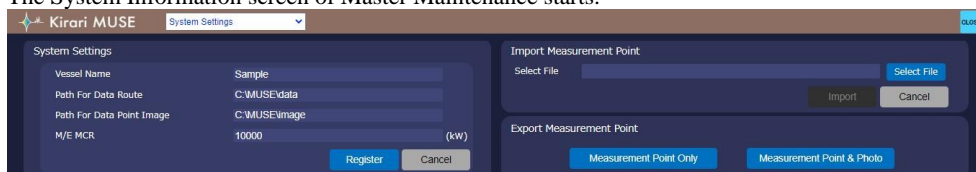
Procedure :1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



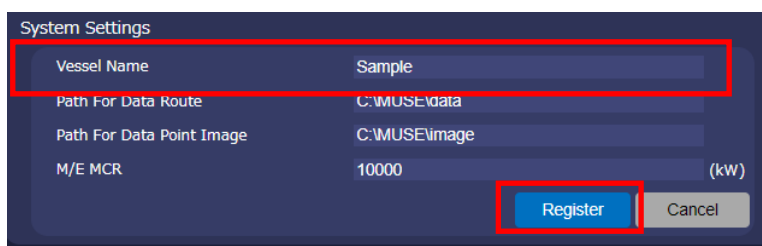
Procedure :2

The System Information screen of Master Maintenance starts.



Procedure: 3

Select [Vessel Name] and press [Register].



Procedure :4

Setting is completed.

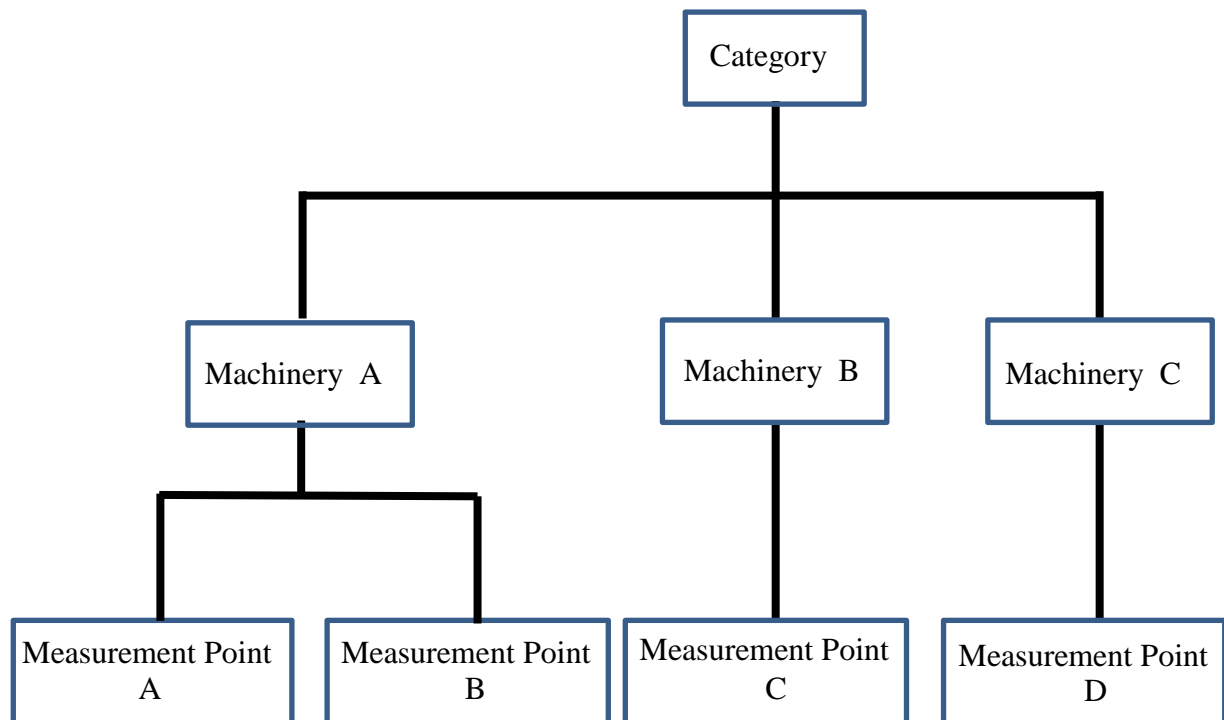
Caution !

- 17 Names exceeding character cannot be registered.

3.2 Category, Machinery and Measurement Point

A brief description of Category, Machinery and Measurement Point and a diagram of their relationship is given below.

- Category : Designation of what the measured object is mounted on. (e.g. ship's type, e.g. ship's number).
- Machinery : Designation of the mounting point of the measuring object. (e.g. engine, pipework joints, etc.).
- Measurement Point : Designation of measuring points on the measuring object. (e.g. at fuel supply outlets, exhaust points, etc.).



3.3 Register and delete "Category"

I will explain how to register categories.

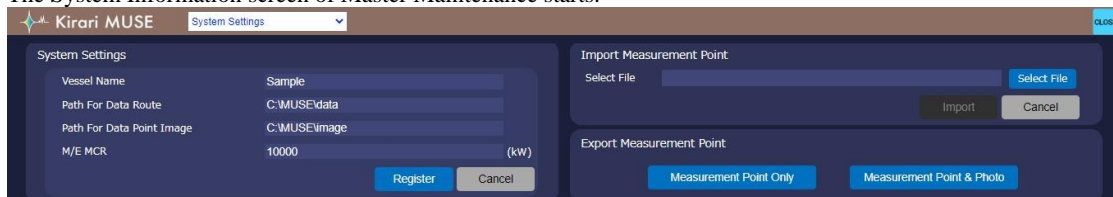
Procedure: 1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



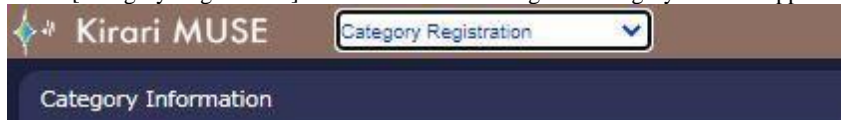
Procedure: 2

The System Information screen of Master Maintenance starts.



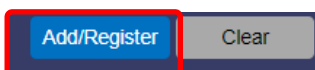
Procedure: 3

Select [Category Registration] from the menu. The Register Category window appears.



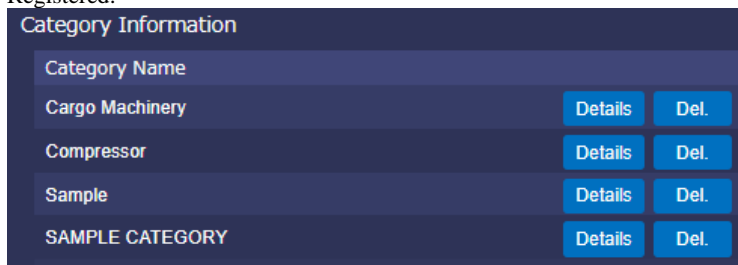
Procedure: 4

Enter [Category Name] and press [Add/Register].



Procedure :5

Registered.



Caution !

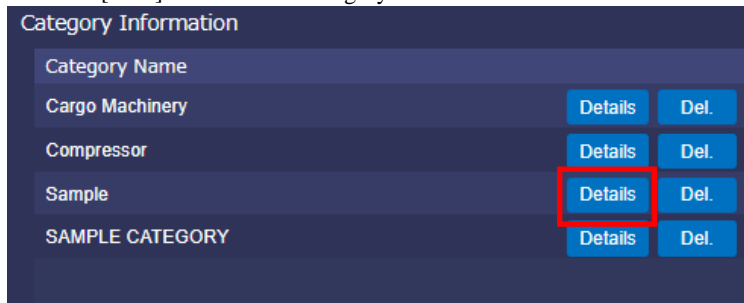
- Names longer than 14 characters cannot be registered.
- Names that have already been registered cannot be registered.

I will explain how to delete a category.

Step 1 to 3 are the same as those for registering [Category].

Procedure: 4

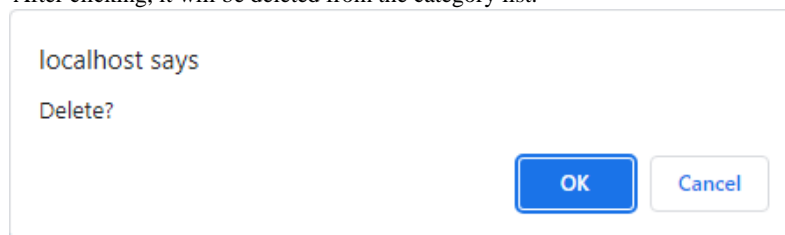
Click the [DEL] button for the category to be deleted.



Procedure: 5

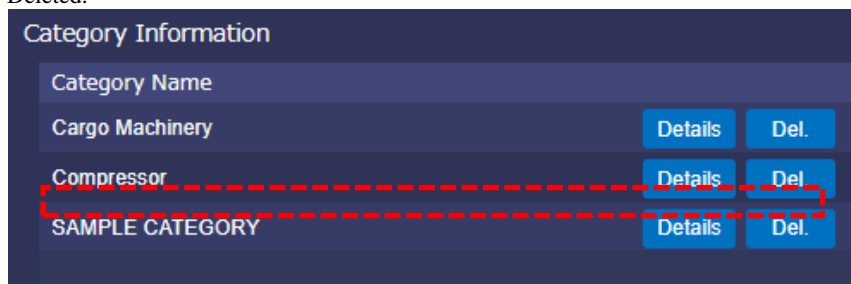
When a confirmation dialog box appears, select [OK].

After clicking, it will be deleted from the category list.



Procedure: 6

Deleted.



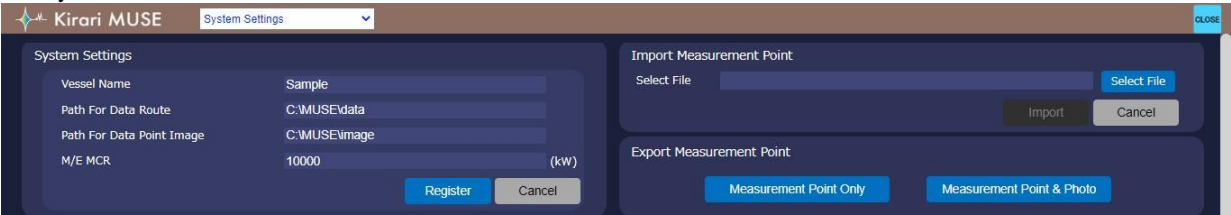
3.4 Register, copy, and delete "Machinery"

This section describes how to register [Machinery].

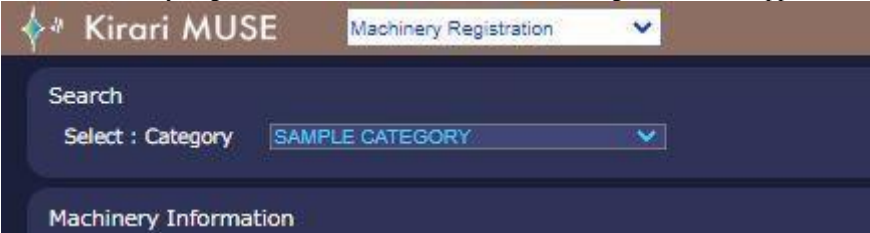
Procedure: 1
Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



Procedure :2
The System Information screen of Master Maintenance starts.



Procedure: 3
Select [Machinery Registration] from the menu. The Device Register window appears.



Procedure: 4
Enter [Machinery Name], etc. and press [Add/Register].

New Registration

Machinery Name

SAMPLE MACHINERY2

General Information/Specifications

No.	Item	Name/Value	Unit
1	SAMPLE ITEM	100	SMPL
2			
3			
4			

Running Condition

No.	Measured Value/Mode	Unit
1	SAMPLE ITEM	SMPL
2		
3		
4		

Add/Register

Clear

Procedure: 5
Registered.

Machinery Information			
Machinery Name			
SAMPLE MACHINERY	Edit	Copy	Del.
SAMPLE MACHINERY2	Edit	Copy	Del.

Caution !

- A device name than exceeds 24 characters cannot be registered.
- You cannot register a device name than has already been.
- The value of the vasic (rating) information cannot exceed seven characters.

Point

- Item/Unit options for General Information/Specifications and Machinery Condition can be registered in the steps of “Registering/Deleting [ItemName]” and “Deleting [Units]” in this manual.

This section explains how to copy [Machinery].

Procedure: 1 to 3 are the same as the method for registering [Machinery]

Procedure: 4

Click the [Copy] button of the device to be copied.

Machinery Information

Machinery Name

SAMPLE MACHINERY

Edit

Copy

Del.

SAMPLE MACHINERY2

Edit

Copy

Del.

Procedure: 5

After clicking, the corresponding registered value is displayed in the device input field by default.
Edit and register these values.

New Registration

Machinery Name

SAMPLE MACHINERY

General Information/Specifications

Running Condition

No.	Item	Name/Value	Unit	No.	Measured Value/Mode	Unit
1	SAMPLE ITEM	100	SMPL	1	SAMPLE ITEM	SMPL
2				2		
3				3		
4				4		
5				5		

I will explain how to delete [Machinery].

Procedures 1 to 3 are the same as registering [Machinery]

Procedure: 4

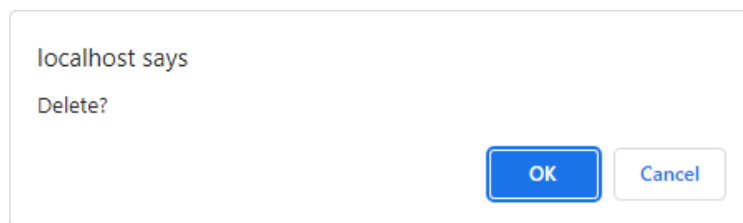
Click the [DEL] button of the device to be deleted.



Procedure: 5

When a confirmation dialog box appears, select [OK].

After clicking, it will be deleted from the list of devices.



Procedure: 6

Deleted.



3.5 Registration, copying, and deletion of "Measurement Point"

This section explains how to register [Measurement Point].

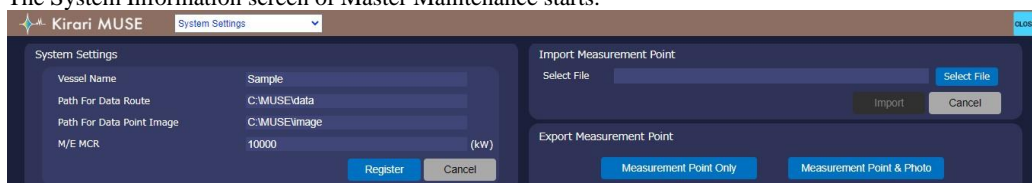
Procedure: 1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



Procedure: 2

The System Information screen of Master Maintenance starts.



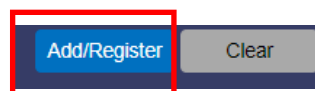
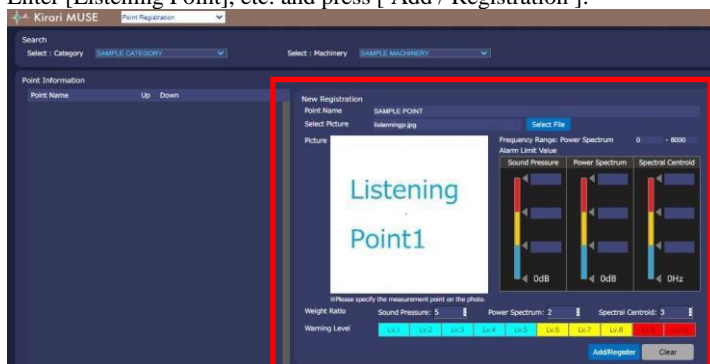
Procedure: 3

Select [Point Registration] from the menu. The Register Measurement Point window appears.



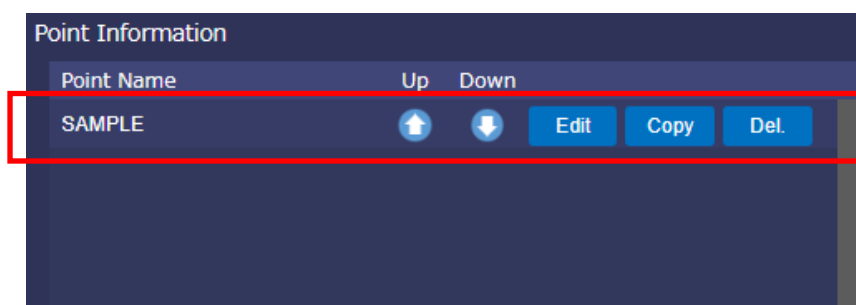
Procedure: 4

Enter [Listening Point], etc. and press [Add / Registration].



Procedure: 5

Registered.



Procedure: 6

After registration, the relevant registered values are displayed by default in the collection point input fields.
Edit and register these values.

① By clicking on the measurement point in the image, the position can be clearly indicated with the **X** symbol.

② Set the power spectrum frequency range.

③ When specifying warning thresholds, define all three levels.

The overall judgment value is calculated by weighting the sound pressure OA value, power spectrum POA value and cepstrum POA by the "Weight Ratio".

Calculate the overall judgment value by weighting the sound pressure OA value, power spectrum POA value and cepstrum POA with the "Weight Ratio".

④ Set the warning threshold for sound pressure.

⑤ Set the warning threshold for the power spectrum.

⑥ Set the warning threshold for the spectral centre of gravity.

⑦ Set the ratio according to the calculated overall judgment level.

⑧ Set the overall judgement level.

※The colour judgment goes from normal (blue) to warning (yellow) to abnormal (red).

Caution !

- Names that exceed 50 characters cannot be registered at the Measurement Point.
- You cannot register the name of a Measurement Point that has already been registered.

Point

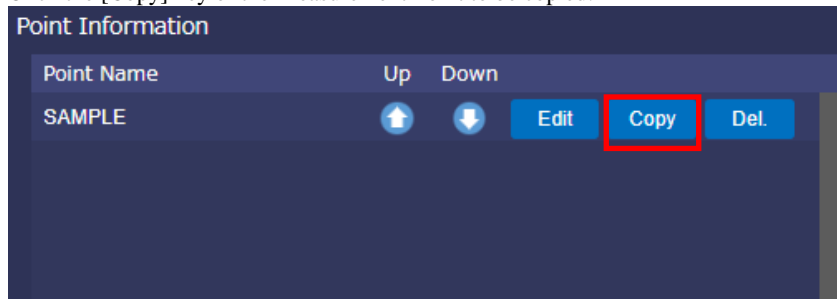
- Items other than the Measurement Point name can be edited using Edit keys even after they are registered.

Copying method of [Measurement Point] is explained.

Procedure: 1 to 3 are the same as the method for registering [Measurement Point]

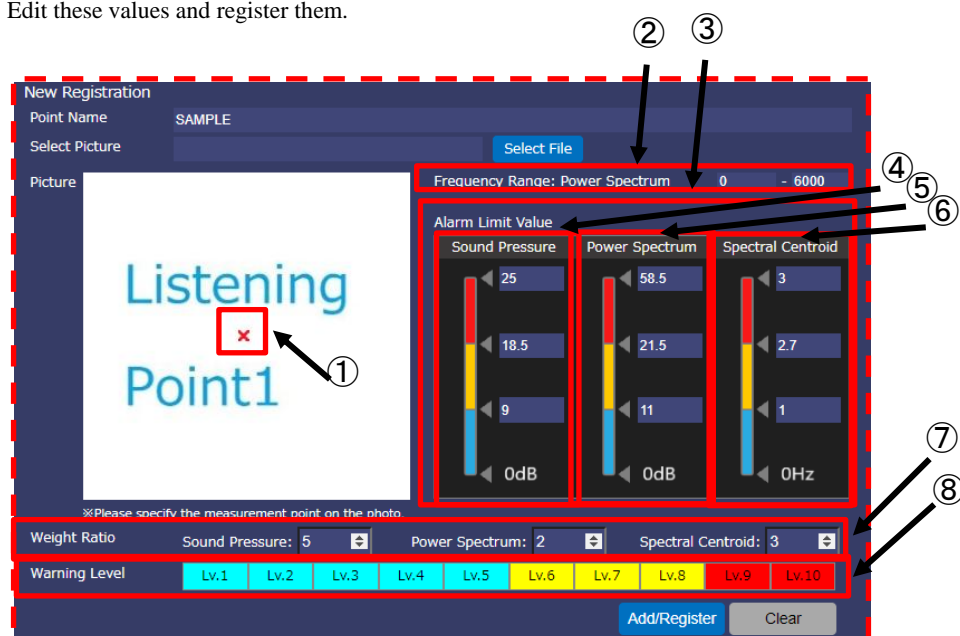
Procedure: 4

Click the [Copy] key of the Measurement Point to be copied.



Procedure: 5

After clicking, the relevant registered values are displayed by default in the collection point input fields. Edit these values and register them.



- ① By clicking on the measurement point in the image, the position can be clearly indicated with the ✕ symbol.
- ② Set the power spectrum frequency range.
- ③ When specifying the warning threshold, define all three levels.
- ④ Set the warning threshold for sound pressure.
- ⑤ Set the warning threshold for the power spectrum.
- ⑥ Set the warning threshold for spectral centre of gravity.
- ⑦ Set the ratio of the overall judgment.
- ⑧ Set the level of overall judgment.

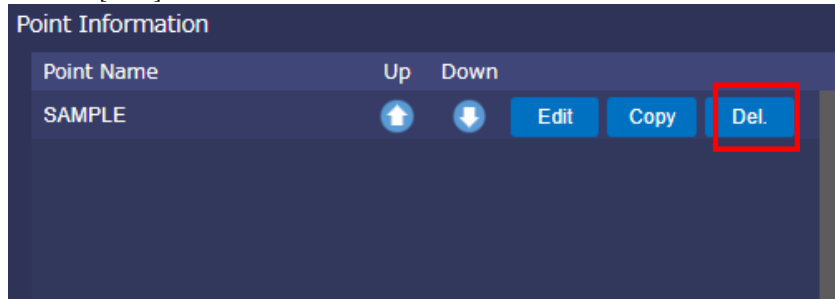
The colour judgment goes from normal (blue) to warning (yellow) to abnormal (red).

This section explains how to delete [Measurement Point].

Procedure: 1 to 3 are the same as the method for registering [Measurement Point]

Procedure: 4

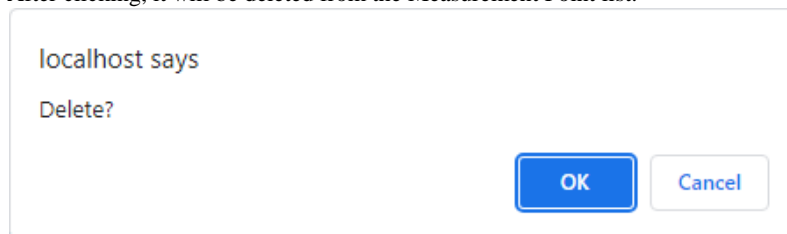
Press the [DEL] button of the Measurement Point to be deleted.



Procedure: 5

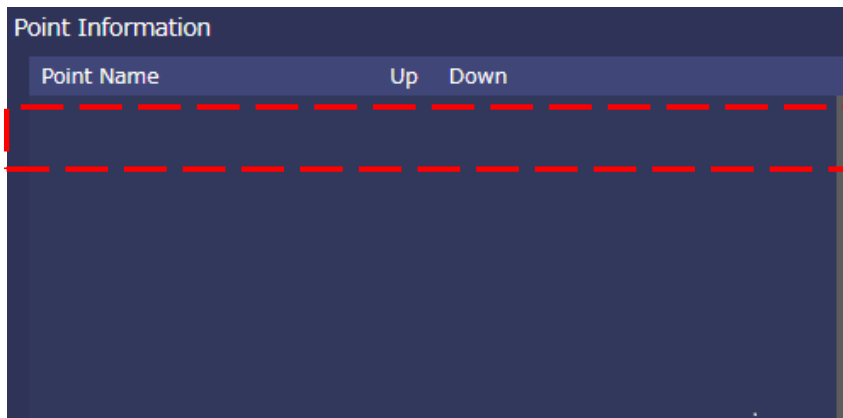
When a confirmation dialog box appears, select [OK].

After clicking, it will be deleted from the Measurement Point list.



Procedure: 6

Deleted.



3.6 Saving and deleting "My Route (Favorites)"

I will explain how to register [My Route (Favorites)].

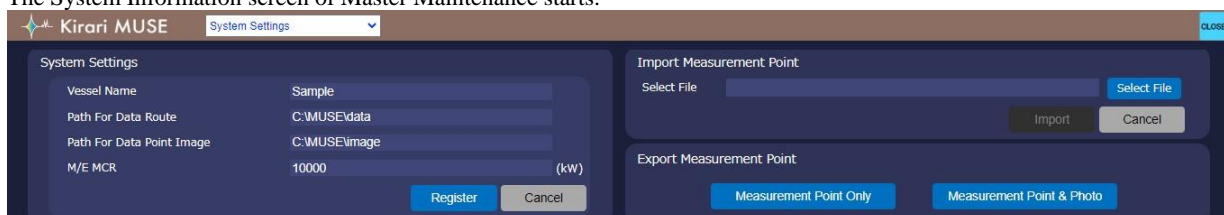
Procedure: 1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



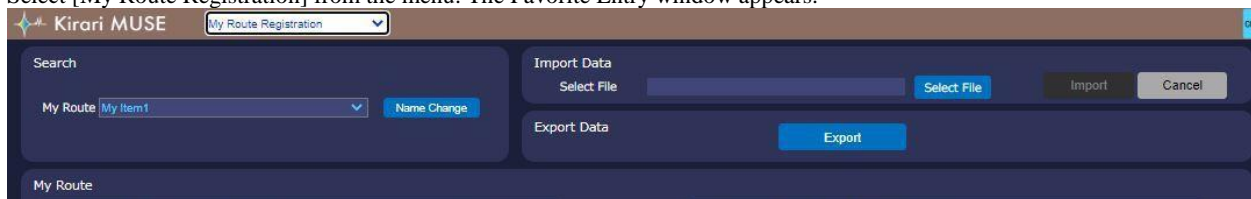
Procedure: 2

The System Information screen of Master Maintenance starts.



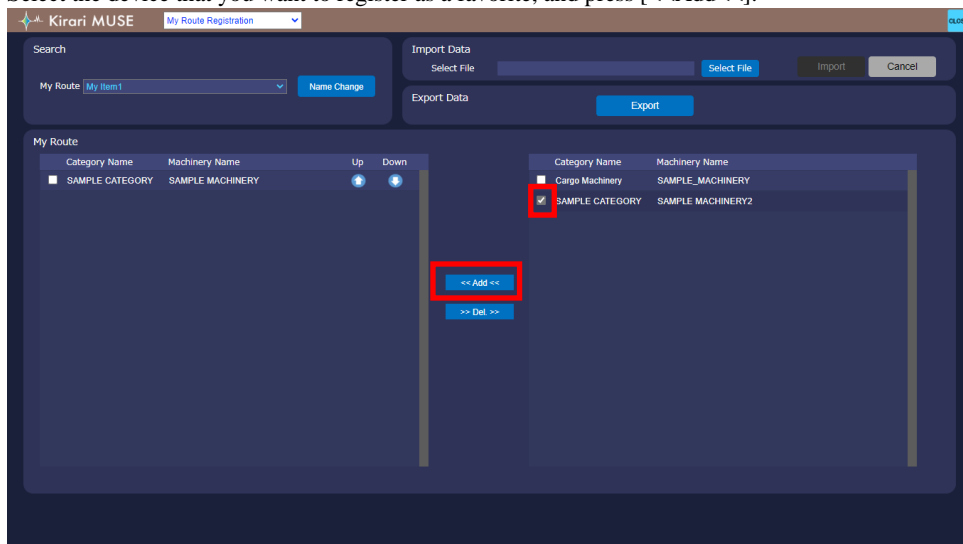
Procedure: 3

Select [My Route Registration] from the menu. The Favorite Entry window appears.



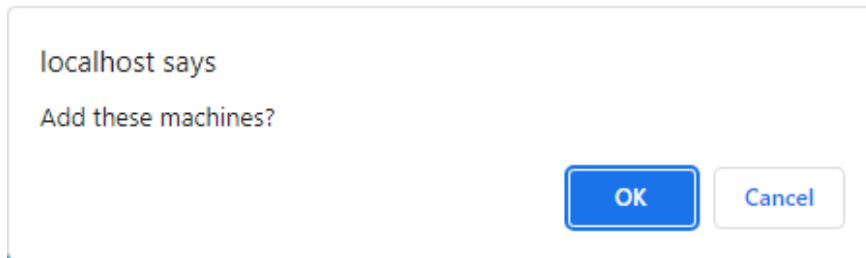
Procedure: 4

Select the device that you want to register as a favorite, and press [<<Add<<].



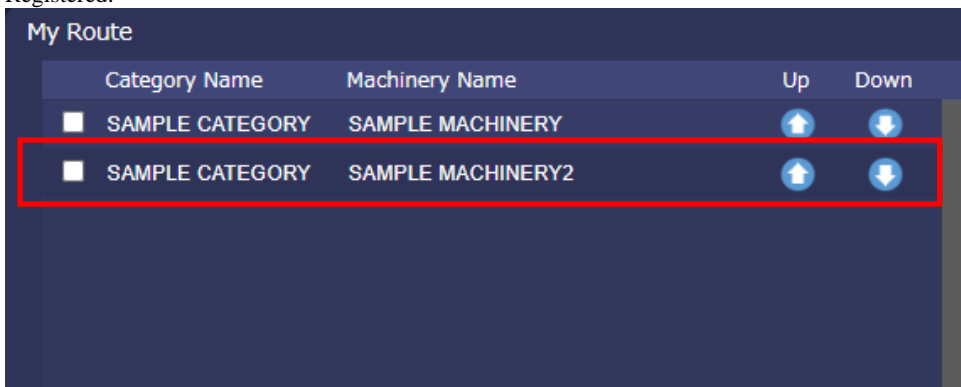
Procedure: 5

When the confirmation dialog box appears, click [OK].
After clicking, it is registered as a favorite.



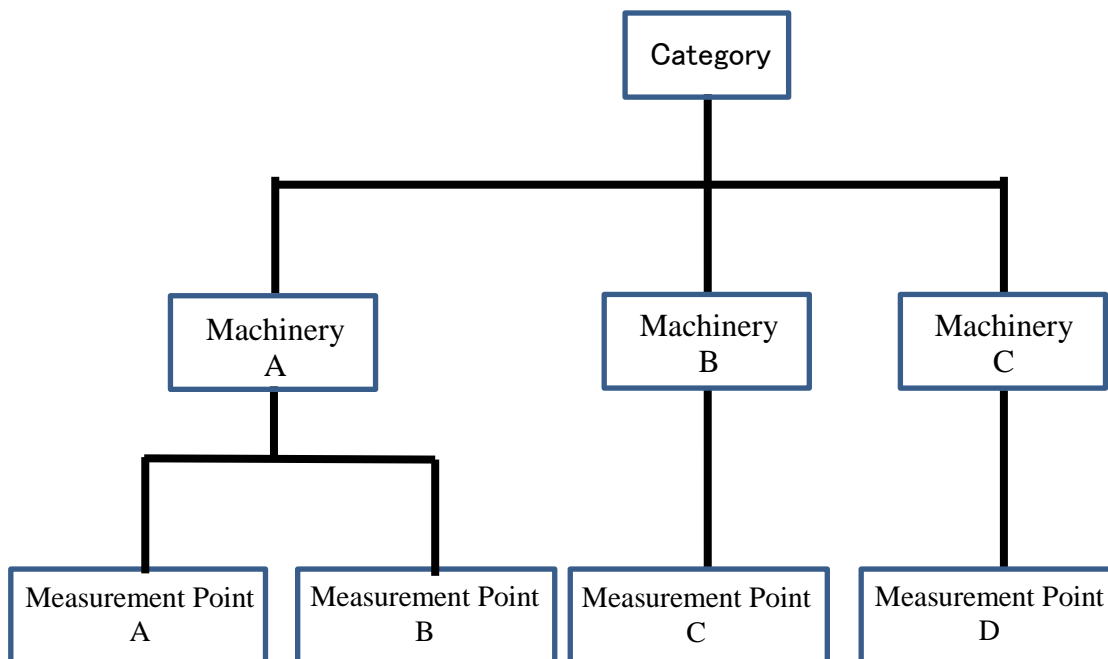
Procedure: 6

Registered.



A simple example of My Route (Favourites), Category (Categories) and Machinery (Equipment) is specified in the relationship diagram below.

You can freely add to the lower levels of My Route (Favourites).



[Normal flow].

Collection point A → Collection point B → Collection point C → Collection point D.

[My Route (Favourite)]

If you register equipment B, equipment C and equipment A in this order, the order will be as follows.

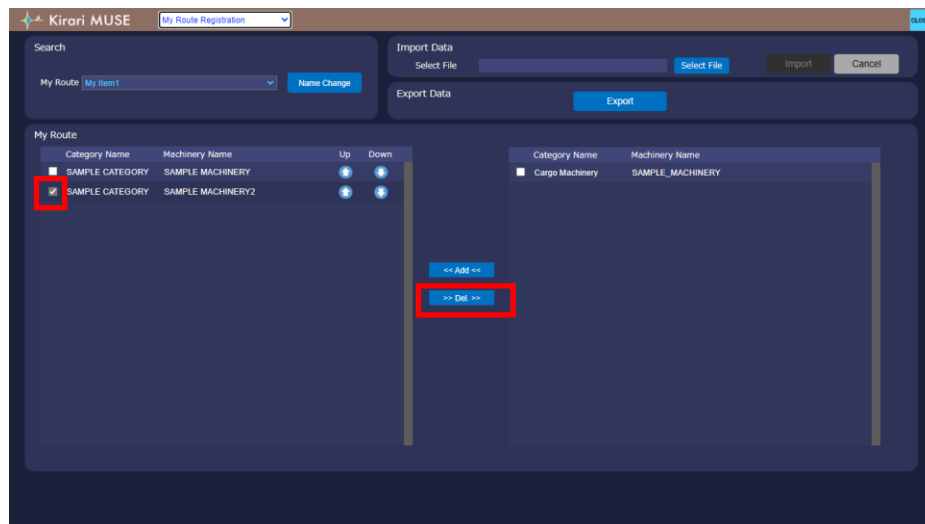
Sampling point C → sampling point D → sampling point A → sampling point B

I will explain how to delete [Favorites]

Procedure: 1 to 3 are the same as for registering [Favorites]

Procedure: 4

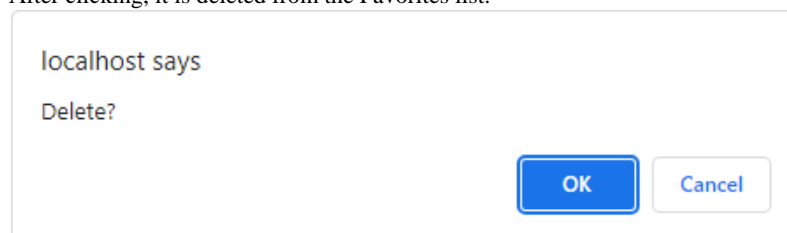
Press [DEL] on the favorite devices to be deleted.



Procedure 5

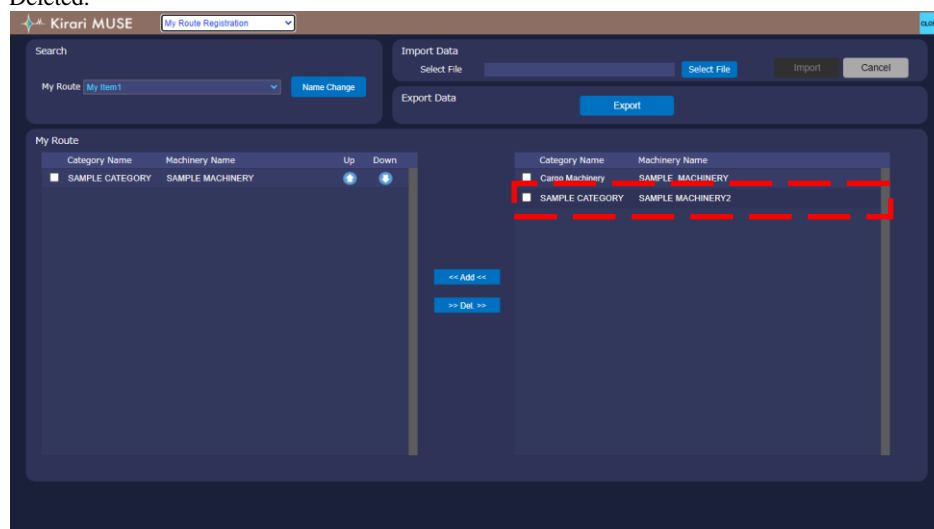
When the confirmation dialog box appears, click [OK].

After clicking, it is deleted from the Favorites list.



Procedure 6

Deleted.



3.7 Register and delete "item name"

I will explain how to register [Item Name].

Procedure: 1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



Procedure: 2

The System Information screen of Master Maintenance starts.

Procedure: 3

Enter the value in the [Setting Items] field, and then press [Add Item].

Procedure :4

Registered.

Caution !

- 15 Names exceeding character cannot be registered.
- Names that have already been registered cannot be registered.

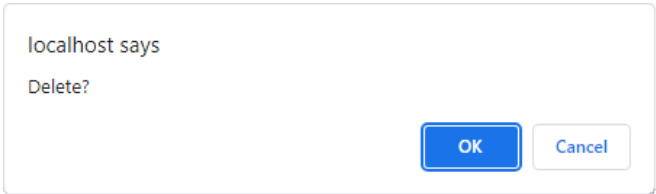
I will explain how to delete [Item Name].

Procedure: 1 to 2 are the same as the method for registering [Item Name]

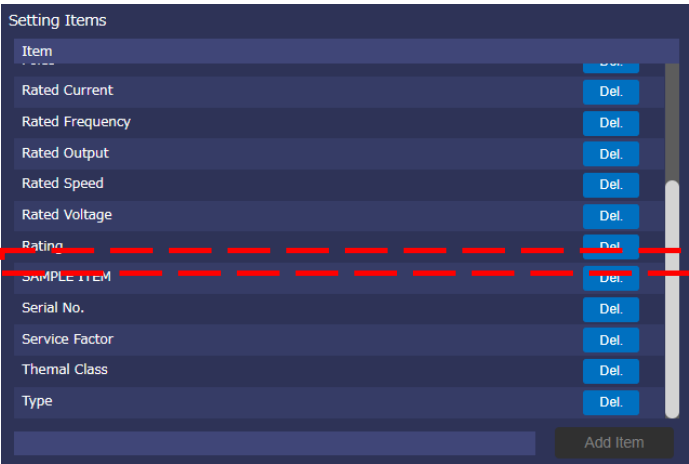
Procedure: 3
Click the [Del.] button for the item to be deleted.



Procedure: 4
When a confirmation dialog box appears, select [OK].
After clicking, it is deleted from the item name list.



Procedure :5
Deleted.



3.8 Register and delete "Unit"

This section explains how to register [Unit].

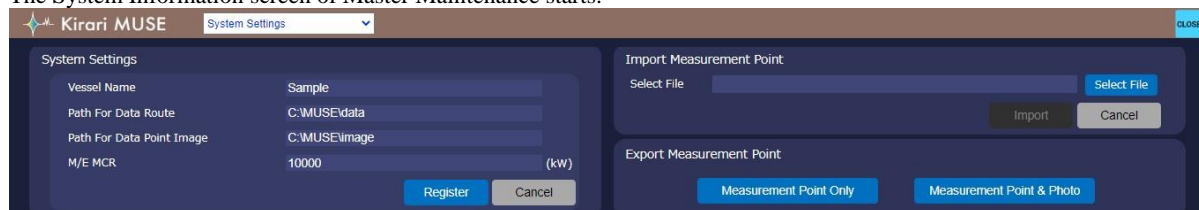
Procedure: 1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



Procedure: 2

The System Information screen of Master Maintenance starts.



Procedure: 3

Enter the value in the [Setting Units] field, and then press [Add Item].



Procedure :4

Registered.



Caution !

- Names that are longer than 4 character cannot be registered.
- Names that habe already been registered cannot be registered.

I will explain how to delete [Units].

Procedure: 1 to 2 are the same as the method for registering [Unit]

Procedure: 3

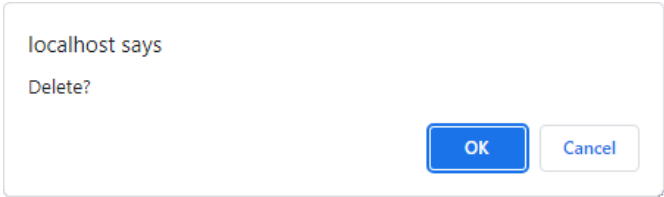
Press the [Del] button for the unit to be deleted.



Procedure: 4

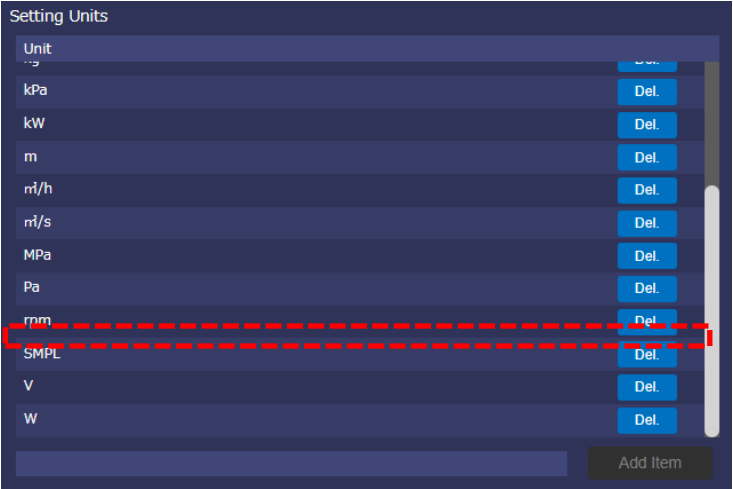
When a confirmation dialog box appears, select [OK].

After clicking, the unit is deleted from the unit list.



Procedure: 5

Deleted.



3.9 Set various work folders

This section describes how to set [Work Folders].

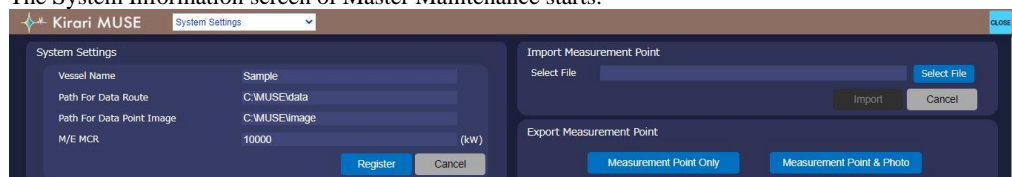
Procedure: 1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



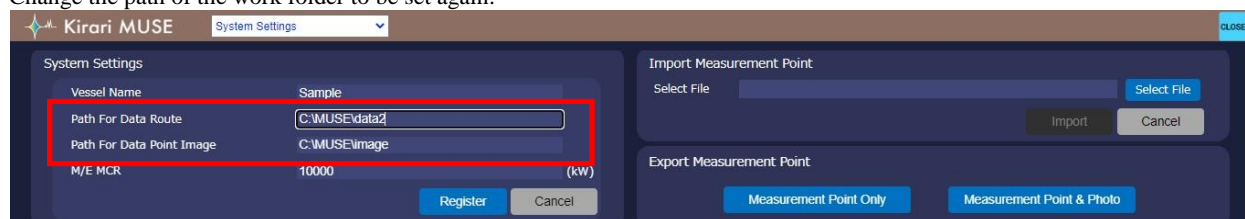
Procedure: 2

The System Information screen of Master Maintenance starts.



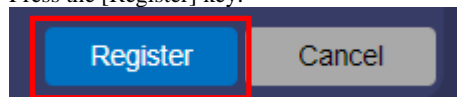
Procedure: 3

Change the path of the work folder to be set again.



Procedure: 4

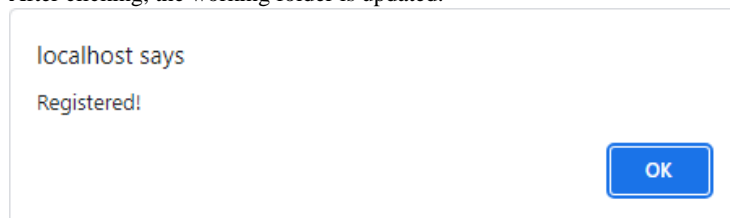
Press the [Register] key.



Procedure: 5

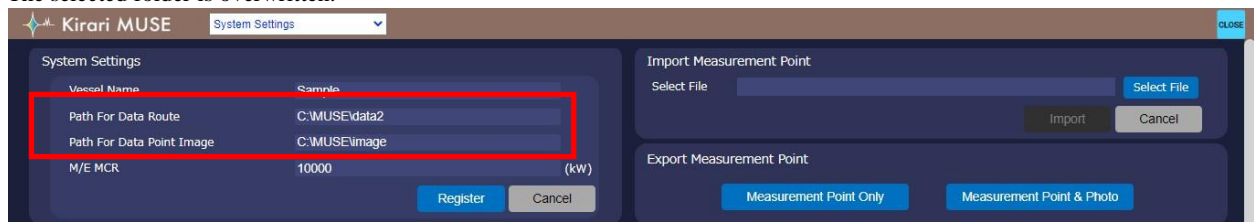
When a confirmation dialog box appears, select [OK].

After clicking, the working folder is updated.



Procedure: 6

The selected folder is overwritten.

Procedure :7

Registered.

Caution !

[Path for Data Route] : Folder to manage captured data files, analysis files, etc.

[Path for Listening Point Image] : Folder to manage image files

3.10 Set "Maximum output of main engine"

This section explains how to set the [Maximum Main Engine Output]. If not set, the main line data: [Main Engine Load] is not displayed.

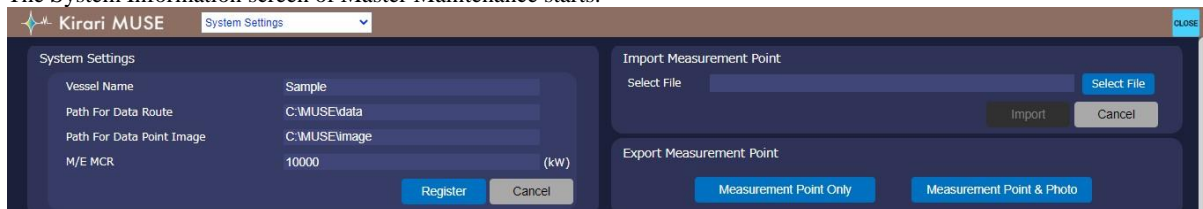
Procedure: 1

Start the application on the PC side, and click the [Master Maintenance] icon in the upper right of the last data list screen.



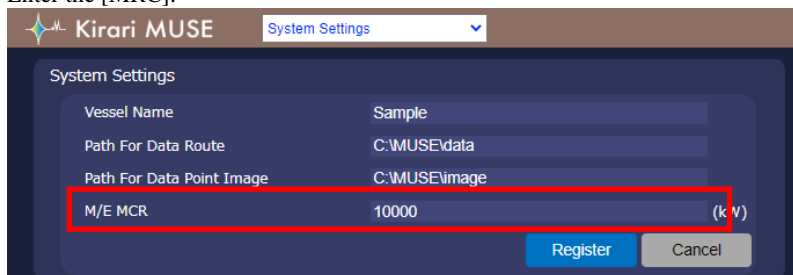
Procedure: 2

The System Information screen of Master Maintenance starts.



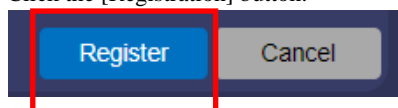
Procedure :3

Enter the [MRC].



Procedure: 4

Click the [Registration] button.



Procedure :5

Registered.

Caution !

- Only numeric valves are valid.
- 9 Registration beyond digits is not

Point

- Main line data registration of the indicator (Android) Used to automatically calculate M/E Load(%) on the side.

3.11 Downloading Data for Batch Registration

This section describes how to download the setting information of [Category], [Device], [Item], and [Unit].

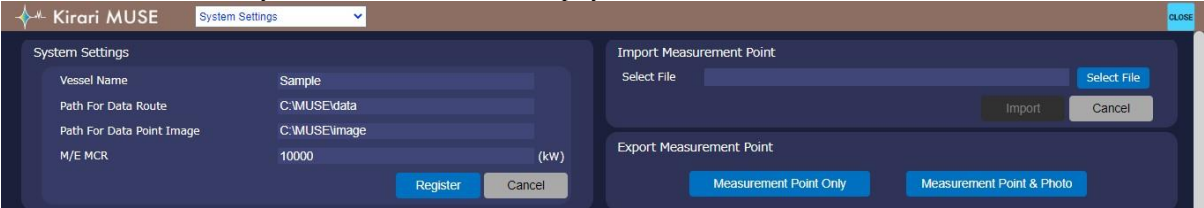
Procedure: 1

Start the PC application, and then click [Master Maintenance Icon] at the upper right of the latest data screen.



Procedure: 2

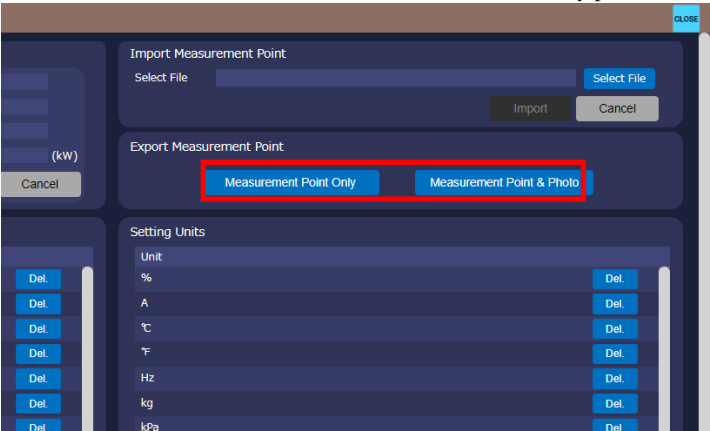
The Master Maintenance System Information screen is displayed.



Procedure: 3

Click the [Measurement Point Only] [Measurement Point & Photo] key. After clicking, the corresponding file will be downloaded.

- Measurement Point Only ··· Download configuration files for [category][equipment][item][unit]
- Measurement Point & Photo ··· Measurement Point Only plus downloadable photographs of the sampling points



3.12 Batch registration of "Category" and "Device"

This section describes the batch registration method for [Category] and [Device].

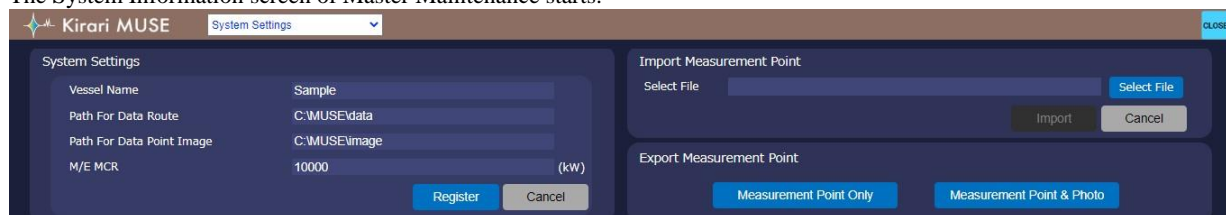
Procedure: 1

Start the PC application, and then click [Master Maintenance Icon] at the upper right of the latest data screen.



Procedure: 2

The System Information screen of Master Maintenance starts.



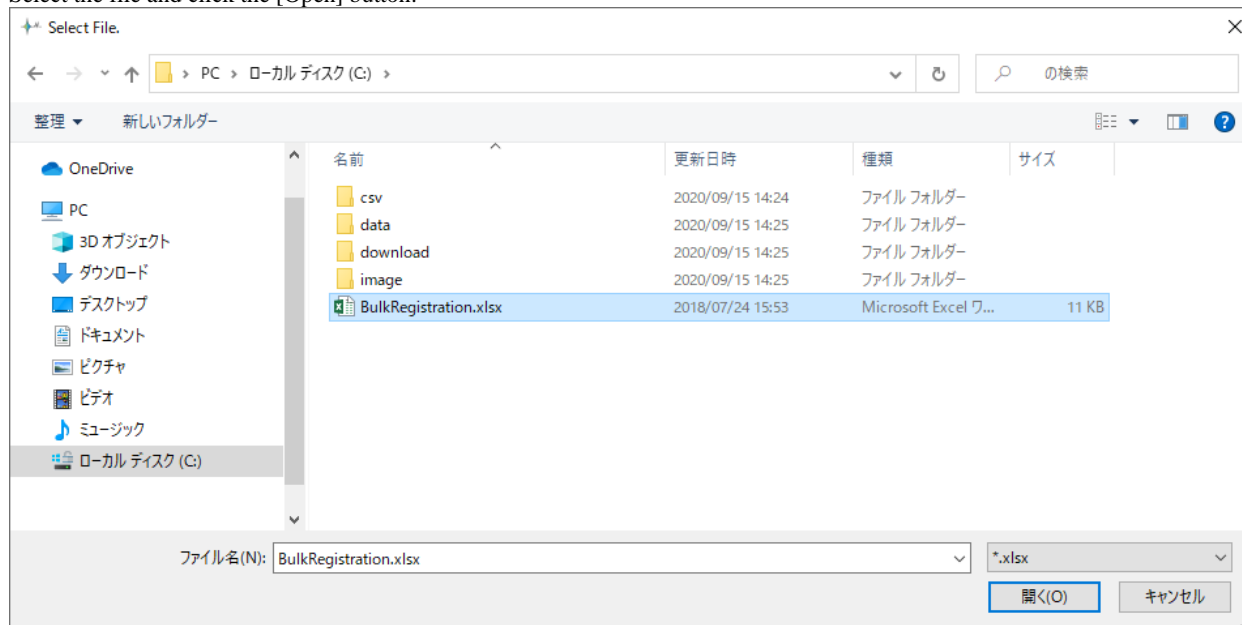
Procedure: 3

Click [Select File] in [Import Measurement Point] to open the file-selection dialog box.



Procedure: 4

Select the file and click the [Open] button.



Procedure: 5

The selected file is overwritten.

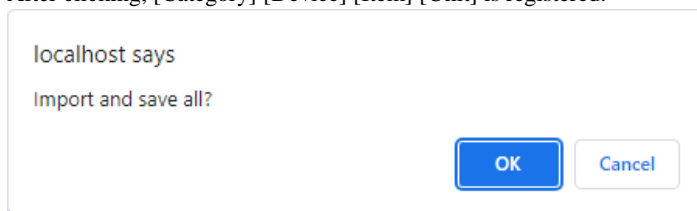
Procedure: 6

Click the [Import] button.

Procedure: 7

When the confirmation dialog box appears, click [OK].

After clicking, [Category] [Device] [Item] [Unit] is registered.

Procedure :8

Registered.

Caution !

- Use the specified format file for the specified EXEL file.
- If you perform batch registration in a different format, the system may be damaged.
- See the Appendix 7.2 for details on specifying formats.
- Register [Category][Device][Item][Unit] of the definition described.
- Add to existing data to register.
- The basic setting value is mandatory and will fail if left blank.

3.13 Batch registration of "Favourites"

This section describes the batch registration method for [Favourites].

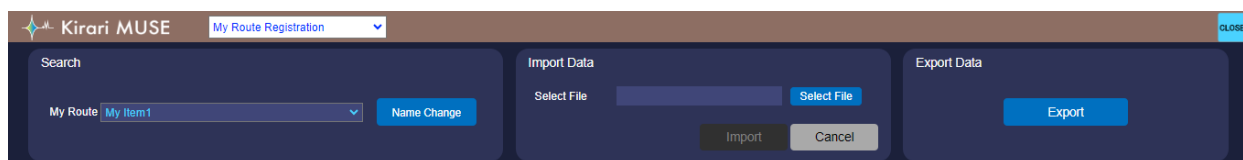
Procedure: 1

Start the PC application, and then click [Master Maintenance Icon] at the upper right of the latest data screen.



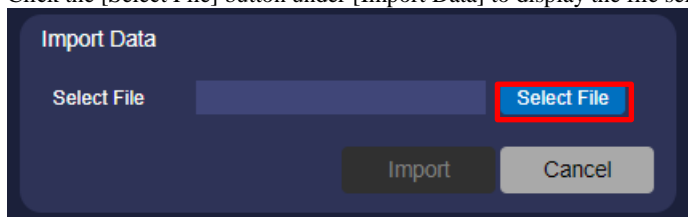
Procedure: 2

Switch from [System Settings] to [My Route Registration] using ▼ on the top tab from the System Information screen in Master Maintenance.



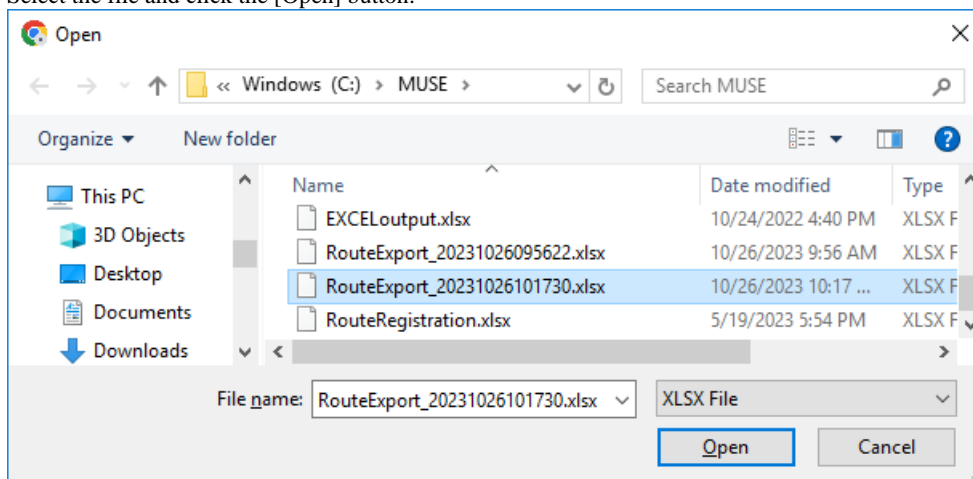
Procedure: 3

Click the [Select File] button under [Import Data] to display the file selection dialogue..



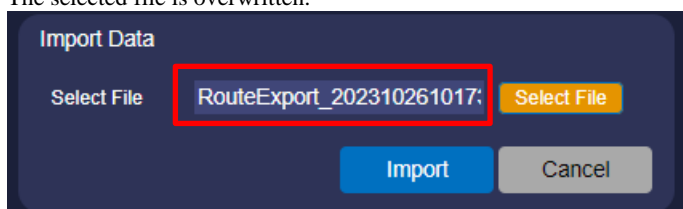
Procedure: 4

Select the file and click the [Open] button.



Procedure: 5

The selected file is overwritten.

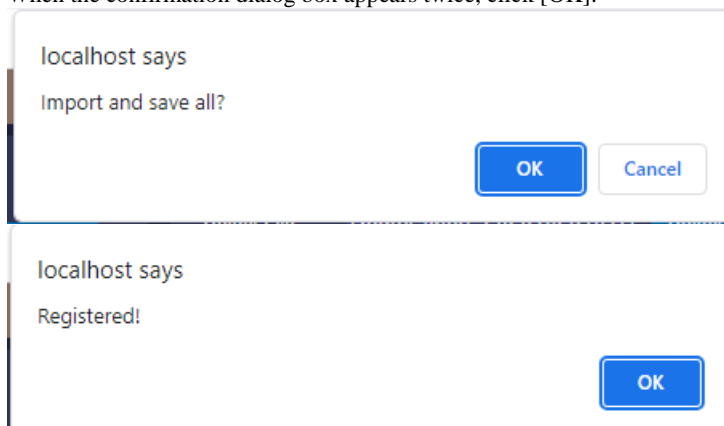


Procedure: 6

Click the [Import] button.

Procedure: 7

When the confirmation dialog box appears twice, click [OK].

Procedure :8

Registered.

Caution !

- Use the specified format file for the specified EXEL file.
 - If you perform batch registration in a different format, the system may be damaged.
 - See the Appendix 7.2 for details on specifying formats.
- Register [Category][Device] of the definition described.
- Add to existing data to register. If the same route name exists, it will be overwritten.
- The basic setting value is mandatory and will fail if left blank.

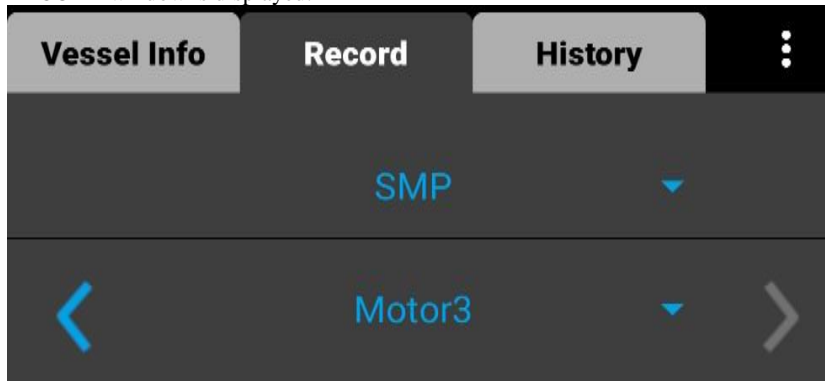
4 Recording (operated by Android app)

4.1 Select "Category" for recording

I will explain how to select the target [Category] to record.

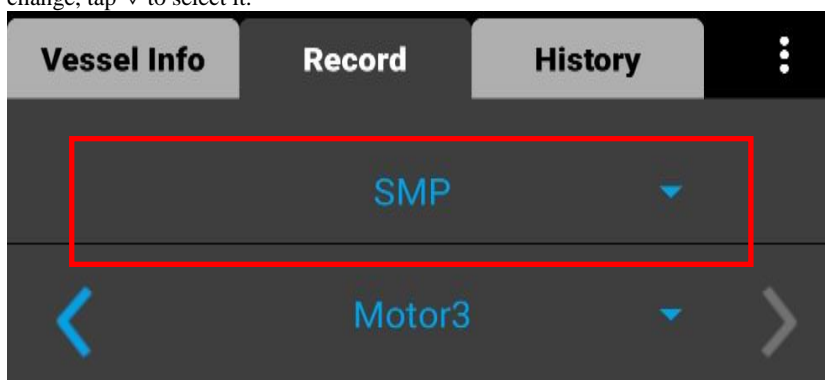
Procedure: 1

RECODE window is displayed.



Procedure: 2

The selected category name is displayed in blue at the top of the screen. To change, tap ▾ to select it.



Procedure: 3

The information associated with the selected category name is updated.

4.2 Selection of "Device" to be recorded

This section describes how to select the target [Device] for recording.

※ It is assumed that the category has been registered.

■ Part 1

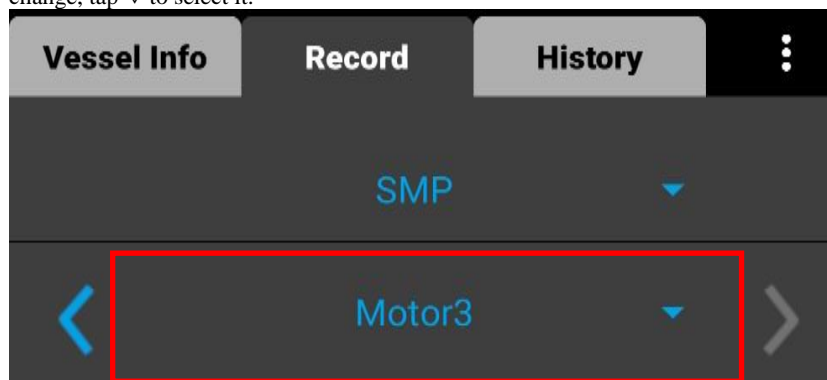
Procedure :1

RECODE window is displayed.



Procedure: 2

The second blue character from the top of the screen is the name of the selected device. To change, tap ▾ to select it.

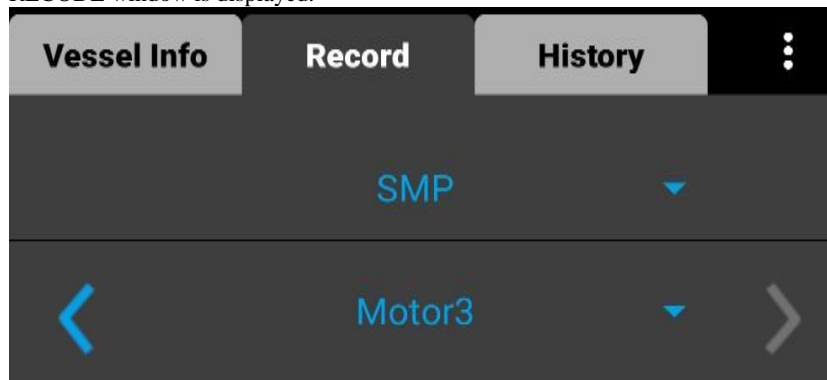


Procedure: 3

The information associated with the selected device name is updated.

■ Part 2Procedure :1

RECODE window is displayed.

Procedure: 2

The second blue character from the top of the screen is the name of the selected device. To make changes, tap the arrows at the left and right to select.

If there is no registration of the next selected device, the arrows will be grayed out (right arrow in the figure below).

Procedure: 3

The information associated with the selected device name is updated.

4.3 Selection of the sampling site to be recorded

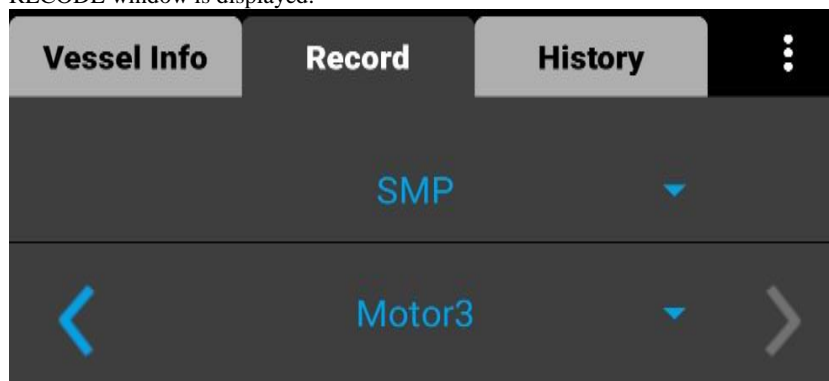
This section describes how to select [Collection Location] for the recording target.

※It is premised that the instrument has been selected.

■ Part 1

Procedure :1

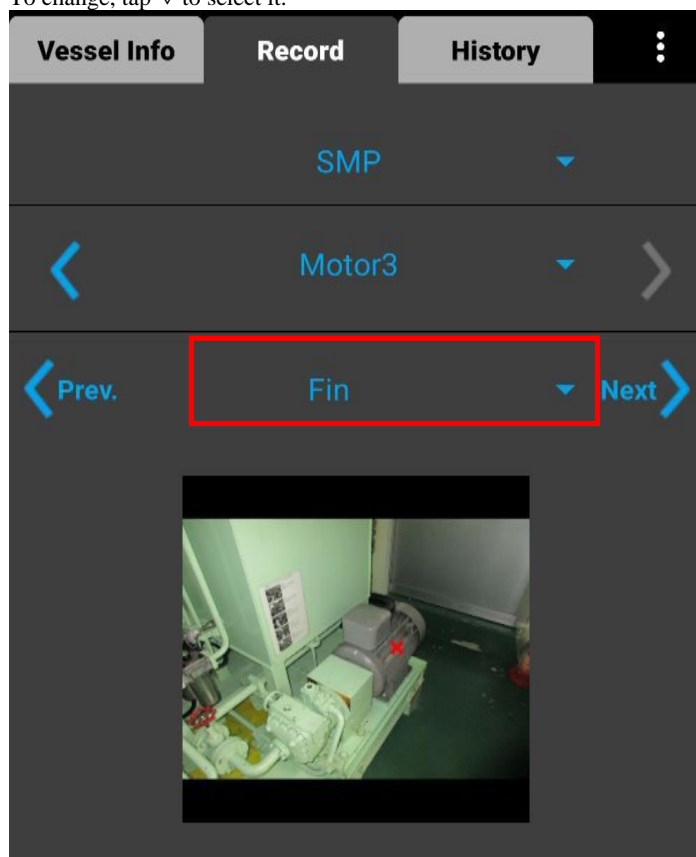
RECODE window is displayed.



Procedure: 2

The third blue character from the top of the screen is the name of the selected collection point.

To change, tap ▾ to select it.



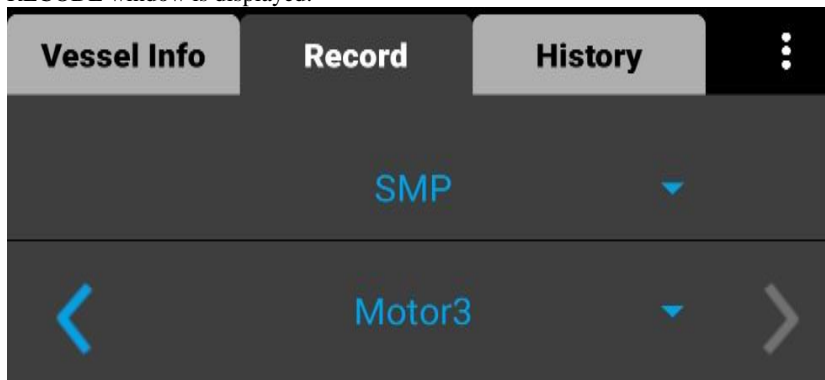
Procedure: 3

It is updated to the information associated with the selected sampling point.

■ Part 2

Procedure :1

RECODE window is displayed.

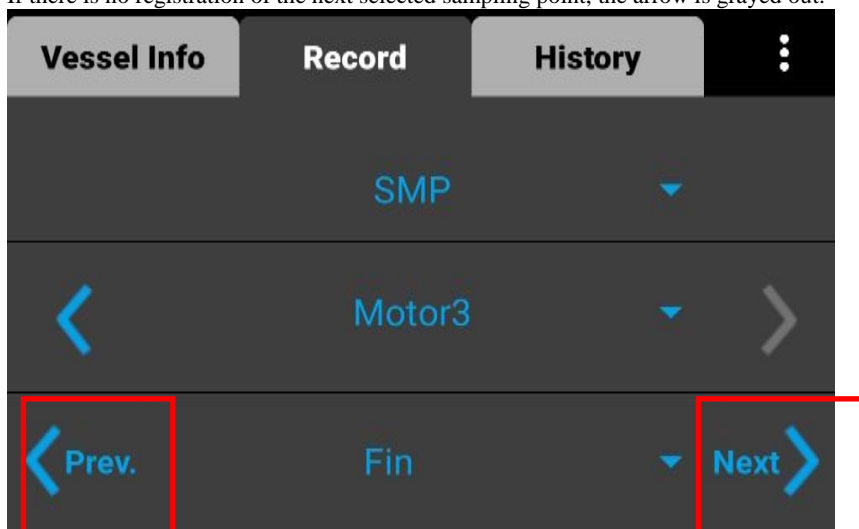


Procedure: 2

The third blue character from the top of the screen indicates the name of the selected collection point.

To change the setting, select it by tapping [< Prev.] or [Next >] on the left and right.

If there is no registration of the next selected sampling point, the arrow is grayed out.



Procedure: 3

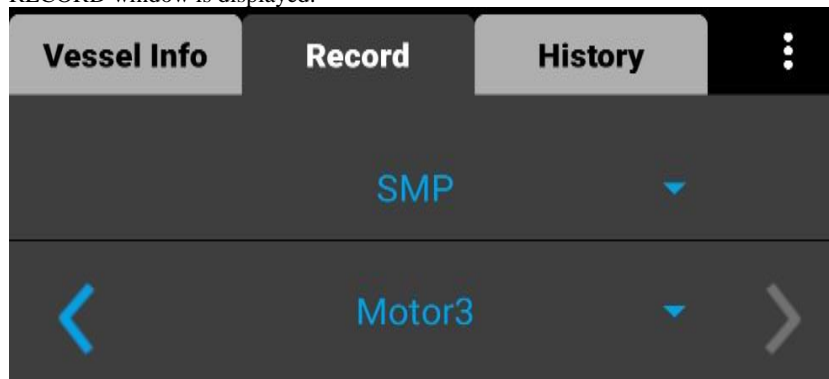
It is updated to the information associated with the selected sampling point.

4.4 Recording data from electronic listening rods

This section explains how to use an electronic listening bar and record data.

Procedure: 1

RECORD window is displayed.



Procedure: 2

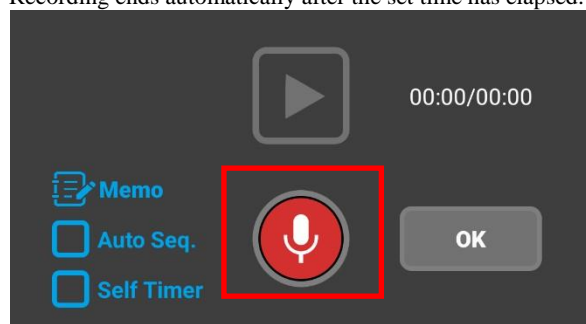
After selecting [Category] [Instrument] and [Collection Point], touch the electronic sound bar to the collection point.

※ Selection of [Category], [Instrument] or [Collection Point] is not mandatory. This is managed as a “Unselected”.

Procedure: 3

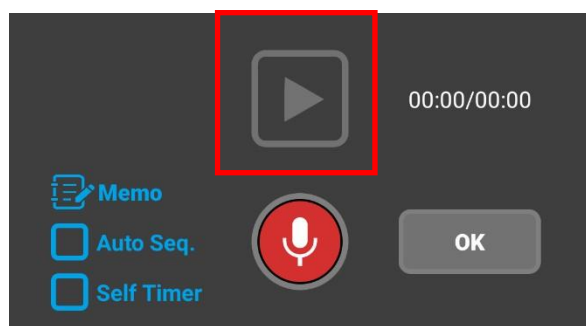
Click the Record button.

Recording ends automatically after the set time has elapsed.



Procedure: 4

Capturing starts. You can stop recording by clicking the Stop button.

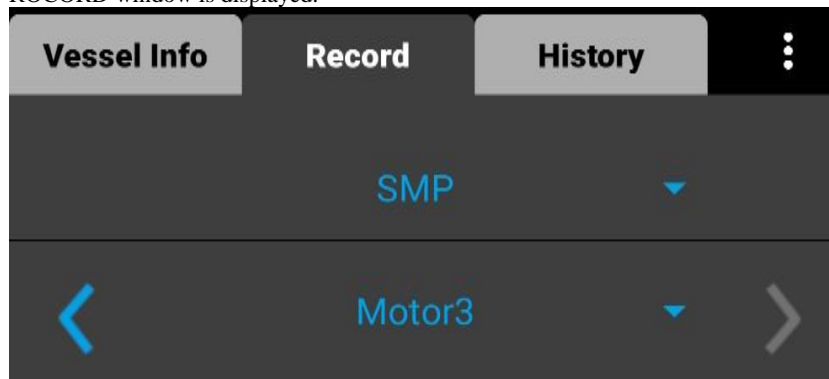


4.5 Register "Device status" of captured data

This section describes how to register [Device Status].

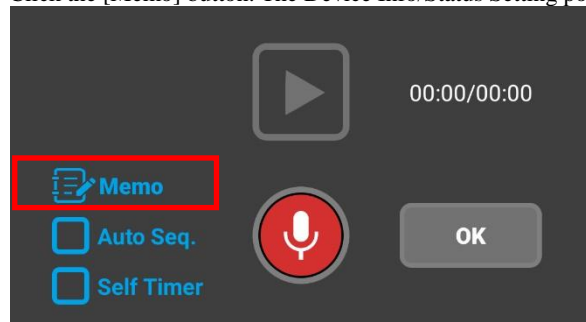
Procedure: 1

ROCORD window is displayed.



Procedure: 2

Click the [Memo] button. The Device Info/Status Setting popup window will appear.



Procedure: 3

The screenshot shows a dark grey form with two sections. The first section is titled 'Condition' and contains a label 'SAMPLE ITEM' followed by a text input field and the label '[SMPL]'. The second section is titled 'Comment' and contains a large text area. At the bottom of the form, there is a blue button with the text 'Save'.

Caution !

- Only numeric values are valid.
- You cannot register more than 7 characters.
- Registration is possible only before recording or immediately after recording. The Information is confirmed by switching the sampling line and performing the next recording operation.

Procedure: 4

It is registered by clicking [Save].

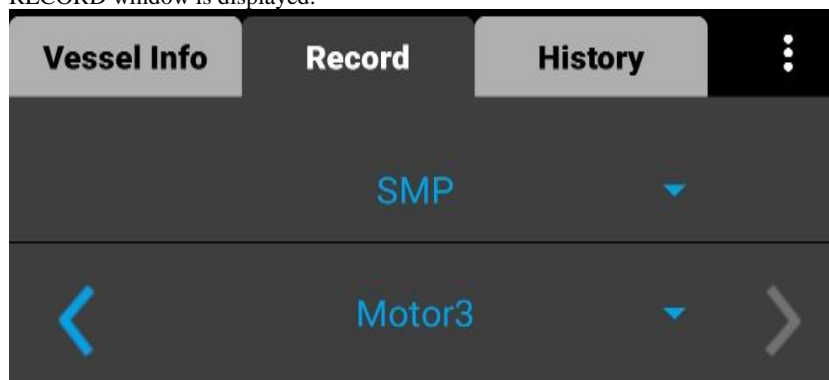
4.6 Replaying Recorded Data

(1) Playing back the recorded data immediately

This section explains how to play back recorded data.

Procedure: 1

RECORD window is displayed.

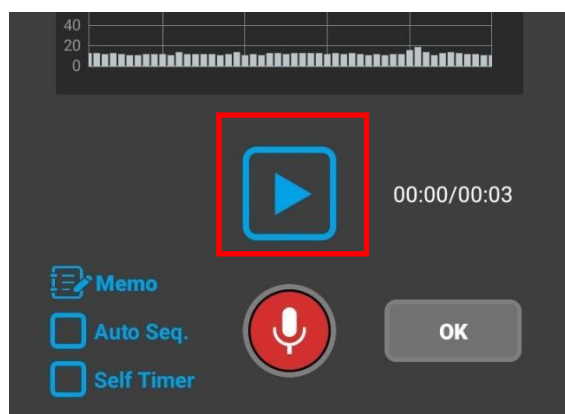


Procedure: 2

Select [Category], [Instrument] and [Collection Position] recorded today.

Procedure: 3

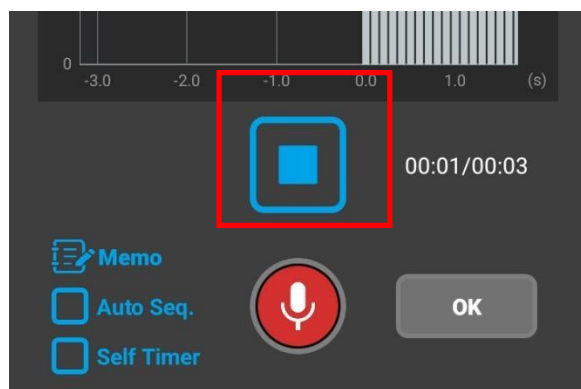
Click the Play button.



Procedure :4

The recorded sound data is played back.

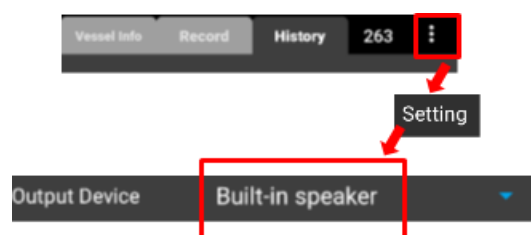
You can also stop playback by pressing the STOP button.



Point

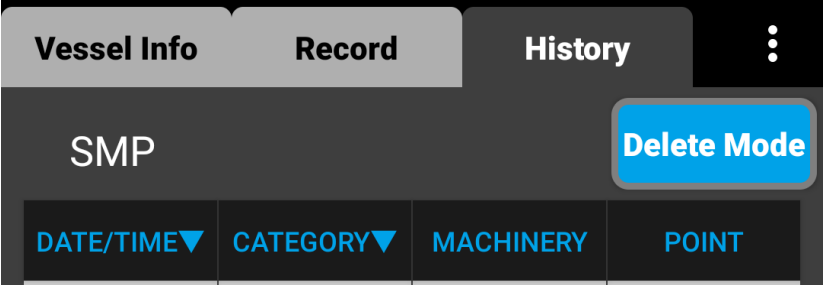
If no sound is output from the device despite the level gauge swinging, check the volume setting of the device.

Also, confirm that Output Device is “Built-in Speaker” from [:] ==>[SETTING]



(2)Searching and playing back data recorded in the past
This section describes how to search and play back data recorded in the past.

Procedure: 1
HISTORY window is displayed.



Procedure: 2
Tap the column name in the list to sort in ascending/descending order.
[DATE/TIME] : Sort by date and time.
[CATEGORY] : Sorts by category.
[MACHINERY] : Sorts by device order.
[POINT] : Sort in order of sampling points.

DATE/TIME▼	CATEGORY▼	MACHINERY	POINT	
2023/06/29 10:25:00	SMP	Motor1	Fin	
2023/06/23 16:16:24	SMP	Motor1	Fin	
2023/06/23 16:16:18	SMP	Motor1	Fin	
2023/06/23 16:16:13	SMP	Motor1	Fin	
2023/06/23	SMP	Motor1	Fin	


Procedure: 3
Tap the data you want to play.

DATE/TIME▼	CATEGORY▼	MACHINERY	POINT	
2023/06/29 10:25:00	SMP	Motor1	Fin	
2023/06/23 16:16:24	SMP	Motor1	Fin	
2023/06/23 16:16:18	SMP	Motor1	Fin	
2023/06/23 16:16:13	SMP	Motor1	Fin	
2023/06/23	SMP	Motor1	Fin	

Procedure: 4

The information of the tapped captured data is displayed at the bottom.

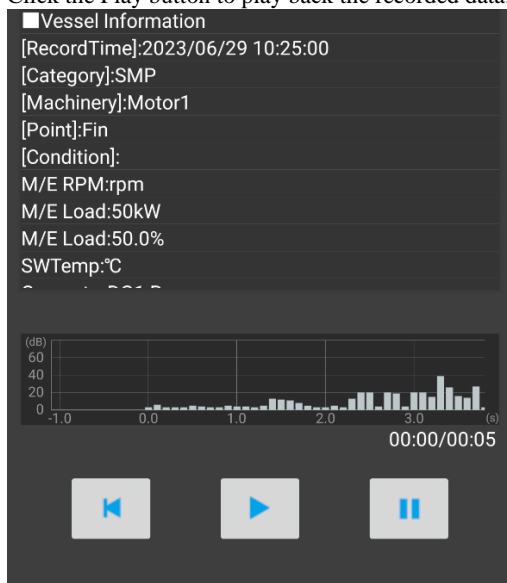
DATE/TIME▼	CATEGORY▼	MACHINERY	POINT
2023/06/29 10:25:00	SMP	Motor1	Fin
2023/06/23 16:16:24	SMP	Motor1	Fin
2023/06/23 16:16:18	SMP	Motor1	Fin
2023/06/23 16:16:13	SMP	Motor1	Fin
2023/06/23	SMP	Motor1	Fin



■ Vessel Information
 [RecordTime]:2023/06/29 10:25:00
 [Category]:SMP
 [Machinery]:Motor1
 [Point]:Fin
 [Condition]:
 M/E RPM:rpm
 M/E Load:50kW
 M/E Load:50.0%
 SWTemp:°C

Procedure: 5

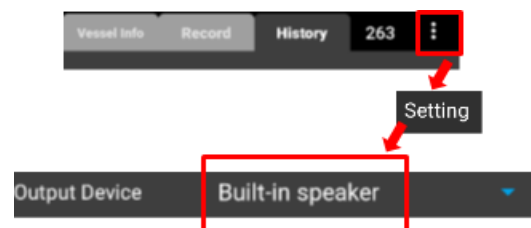
Click the Play button to play back the recorded data.



Point

If no sound is output from the device despite the level gauge swinging, check the volume setting of the device.

Also, confirm that Output Device is “Built-in Speaker” from [:] ==>[SETTING]



Procedure: 6

The specified captured data is replayed.

Press the button to the right of the Play button to pause playback.

4.7 Switching the input of electronic listening bars

This section explains how to switch the signal input destination of the electronic listening bar.

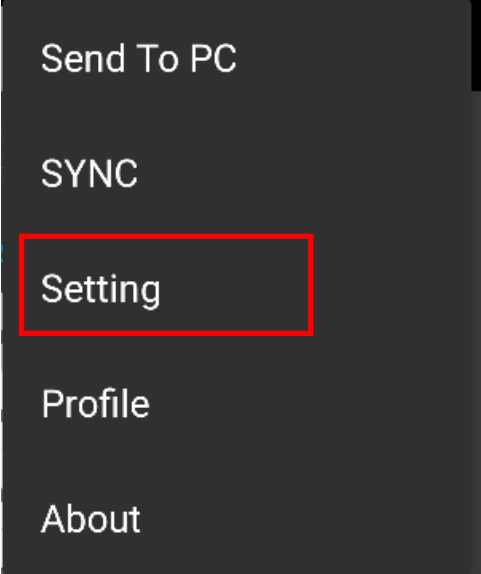
Procedure: 1

Touch [⋮] in the upper-right corner of the screen to open the menu.



Procedure :2

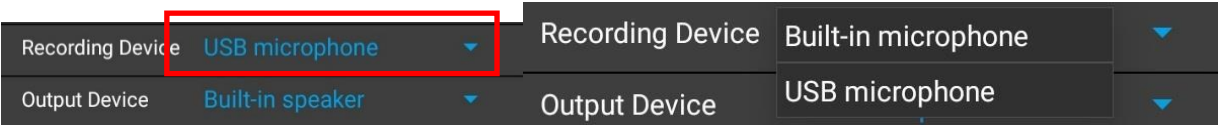
Select [Setting].



Procedure: 3

Select [Recording Device] to switch the type.

Built-in microphone : Built-in microphone (Android terminal)
USB microphone : USB microphone (listening bar) <== Normally select this.

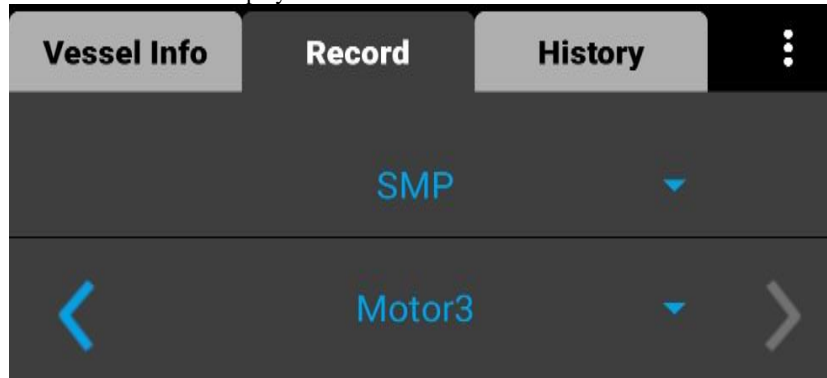


4.8 Switching the recording mode

This section explains how to switch the recording mode.

Procedure: 1

RECORD window is displayed.



Procedure: 2

Select the recording mode. You can also select both.

Auto Step : The measurement point is advanced automatically after recording.

Self Timer : The countdown is performed until recording starts.



Procedure: 3

Selecting this function switches the mode.

Point

- Both modes can be stopped with the STOP button during recording

4.9 Set "Vessel Information"

This section explains how to set [Vessel Information].

Procedure: 1

Vessel Info window is displayed.



Procedure: 2

Register [Data] [Condition] [M/E RPM] [M/E Load] [SW Temp] [D/G] [T/G] [S/G] of the Vessel Info.

Sample

Vessel Information

Date	2023/08/08	
Condition		▼
M/E RPM	80	rpm
M/E Load	900	kW
M/E Load	900.0	%
SW Temp	25	°C
D/G#1	Run	▼
D/G#2	N/A	▼
D/G#3	Stop	▼
D/G#4	Stop	▼
T/G#1	Stop	▼
T/G#2	Stop	▼
T/G#3	Stop	▼
T/G#4	Stop	▼
S/G#1	Stop	▼

[Condition] Choice : Blank, In port, At Sea, At Anchor, Drifting, Docking, Other

[Generator] Choice : N/A, Run, Stop

[M/E Load] percentages are automatically calculated

Calculation formula: [M/E Load (kW)] ÷ [Max. power of main engine] × 100

※ Refer to "Setting the maximum output of the main engine" for the setting of [Maximum output of the main engine].

If [Max. Main Engine Output] is not set, [M/E Load] will be hidden.

Procedure: 3

After entering the Vessel Info, press [START].

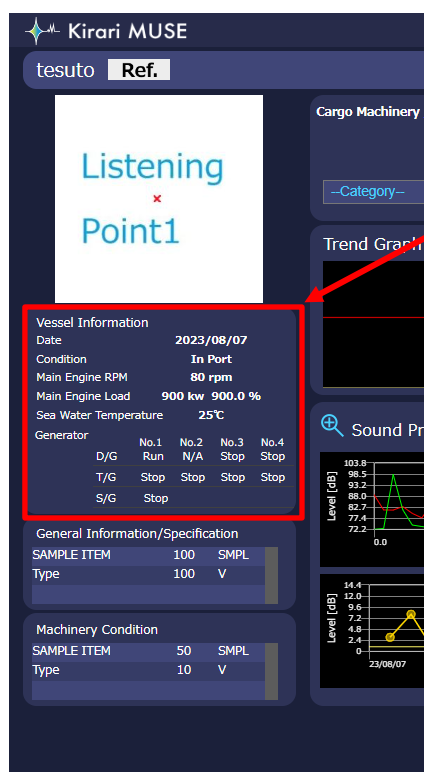
Procedure: 4

Go to RECORD window. Setting is completed.

Caution !

- [M/E RPM] cannot be longer than 5 characters.
- [M/E RPM] can only be registered as a numeric value.
- [M/E Load] cannot be set to more than 8 character.
- [M/E Load] cannot register a value whose the percentage exceeds 999.9.
- [M/E Load] can only be registered as numeric value.
- [SW Temp] cannot be set to more than 5 characteres.
- [SW Temp] cannot be registered except for numerical values.

PC screen



The information about the vessel set up on the phone is reflected.

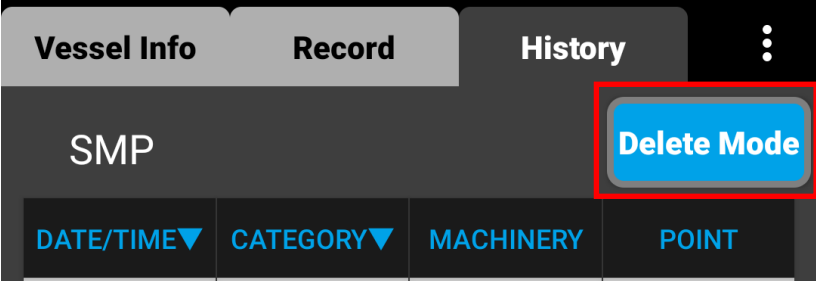
4.10 Deleting recorded data

This section explains how to delete recorded data.

■ To delete one recorded data

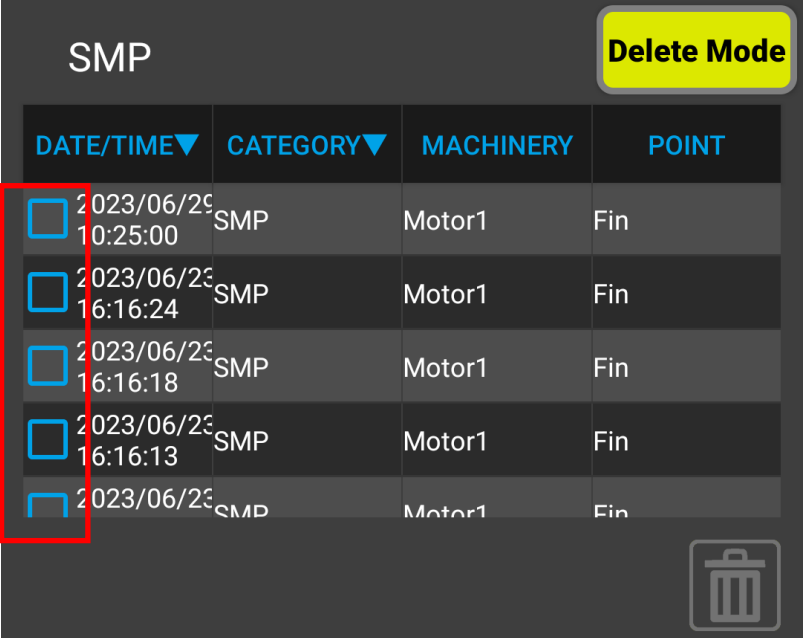
Procedure :1

In HISTORY window, select [Delete Mode].



Procedure: 2

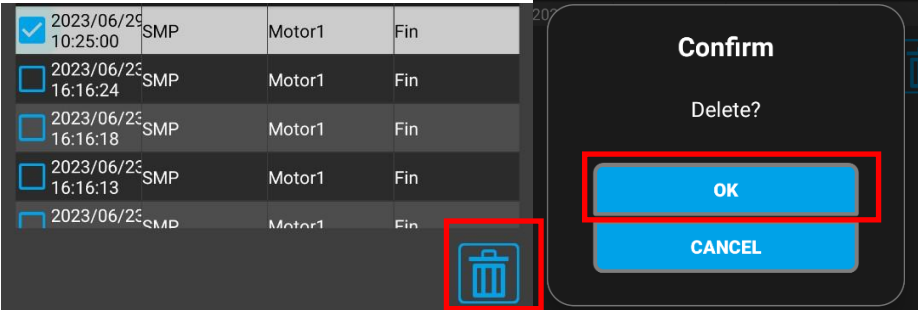
Select the data you want to delete.



Procedure: 3

Click the trash can button to display a confirmation dialog.

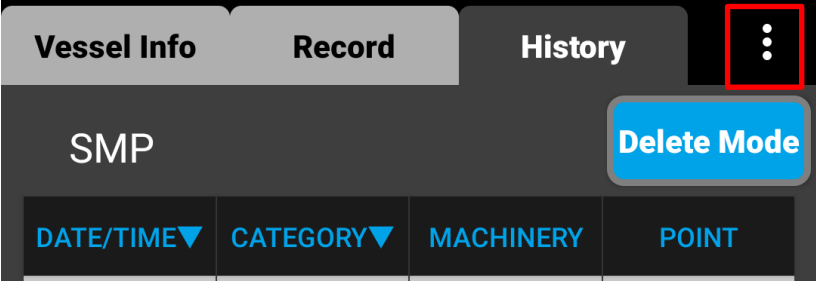
When [OK] is clicked, it will be deleted.



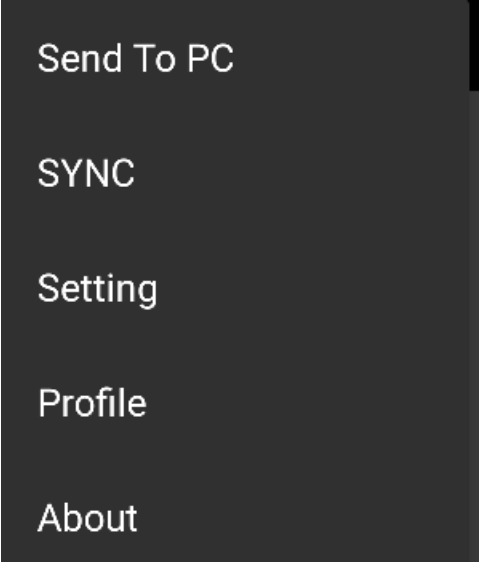
4.11 About the “ Menu screen “

I will explain the menu screen.

Procedure: 1
Touch [⋮] in the upper-right corner of the screen to open the menu.



Procedure :2
The menu screen appears.



Send To PC	Transmits unsent recorded data to the connected PC.
SYNC	Synchronises master data from the connected PC.
Setting	Communication status can be set and checked.
Profile	You can check the storage in use and the total storage capacity in the app.
About	The current application version can be checked.

• Setting screen

IP Address	Set the IP address of the PC to be connected.
Port	Set the port number for the PC connection.
Recording Period	Sets the number of seconds in the audio file to be recorded.
Recording Device	Select the available recording devices.
Output Device	The available playback devices select.
Save Location	Select the data storage location.
Delete date after sending PC	With or without check, you can select what to do with the data after Send To PC. Unchecked: displays a pop-up asking whether the data should be deleted after sending the data. Checked: deletes the data after sending the data.
Sampling rate	Set the sampling frequency of the audio file to be recorded.

• Profile screen

Ship Name	Displays ship names already retrieved from the PC Tool.
App Storage	Displays the storage in use by the app and the total storage capacity.

• About screen

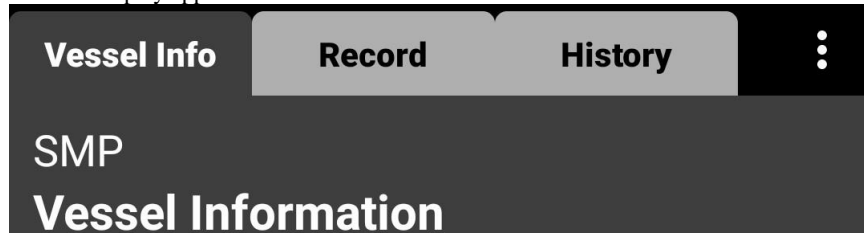
Application Name	Displays the name of the application.
Version	Displays the version.
Copyright	Displays the Copyright information.

4.12 Synchronize master data

This section describes how to synchronize the master data managed by the PC.

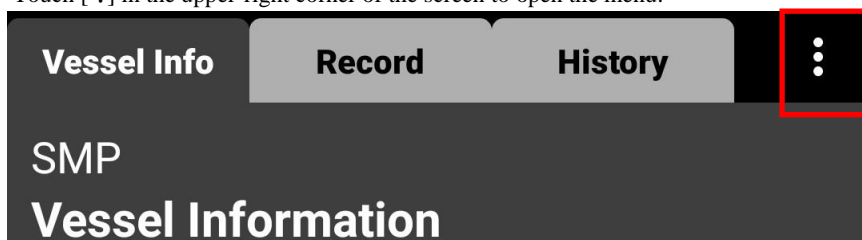
Procedure: 1

Start the display application.



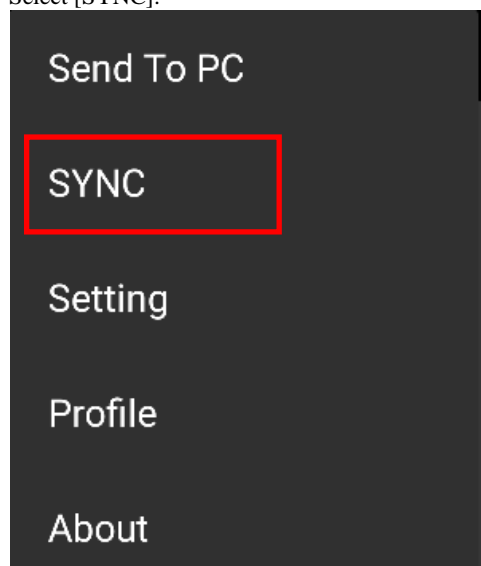
Procedure: 2

Touch [⋮] in the upper-right corner of the screen to open the menu.



Procedure :3

Select [SYNC].

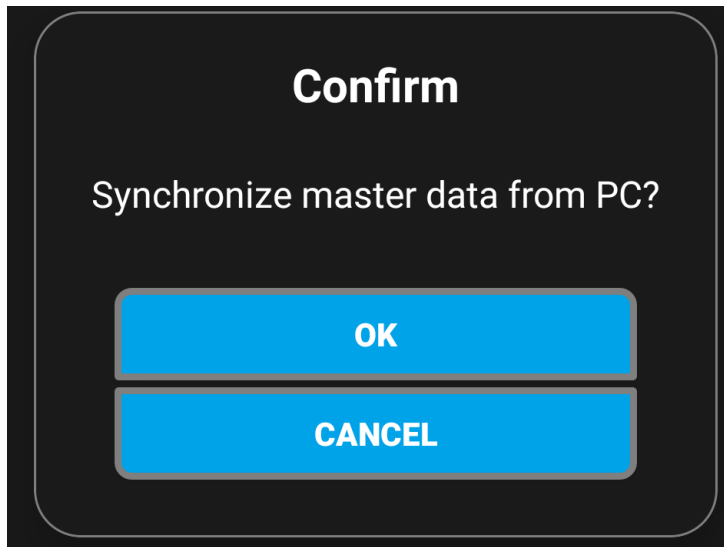


Procedure: 4

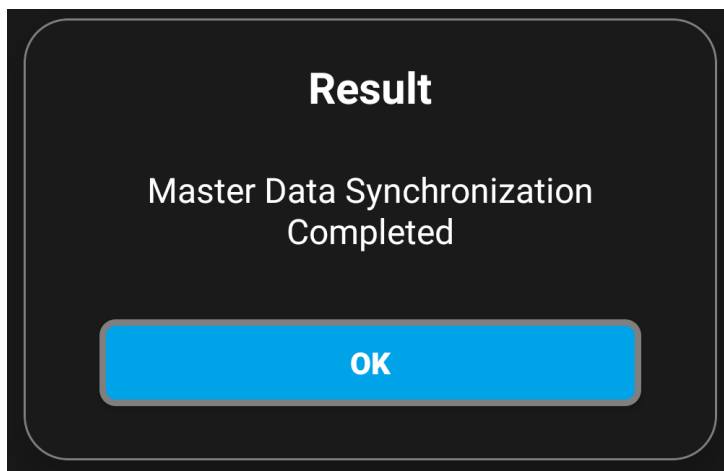
Touch [SYNC] in the center of the window.

Procedure: 5

A confirmation dialogue will be displayed and synchronization will be started when [OK] is clicked.

Procedure: 6

When the synchronization is completed, the completion dialog box is displayed.

**Caution !**

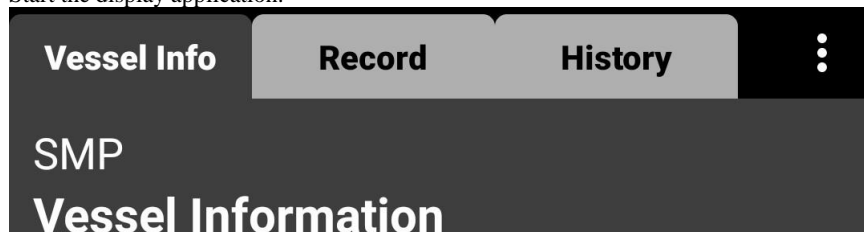
- The synchronization process is replaced with the master data managed by the PC.
- Synchronous processing does not perform data transfer.

4.13 Transfer of recorded data

This section describes how to transfer data recorded in a display application to a PC.

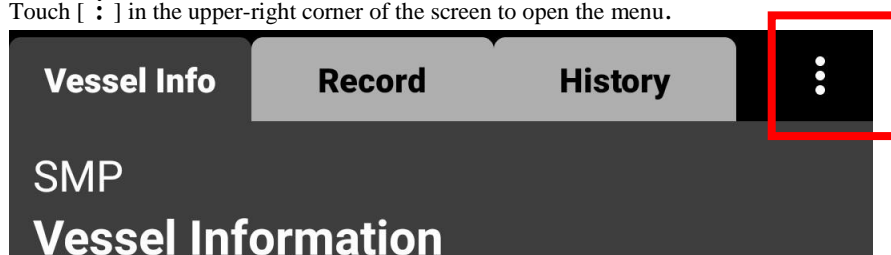
Procedure: 1

Start the display application.



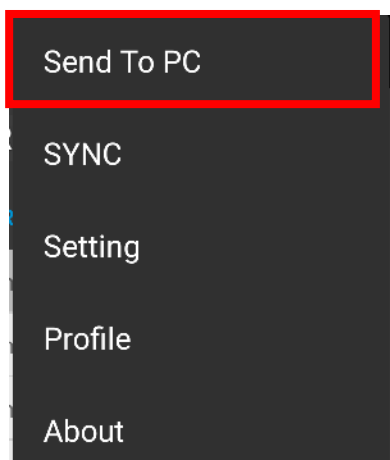
Procedure: 2

Touch [⋮] in the upper-right corner of the screen to open the menu.



Procedure: 3

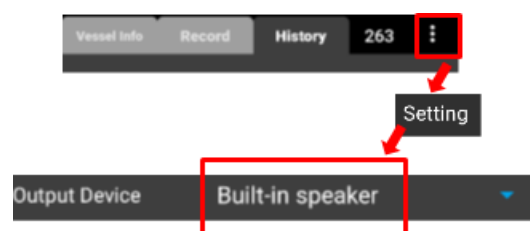
Select [Send To PC].



Point

If no sound is output from the device despite the level gauge swinging, check the volume setting of the device.

Also, confirm that Output Device is “Built-in Speaker” from [⋮] ==>[SETTING]



Procedure: 4

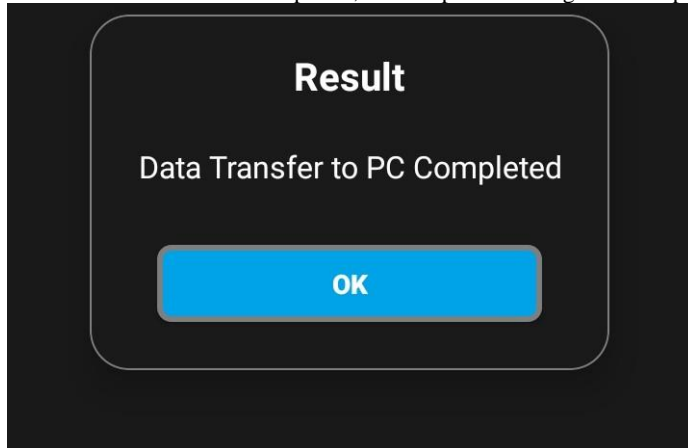
Tap " SEND TO PC " in the center of the window.

Procedure: 5

When the confirmation dialog box is displayed and the [OK] button is clicked, the data transfer starts.

Procedure: 6

When the data transfer is completed, the completion dialog box is displayed.

**Caution !**

- Master data is not synchronized during data transfer processing

4.14 The difference between Send to PC and SYNC

- Send to PC ... Transmits unsent recorded data to the connected PC.
- SYNC ... Synchronises master data from the connected PC.

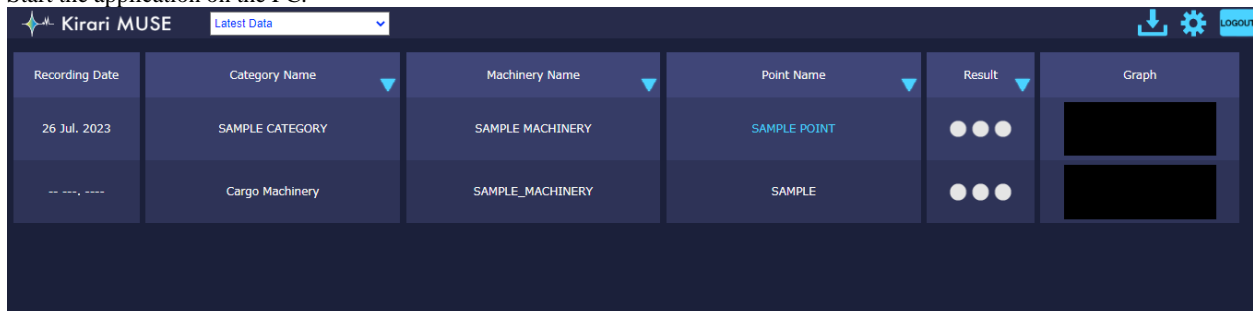
5 How to analyze (PC app)

5.1 Referencing the last transferred data

The following describes how to display the list of the most recently transferred recorded data.

Procedure: 1

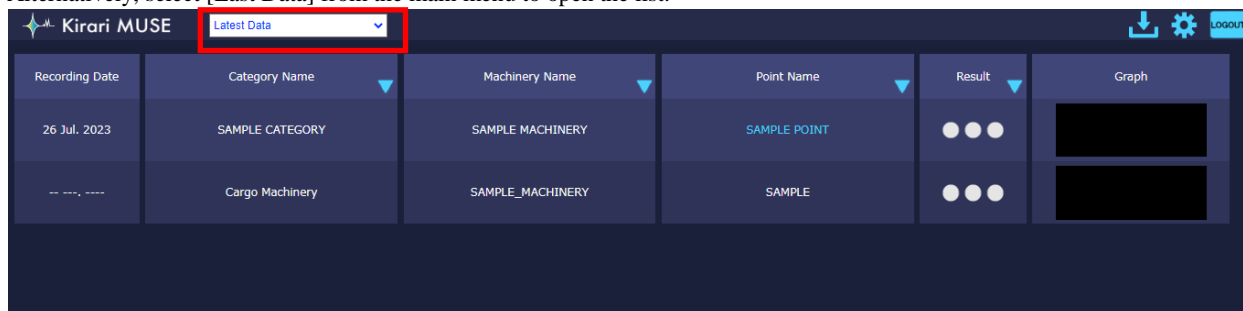
Start the application on the PC.



Procedure: 2

At startup, the [Last Data] list is displayed.

Alternatively, select [Last Data] from the main menu to open the list.



Point

- The displayed items in the list are displayed as the [Recording Date] [Category Name][Machinery Name][Point Name][Result] judgment trend graph.
- The standard order is [Result] in descending order.
- Click on the [▲] or [▼] of each item to sort in descending or ascending order.
- Click on the [▲] or [▼] of each item to select the item to be displayed.

5.2 Refer to unregistered recorded data.

This section describes how to display a list of unregistered recorded data.

Procedure: 1

Start the application on the PC and select [UnRegistered Data] from the main menu.

Recording Date	Category Name	Machinery Name	Point Name	Result	Graph
26 Jul. 2023	SAMPLE CATEGORY	SAMPLE MACHINERY	SAMPLE POINT	● ● ●	
-- --, --	Cargo Machinery	SAMPLE_MACHINERY	SAMPLE	● ● ●	

Procedure: 2

The [UnRegistered Data] list is displayed.

The data displayed in this list includes unregistered items in [Category], [Device], and [Measurement Point].

Recording Date	Category Name & Machinery Name	Point Name	Comment
31 Jul. 2023	UnRegistered	UnRegistered	
06 Jul. 2023	UnRegistered	UnRegistered	
06 Jul. 2023	UnRegistered	UnRegistered	

Point

- The displayed items in the list are [Recording Date][Category Name & Machinery Name] [Point Name][Comment].
- Displayed in descending order of [Recording Date].



5.3 Show details of recorded data

I will explain how to display the details of the recorded data.

Procedure: 1-1
Select [Point Name] in [Last Data].

Kirari MUSE

Latest Data



 LOGOUT

Recording Date	Category Name	Machinery Name	Point Name	Result	Graph
26 Jul. 2023	SAMPLE CATEGORY	SAMPLE MACHINERY	SAMPLE POINT	● ● ●	
-- --, --	Cargo Machinery	SAMPLE_MACHINERY	SAMPLE	● ● ●	

Procedure: 1-2
Select [Recording Date] in [UnRegistered Date].

Kirari MUSE

UnRegistered Data

 LOGOUT

Recording Date	Category Name & Machinery Name	Point Name	Comment
31 Jul. 2023	UnRegistered	UnRegistered	
06 Jul. 2023	UnRegistered	UnRegistered	
06 Jul. 2023	UnRegistered	UnRegistered	

Procedure: 2

The details of the recorded data are displayed as shown below.



- (1) Display the ship name
- (2) This button sets the reference level. (The color of the data already set to the reference level changes.)
- (3) This displays the category name, equipment name, and measurement point of the data.
- (4) Use the drop-down to toggle the reference data.
- (5) Displays the trend graph of the data.
- (6) Displays the total judgment of the data.
- (7) Displays the waveform of the recorded data.
- (8) Displays the level of recorded data.
- (9) This button plays, pauses, and stops the recorded data.
- (10) Displays the recording start time.
- (11) Displays the recording time.
- (12) The registered comments are displayed.
- (13) Download the data profile.
- (14) Edit the data.
- (15) Saves the audio source of the captured data as an audio file.
- (16) Displays the Vessel Information.
- (17) Displays the rating information.
- (18) Displays the device status.
- (19) Displays the name of each analysis.
- (20) Opens the detailed screen for each analysis.
- (21) Displays the analysis waveform.
- (22) Displays the evaluation level trend graph.
- (23) Displays the value and judgment of the analysis result.

Rating information, device status and comments PC app and smartphone relationship.

- PC screen
Enter rating information.

New Registration

Machinery Name SAMPLE MACHINERY

General Information/Specifications				Running Condition		
No.	Item	Name/Value	Unit	No.	Measured Value/Mode	Unit
1	SAMPLE ITEM	100	SMPL	1	SAMPLE ITEM	SMPL
2				2		

Rating information can be selected from among the Setting Items and Setting Units in “System Settings”.

When adding information, it can be added with ① Item name ②.

When deleting information, it can be deleted with 'DEL'.

Setting Items		Setting Units	
Item	DEL	Unit	DEL
Rated Current	DEL	rpm	DEL
Rated Frequency	DEL	rpm	DEL
Rated Output	DEL	rpm	DEL
Rated Speed	DEL	V	DEL
Rated Voltage	DEL	V	DEL
Rating	DEL	V	DEL
Sample Item	DEL	V	DEL
Serial No.	DEL	V	DEL
Service Factor	DEL	W	DEL
Thermal Class	DEL	W	DEL
Type	DEL	W	DEL

① ②

- Smartphone screen

- ① The rating information set on the PC is also reflected in the equipment status, so please enter the values.
- ② Enter details etc. in the comments.

①

Condition

SAMPLE ITEM : 50 [SMPL]

Type : 10 [M]

②

Comment

Comment Comment Comment

Save

- PC screen

The ① equipment status value and ② comment content set on the smart phone are linked to the data.



5.4 Replaying Recorded Data

This section explains how to play back recorded data.

Procedure: 1

Displays the details of the recorded data to be replayed.



Procedure: 2

Click the Play button. Play back the playing data.

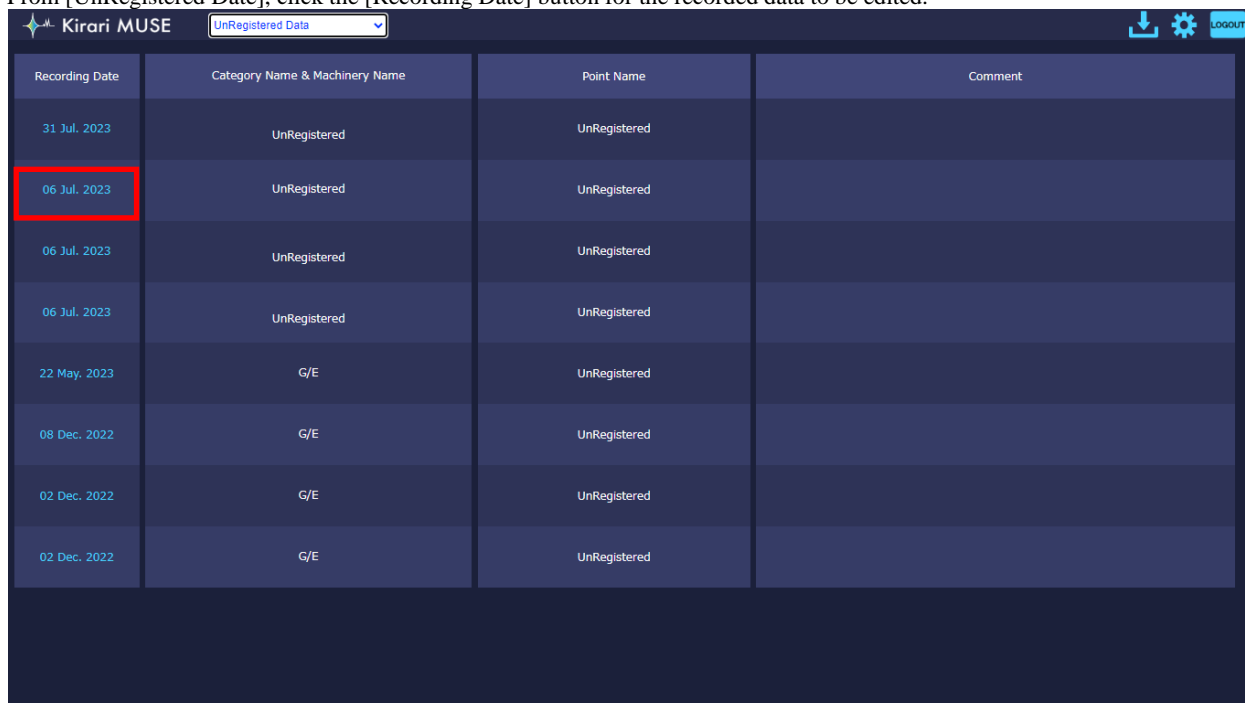


5.5 Edit unregistered data

This section describes how to edit the data that is not registered in [Category], [Machinery], and [Measurement Point].

Procedure: 1

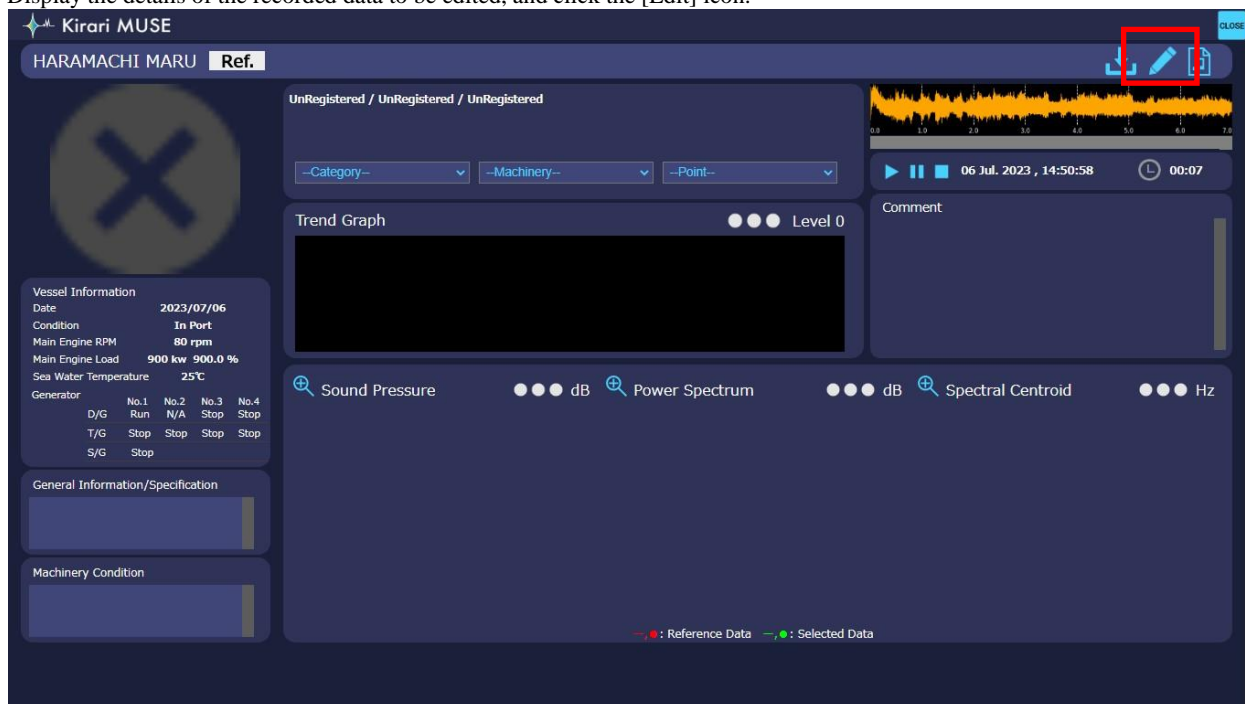
From [UnRegistered Date], click the [Recording Date] button for the recorded data to be edited.



Recording Date	Category Name & Machinery Name	Point Name	Comment
31 Jul. 2023	UnRegistered	UnRegistered	
06 Jul. 2023	UnRegistered	UnRegistered	
06 Jul. 2023	UnRegistered	UnRegistered	
06 Jul. 2023	UnRegistered	UnRegistered	
22 May. 2023	G/E	UnRegistered	
08 Dec. 2022	G/E	UnRegistered	
02 Dec. 2022	G/E	UnRegistered	
02 Dec. 2022	G/E	UnRegistered	

Procedure: 2

Display the details of the recorded data to be edited, and click the [Edit] icon.



Kirari MUSE

HARAMACHI MARU Ref.

UnRegistered / UnRegistered / UnRegistered

--Category-- --Machinery-- --Point--

Trend Graph Level 0

Vessel Information

Date: 2023/07/06

Condition: In Port

Main Engine RPM: 80 rpm

Main Engine Load: 900 kw 900.0 %

Sea Water Temperature: 25°C

Generator

	No.1	No.2	No.3	No.4
D/G	Run	N/A	Stop	Stop
T/G	Stop	Stop	Stop	Stop
S/G	Stop			

General Information/Specification

Machinery Condition

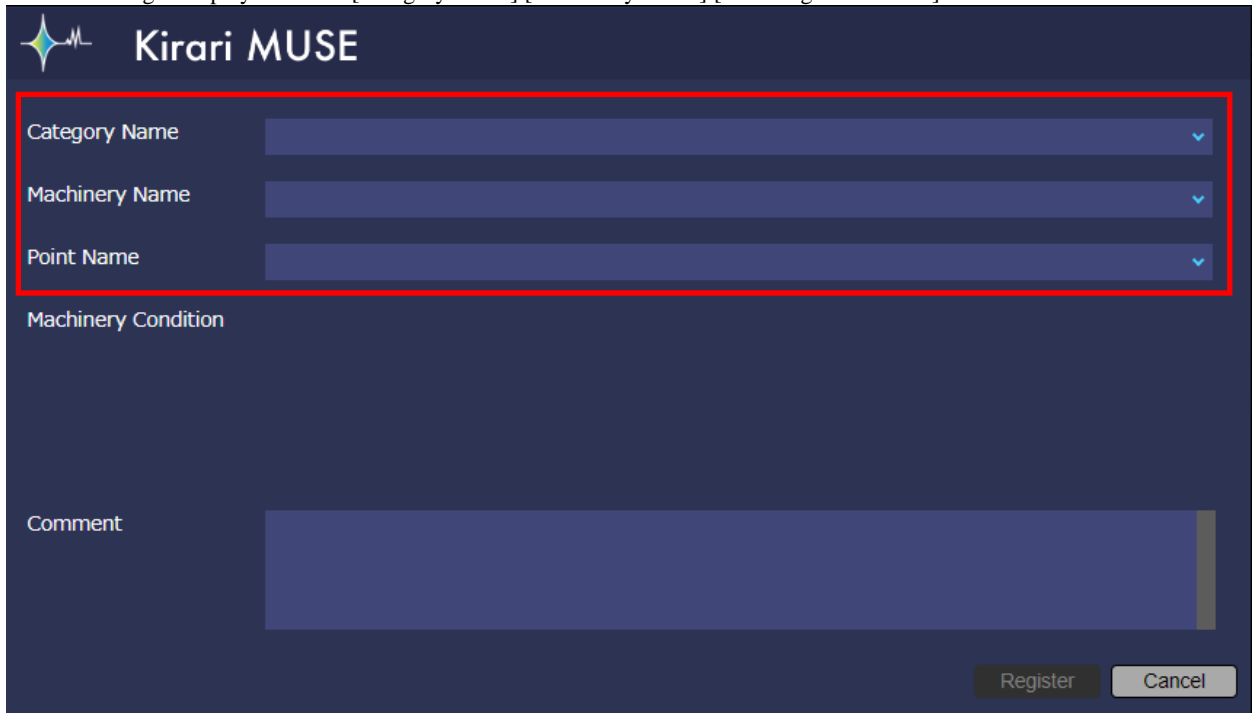
Comment

Sound Pressure ●●● dB **Power Spectrum** ●●● dB **Spectral Centroid** ●●● Hz

●●●: Reference Data ●●●: Selected Data

Procedure: 3

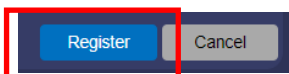
The Edit dialog is displayed. Select [Category Name] [Machinery Name] [Listening Point Name].

**Point**

- By selecting a device, [Device status] is displayed. Register [Device status] as required.
- Edit [Comment] as necessary.

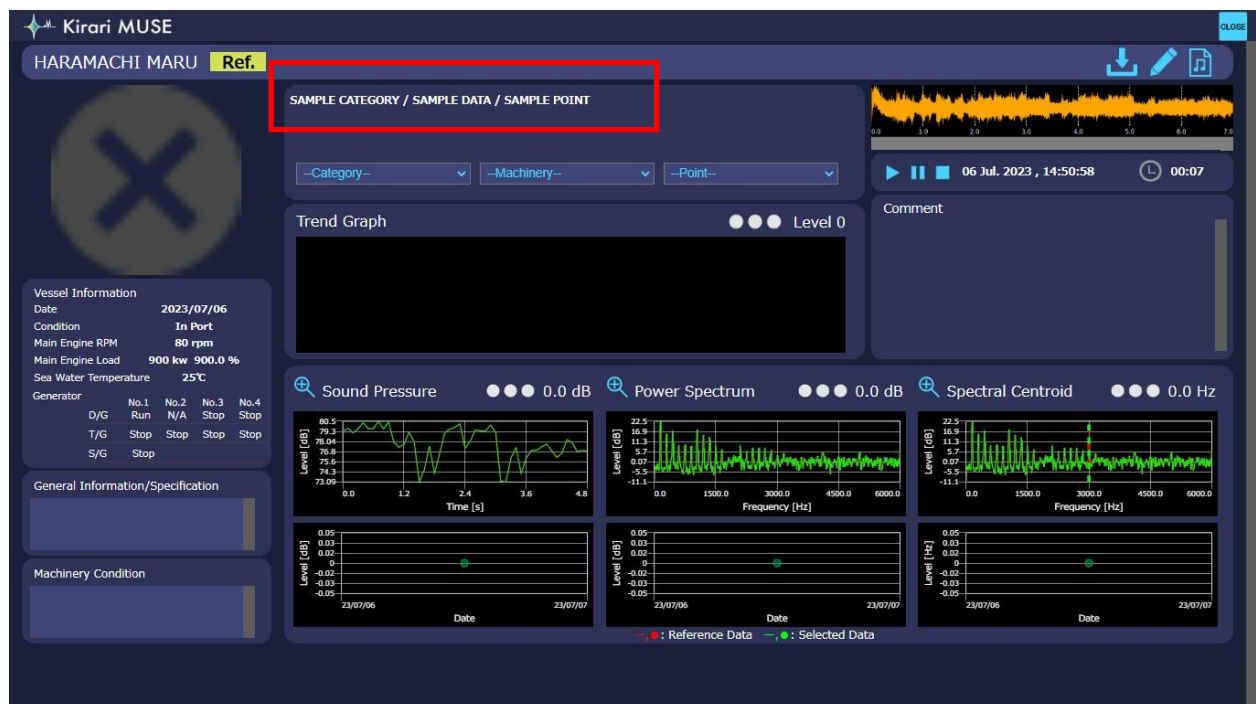
Procedure: 4

Press the [Registration] key. To cancel, select [Cancel].



Procedure: 5

The basic (rating) info is also displayed if the edited details and the new " Machinery " are selected, which are tied to the selected [Category Name] [Machinery Name] [Listening Point Name].



5.6 Editing registered data

This section describes how to edit [Category], [Machinery], [Measurement Point], and [Machinery Status] of the recorded data. (assuming that the equipment is already determined)

Procedure: 1

Display the details of the recorded data to be edited, and click the [Edit] icon.



Procedure: 2

The Edit dialog is displayed. Edit [Category], [Machinery], [Measurement Point], and [Machinery status].

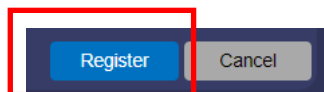
The screenshot shows the Kirari MUSE Edit dialog. It has a red border. The fields are:

- Category Name: Cargo Machinery
- Machinery Name: SAMPLE_MACHINERY
- Point Name: SAMPLE
- Machinery Condition: SAMPLE ITEM: 50 SMPL, Type: 100 V
- Comment: comment

At the bottom, there are 'Register' and 'Cancel' buttons.

Procedure: 3

Press the [Registration] key. To cancel, select [Cancel].

Procedure: 4

Displays the details of the edited [Category], [Machinery], [Measurement Point], and [Machinery status].



5.7 Editing comments

This section describes how to edit [Comment] of recorded data.

Procedure: 1

Display the details of the recorded data to be edited, and click the [Edit] icon.



Procedure: 2

The Edit dialog is displayed. Edit [Comment].

The screenshot shows the 'Edit' dialog box in the Kirari MUSE software. It contains the following fields:

- Category Name: Cargo Machinery
- Machinery Name: SAMPLE_MACHINERY
- Point Name: SAMPLE
- Machinery Condition: SAMPLE ITEM 50 SMPL, Type 100 V
- Comment: A text input field containing the word 'comment'.

At the bottom right, there are 'Register' and 'Cancel' buttons. The entire dialog box is highlighted with a red border.

Procedure: 3

Press the [Registration] key. To cancel, select [Cancel].

Procedure: 4

Displays the details of the edited [Machinery status].

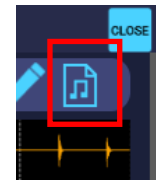


5.8 Extracting Audio File

This section explains how to extract audio files (.wav).

Procedure: 1

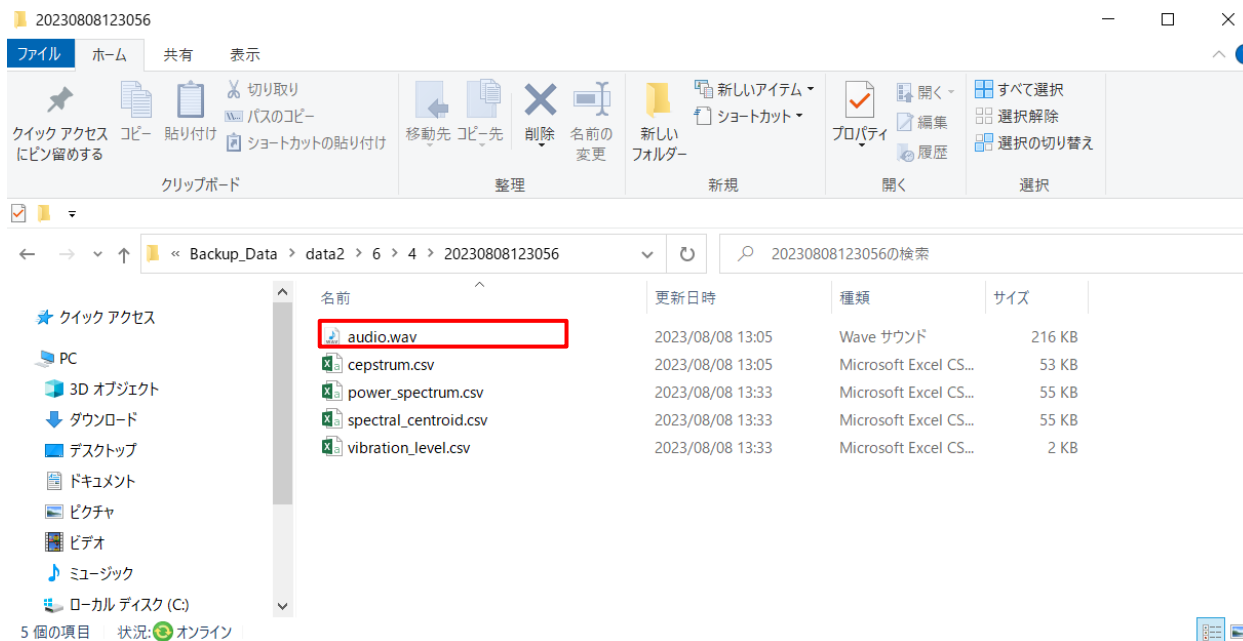
Display the details of the recorded data of the audio file to be acquired, and click the [Audio File] icon.



Procedure: 2

Use Explorer to display the folder that contains the audio files.

“Audio.wav” file becomes the audio file.



5.9 See analysis results

This section explains how to refer to the analysis results.

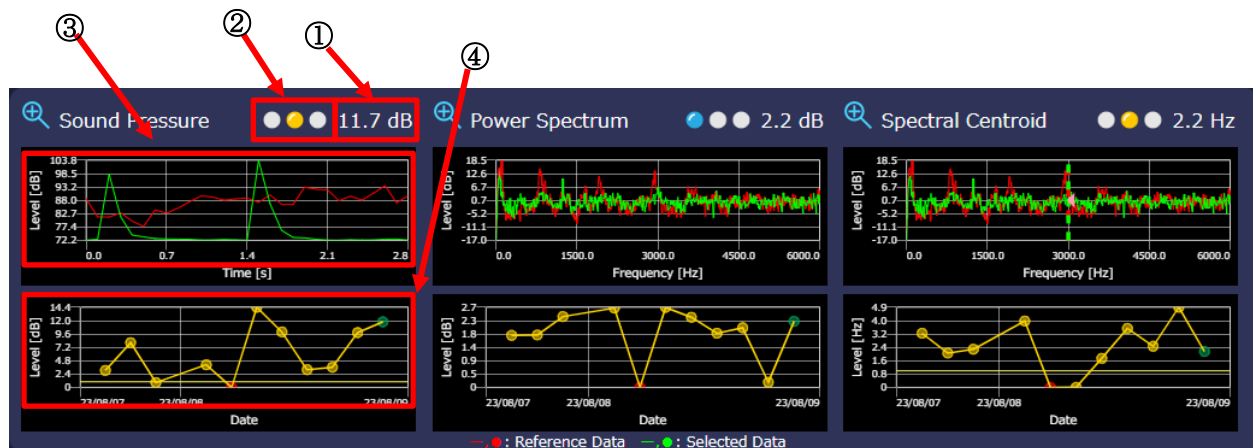
Procedure: 1

Displays the details of the recorded data for which the analysis results are referenced. Displayed in the red frame below.



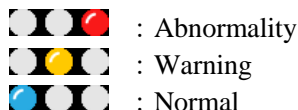
Procedure: 2

The analysis result displays three types of [Sound Pressure] [Power Spectrum] [Spectral Centroid].



- ① Analysis result values are displayed in (dB/Hz).
 Sound Pressure is displayed based on the OA value and the alert threshold.
 Power Spectrum is displayed based on the POA value and the alert threshold.
 Spectral Centroid is based on the POA value and the alert threshold.

- ② Displays the analysis decision result in three levels.



The display criteria for the three levels are set in (3.5 Registering, copying and deleting Measurement Points (sampling points)).



- ③ Displays the analysis result graph.
 Displays a comparison with the reference data.
 (Reference: red line drawn)
 Displays the measurement results of Sound Pressure.
 Displays the measurement results of Power Spectrum.
 Displays the measurement results of the Spectral Centroid.

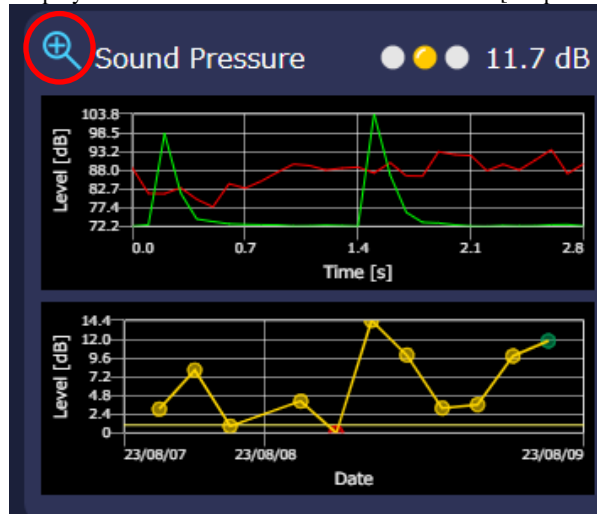
- ④ Displays a trend graph of the decision level.
 Clicking on the zero point can change the plot position of the analysis result graph.
 The plot position of the analysis result graph can be changed by clicking on the dot.
 Displays the sum of the power in each frequency band of the power spectrum analysed by Sound Pressure as an OA value.
 The sum of the Power Spectrum is taken to limit the frequency range, and the measurement results of the POA value obtained by summing the Power Spectrum over that range are displayed.
 Displays the measurement results of the POA values obtained by summing the Spectral Centroid and restricting the frequency range to the sum of the range.

5.10 Change the scale of the analysis result graph

This section explains how to change the scale of the graph of the analysis result.

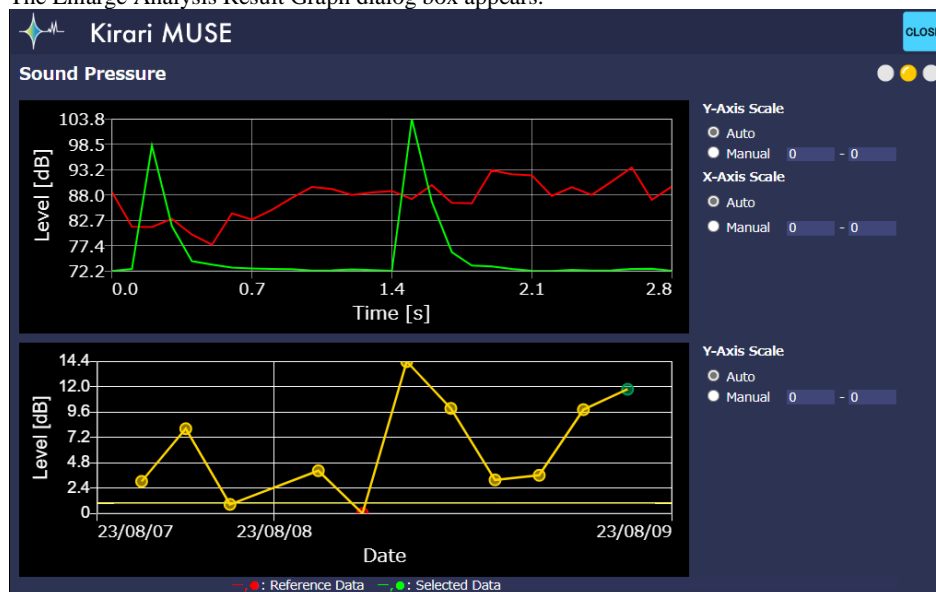
Procedure: 1

Displays the details of the recorded data. Click the [Graph Magnification] icon of the analysis whose scale is to be changed.



Procedure: 2

The Enlarge Analysis Result Graph dialog box appears.



Procedure: 3

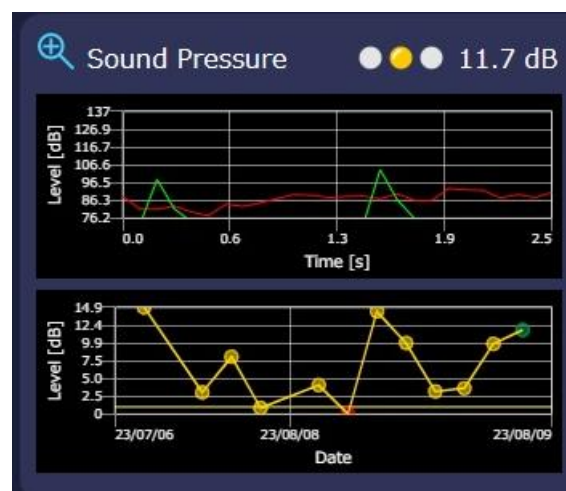
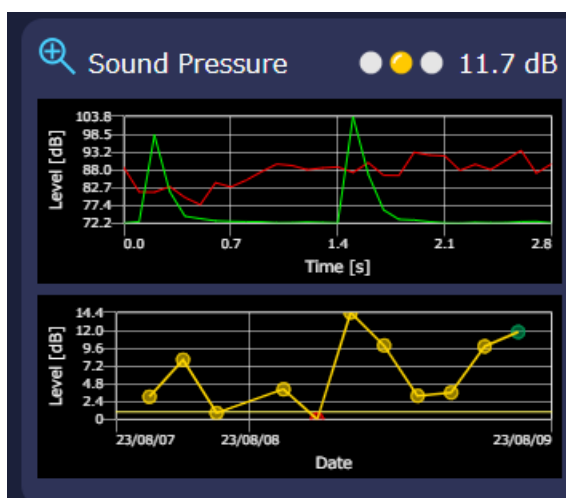
Y Select [AUTO] [MANUAL] for the scale of the axis and X axis. When [MANUAL] is selected, enter the value of the lower/upper limit. Removing the focus (moving) will reflect the input value.

※ When changing, be sure to change from the upper limit value for consistency check.



Procedure: 4

When you close the Enlarged Analysis Result Graph dialog box, it is also reflected in the graph on the detail page of the captured data.



5.11 Download details of recorded data

This section describes how to download the details of recorded data (screen capture, device information file).

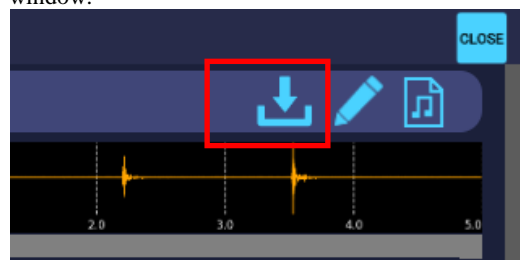
Procedure: 1

Displays the details of the recorded data to be downloaded.



Procedure: 2

Clicking the [DL] icon in the upper-right corner of the window downloads the captures and device info files of the displayed window.

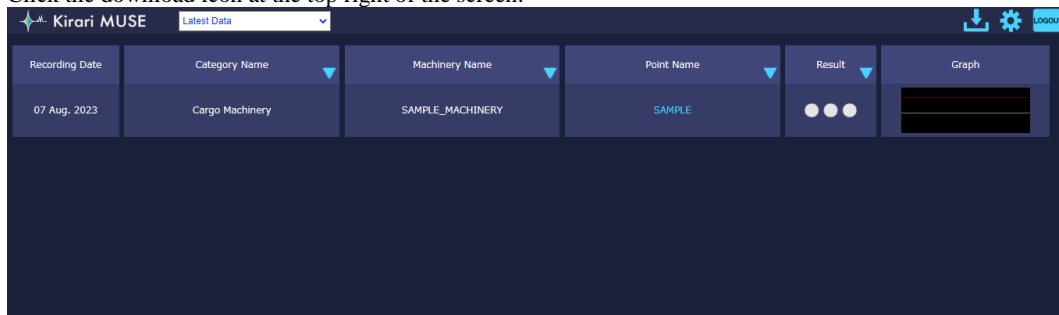


5.12 Recorded Data and Database Output

I will explain how to output recorded data and database.

Procedure: 1

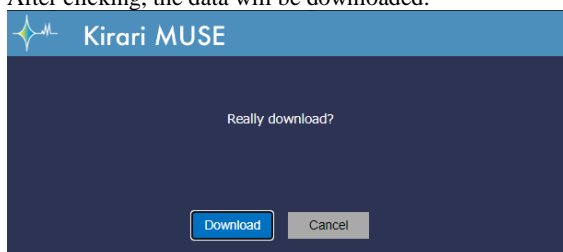
Click the download icon at the top right of the screen.



Procedure: 2

When the download confirmation dialog box appears, click [OK].

After clicking, the data will be downloaded.

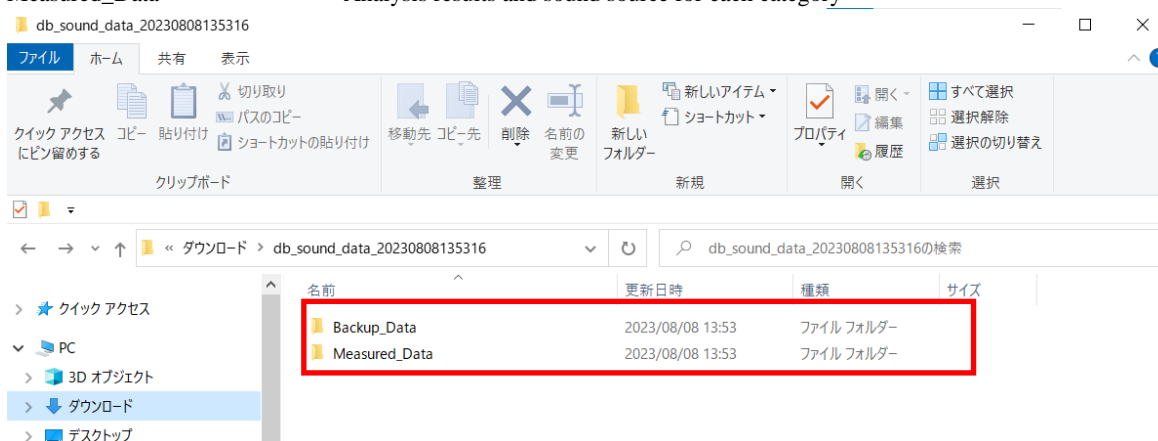


Procedure: 3

The downloaded data is as follows.

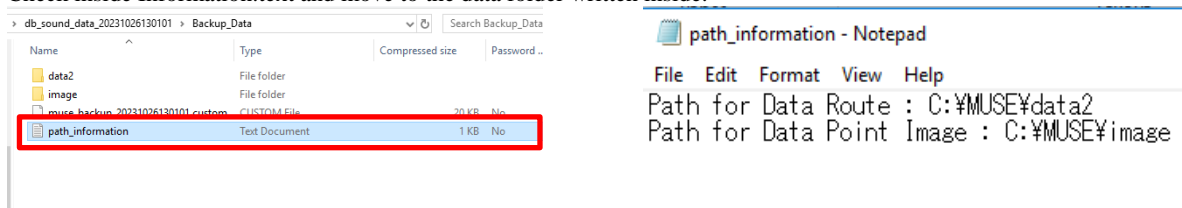
Backup_Data ... Analyzed results and audio source for each device

Measured_Data ... Analysis results and sound source for each category



Procedure: 4

Check inside Information.text and move to the data folder written inside.



6 Troubleshooting

If an error occurs, perform troubleshooting according to the following procedure. If troubleshooting does not improve the problem, stop using the unit immediately.

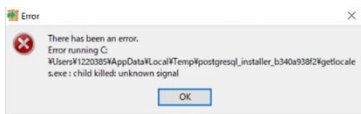
6.1 (Smartphone side)

Phenomenon	Probable Causes	Countermeasures
The smartphone cannot be charged.	The connection between the extension cable and the smartphone has a bad contact. Internal disconnection of the extension cable.	Connect or disconnect the extension cable and try charging again. Replace the extension cable.
Smart phone Power does not turn on	The battery is not charged.	Fully charge the battery before turning on the power. Please. Or, try charging using another charging cable.
Cannot check the internal file.		Try to restart the app. Or restart the app after restarting the smartphone. Please.
Cannot start the app		After restarting the smartphone, Please launch the app after launching Smartphone.
Button does not respond	The app is unstable or frozen.	Try to restart the app. Or restart the app after restarting the smartphone. Please.
Cannot change the setting.	As above	As above
Unable to measure	The connector of the sensor board comes off. It is.	Check if the connector is disconnected Please do it.
	Disconnection or no contact of cables communicating between the sensor and smartphone.	Check the wiring for any abnormality.
When playing back recorded data, a smartphone No sound	The volume of the smartphone is set to mute, Manner mode, or set to low.	Mute the smartphone, cancel Manner mode, and set the volume to a high level.
As above	[Measuring terminal application version 1.2] If the connector on TYPE-A side of the extension cable remains connected, USB microphone takes precedence and no sound comes out of the smart phone.	Remove the connector on TYPE-A side of the extension cable. Then play back the cable.
As above	[Measuring terminal application version 1.3] Output Device of the sound output setting of the measuring terminal app is set to "Android setting".	From [⋮] => [SETTING] in the upper-right corner of the Measuring Terminal app window to Output Device Set to "Built-in Speaker".

(Smartphone side -continued-)

Phenomenon	Probable Causes	Countermeasures
Cannot synchronize with PC	The connection of the smartphone is not set.	Refer to Section 2.11 to set up the connection and establish communication with PC.
Captured data is playing but no sound	On the smartphone speaker volume You are in small or silent mode.	For the smartphone speaker volume Please raise. Or cancel the silent mode.
Transfer of captured data Fail to send	Smartphone connection settings Not.	Set according to Section 2.11 and communicate with PC. Make sure you have a good faith.
The app cannot be terminated	The app is freezing.	Forcibly terminate the app. Or turn off your phone, Turn on the power again.

6.2 (PC side)

Phenomenon	Probable Causes	Countermeasures
Cannot install PC app File	Logged in with Administrator privilege.	Log in as a user with administrator privileges to install the app.
Error when executing 1-postgresql-9.6- install.bat (see right)	Runtime not installed. 	Download and install Microsoft Visual C++ Redistributable 2013 from the link below and then run 1-postgresql-9.6-install.bat. https://aka.ms/vs/17/release/vc_redist.x64.exe
Error when executing 5-python_install.bat	Other Python and Anaconda applications are installed.	After uninstalling the Python and Anaconda applications, remove the once-installed environment according to section 2.10. Then perform the installation according to sections 2.1-2.5.
Server Cannot Start	The app is not installed correctly.	2 Refer to the section (Preferences) to install PC App.
Server doesnot start when PC starts up	Shortcut not created in Startup.	Copy the “ runMUSE.bat “ shortcut in C:\MUSE'app' to the start-up. Alternatively, after starting the PC, double-click “runMUSE.bat” to run it.
Cannot log in	The password is wrong.	Enter the correct password and log in. Please do it. (See section 2.6.)
Cannot start the application	Programmes (mainly web servers) that use TCP port 80 are already installed and have conflicting port numbers.	Open the MUSE.ini file in C:\MUSE with a text editor and change port=80 to a port number that is not in use (e.g. port=9090). Afterwards, go to http://localhost:9090/ in the address bar.
Operation does not respond	PC app (browsers) is frozen.	Restart the browser and log in again. (See section 2.6.)
Cannot change the settings	As above	As above

Phenomenon	Probable Causes	Countermeasures
Audio is output when playing recorded data. No	PC's loudspeaker is too loud or muted.	Increase PC's loudspeaker volume.
As above	Output speaker settings are correct File	Check PC loudspeaker settings Please.
Images cannot be read.	Not a file format that can be referenced.	Check the file format of the image and change it if necessary.
There is analysis data. Be unable to force	Browser operation failure	Restart the browser. Change the save destination.
Cannot end the app	PC app (browsers) is frozen.	Close the browser. If it is still not closed, start Task Manager and execute Forced Quit. Please.

7 Appendix

7.1 IP addressing

[Kirari MUSE] The setting of IP is as follows.



No	Equipment	IP address	サブネットマスク
1	Personal computer	192.168.11.*	255.255.255.0
2	Wi-Fi router	192.168.11.1	255.255.255.0
3	Smartphone (Android)	DHCP	-

※In Android of using the equipment, be sure to connect it to Wi-Fi router.

※set the least significant bit (LSB) of the IP address of the PC to 2-255.

※Use Bluetooth earphones as there is no earphone jack due to changes in smartphone specifications.

7.2 File format for batch registration

• Case [Category] and [Machinery]

The following rules apply to the format file for batch registration of [Category] and [Machinery] from master maintenance.
Edit the specified file before use.

	1	2	3	4	5	6	7	8	9
1	カテゴリ名 (最大10文字)	機器名 (最大15文字)	基本情報	項目名 (最大11文字)	値 (最大7文字)	単位 (最大4文字)	機器状態	項目名 (最大11文字)	単位 (最大4文字)
2			1				1		
3			2				2		
4			3				3		
5			4				4		
6			5				5		
7			6				6		
8			7				7		
9			8				8		
10			9				9		
11			10				10		
12			1				1		
13			2				2		
14			3				3		
15			4				4		
16			5				5		
17			6				6		
18			7				7		
19			8				8		
20			9				9		
21			10				10		
22			1				1		
23			2				2		

Define [category name] in the first column. (Up to 10 characters) Define

Define [Device Name] in the second column. (up to 15 characters)

Define [Item Name] of the basic (rating) information associated with the device, in the fourth column. (Up to 11 characters)

Define the [value] of the basic (rated) information associated with the device in column 5. (up to 7 characters)

Define the [unit] of the basic (rating) information associated with the device, in the sixth column. (Up to 4 characters)

Define the [Item Name] of the device status associated with the 8th column. (up to 11 characters)

Define the [Unit] of the device status associated with the device, in the 9th column. (up to 4 characters)

When defining multiple [Category Name] and [Device Name], copy lines 2 to 11 and insert a line. (12 to 21st line image)

- Case [Favourites]

The following rules apply to the format file for batch registration of [Favourites] from master maintenance.
Edit the specified file before use.

Route Name (Max 22 characters) *Required	
--	--

	Category Name	Machinery Name
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		

NOTE
-Only the categories /machineries that have already been registered in the software are can be registered in this route list. In order to prevent registration errors due to typos, it is recommended to export the bulk registration list once and copy-paste the names.

Define what you want to register for each route on each sheet (Route1 to Route10).

Define [Route name] on the second line of each sheet. (max. 24 characters)

Define the registered [Category Name] in the second line after the fourth line of each sheet. (max. 15 characters)

Define the registered [Equipment Name] in the third line after the fourth line of each sheet. (max. 24 characters)

The [Route name] field is mandatory. If it is not stated, the information on the sheet will not be registered.

When defining [Category] and [Equipment Name], both [Category Name] and [Equipment Name] must be defined.

The [Category Name] and [Equipment Name] that can be defined are limited to those that have already been registered.

If there are not enough fields for [Category Name] and [Equipment Name], add a line under the last line to define them.

There is no limit to the number of [Category Name] and [Equipment Name] entries.

7.3 Obtaining data from a smart phone via USB

This section describes how to acquire data from the display unit (Android).

Step 1

Restart the handset to refresh the data in Android phone. Press and hold the power button and tap "Restart".

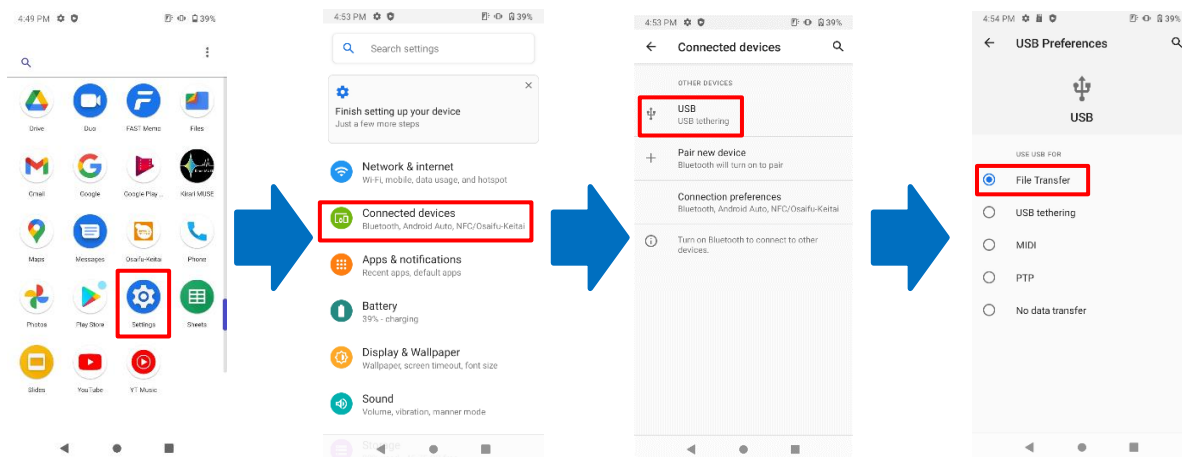
Step 2

Connect Android terminal and PC in USB.

Step 3

Switch Android terminal USB mode to "File-transfer" mode.

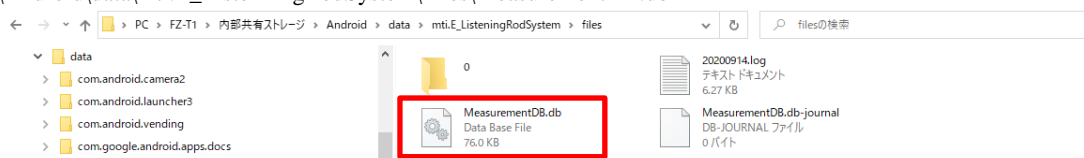
Tap "Settings" → "Connected device" → "USB" → "Transfer files".



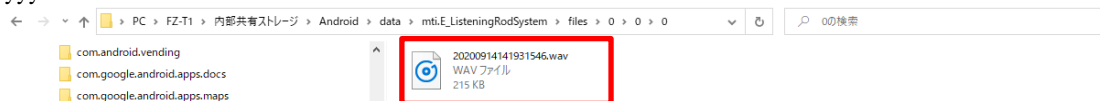
Step 4

You can retrieve data from Explorer from:

- Local database
\\[Terminal Name]\\Internal Shared Storage
\\Android\\data\\mti.E_ListenningRodSystem\\Files\\MeasurementDB.db



- Recorded data
\\[Terminal Name]\\Internal Shared Storage
\\Android\\data\\mti.E_ListenningRodSystem\\files\\[CategoryID]\\[DeviceID]\\[PlaceID]
\\yyyyMMddHHmmssSS.wav



8 Specification

8.1 Hearing stick specifications

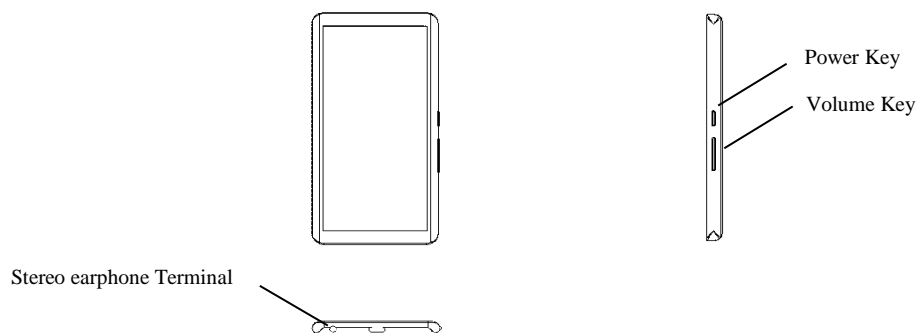


Nabtesco item No.	73769313-01
Operating Temperature	5 ~ 35 °C
Storage Temperature	
Operating Humidity	45 ~ 85 %
Storage Humidity	
Housing material	Aluminum
Dimensions	W 7 × D 15 × H 83
Mass	1.2 kg
Charging port shape	USB Type-C

Nameplate



8.2 Smartphone specifications



Nabtesco item No.		74767906-01
Manufacture / Model		AIM459-NT1 (Aimex Co., Ltd.) (Arrows BZ02 (FCNT Co., Ltd.))
OS		Android™ 12
CPU		Snapdragon 460
Memory ^{※1}		RAM : 4GB ROM : 64GB
Display		5.6 inch HD+ (720×1480) Capacitive method
Dimensions (mm)		W 148 × D 71 × H 9.4
Mass		160 g
Waterproof / Dustproof		IPX5/IPX8, IP6X
Chemical Resistance		Compatible Chemicals (Ethanol, IPA, Sodium hypochlorite) ^{※2}
Earphone mike Jack		φ 3.5 mm stereo mini plug
Internal Battery	Battery Type	Lithium-ion Battery
	Nominal Boltage	3.85 V
	Nominal Capacity	3600 mAh
Standby Time		790 hours ^{※3}
Battery Charging Time		220 minutes ^{※4}
Power Supply Method		AC adapter

※1 The memory built into the unit cannot be removed.

※2 This is a chemical resistance performance assuming wiping off with a sterilization sheet.

No discolouration, no paint fading or deformation due to chemicals.

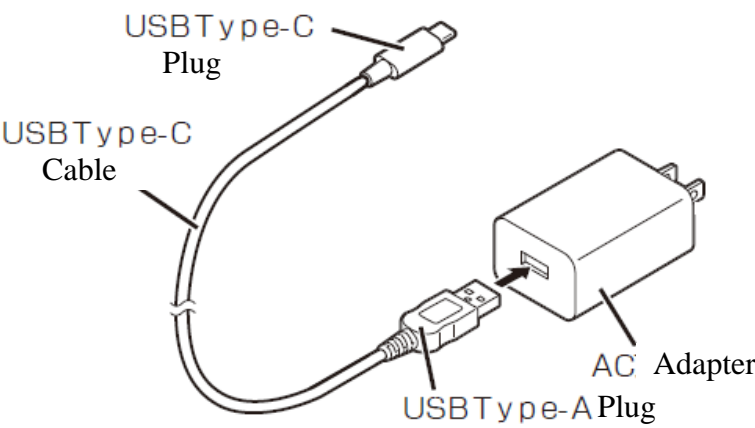
※3 Based on FCNT measurement standatds. May vary depending on the environment in which the product is used.

※4 Charging time is the power off.

*For more information, Refer to the Smartphone instruction manual at the URL below.

https://www.fcnt.com/support/manual/assets/pdf/CA92005-0590_Android12.pdf

8.3 Chargers specifications



Nabtesco item No.	73769313-01
Input	AC100V ~ 240V / 0.3A / 50/60Hz
Output	DC5.0V / 2.0A
Dimensions (mm)	W 38 × D 22 × H 48
Mass	40 g

※Use the supplied power conversion plug if the connection ports are different.

8.4 Power conversion plugs specifications



Nabtesco item No.	73769313-01
Input	AC100V ~ 240V / 0.3A / 50/60Hz
Output	DC5.0V / 2.0A
Dimensions (mm)	W 38 × D 22 × H 48
Mass	40 g

8.5 Smartphone application specifications

Item	Contents
Target terminal	AIM459-NT1 (Aimex Co., Ltd.)
OS versioning	Android 12
To distribute	APK Files
Display method	Vertical display system
Version	3.2 ※

※Subject to change without notice.

8.6 PC application specifications

Item	Contents
Environment	.NET Framework 4.5.2
Runtime	Visual C++ runtime library 2013
Database	PostgreSQL [postgresql-9.6.5-1-windows-x64]
Server name	4in1PC port-number: 5432
Database name	Muse
User name	None
Pass word	Can be changed in the settings
Recommended specification	OS : Microsoft Windows 10 More than CPU : 2.8GHz : More than 8.0GB
Recommended resolution	1440×900
Versioning	4.3※

※Subject to change without notice.

Caution !

- The PC application may not work properly if other versions of Python or Anaconda are installed on the PC; uninstall Python or Anaconda and then install the PC application.

●Contact details

If you still have questions after reading this instruction manual, please contact your dealer or the following address.

- Nabtesco Corporation

Marine Control system company Service group

Email : mr_service@nabtesco.com