Noise Dosimeter Data Management Software AS-05 Viewer

Instruction Manual

Organization of the NB-14 Instruction Manual

There are four types of instruction manuals for Noise Dosimeter NB-14.

Quick Start Guide

This manual describes the basic handling of Noise Dosimeter NB-14.

Hardware Guide

This manual describes the detailed instructions for handling Noise Dosimeter NB-14.

Software Guide (This Document)

This manual describes the instructions for handling Noise Dosimeter Data Management AS-05 Viewer.

Technical Guide

This manual is a technical guide to noise dosimeters and noise dosimetry, including the noise dosimeter performance, microphone structure and characteristics, and how the dedicated windscreens affect measurements.

You can download the instruction manuals from our “Occupational safety and health measures related to noise” web page.

https://osh.rion.co.jp/nb-14/qrcode-manual

Usage License Agreement

Important

- Please read the following Usage License Agreement carefully before using this software product.

This Software Usage License Agreement (hereinafter referred to as "Agreement") sets forth the terms and conditions for the use of Noise Dosimeter Data Management Software (AS-05 Viewer) (hereinafter referred to as the "Software") provided by Rion Co., Ltd. (hereinafter referred to as "Rion"). Customers must consent to this Agreement in order to use the Software. The customer who uses the Software (hereinafter referred to as "You") must consent to this Agreement in advance.

Article 1 Authorized Use

Rion authorizes you to use the Software (including any upgraded or customized versions; the same shall apply hereinafter) on the condition that you comply with the terms of this Agreement. Your use of the Software constitutes that you agree with the terms and conditions of this Agreement.

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5. This Agreement does not grant you any rights to transfer the rights specified in this Agreement to any third parties.
6. Rion shall not be liable for any consequences of your actions as set forth in this Article.

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4. Rion (hereinafter in this Article, including Rion's affiliates and subsidiaries) shall not be liable for any change or loss of stored data due to a problem occurring with the Software.
5. In no event does Rion assume liability for any kind of direct or indirect damage, loss of profit or anticipated gain, or any other damage caused by the use of the Software, or the inability to use the Software.
6. In no event does Rion assume liability for any problem caused by an alteration or modification of the Software by you. Rion also does not assume liability for any damage caused to yourself by such an alteration or modification.
7. Except as explicitly provided in this Agreement, Rion shall not be liable to you or a third party for damages of any kind arising out of, or in connection with, the Software.

Article 5 Software Updates

1. Rion may update the Software upon prior notice to you.
2. Rion may temporarily suspend the provision of the Software to you due to updates, maintenance, etc. of the Software as set forth in the preceding paragraph. However, Rion shall not be liable for any damages incurred by you as a result of such temporary suspension.

Article 6 Termination of Use

1. You can terminate the use of the Software at any time by destroying the Software and all associated documentation.
2. Rion may terminate the provision of Software to you without prior notice if you breach any of the terms of this Agreement. In such a case, you are obligated to immediately destroy the Software and all associated documentation (including any unauthorized copies).
3. Rion may terminate the provision of Software to you with at least three (3) months' notice.
4. Rion shall not be liable for any damages incurred by you due to your inability to use the Software in accordance with the preceding two paragraphs.
5. This Agreement shall be effective as long as you continue to use the Software.

Article 7 Other Items

1. If the Software and the Product are taken from Japan to any other country, the Foreign Exchange and Foreign Trade Law, the United States Export Administration Act, and all other applicable laws and regulations of the country must be strictly observed.
2. This Agreement shall be exclusively governed by the laws of Japan.
3. In the event of any dispute arising in connection with this Agreement, the court with jurisdiction over the location of Rion's head office shall be the exclusive court of first instance.

Article 8 Changes to this Agreement

Rion reserves the right to change this Agreement at any time without notice. In this case, you will be deemed to have agreed to the revised Agreement at the time you use the Software after the change is made to the Agreement.

Handling Precautions

Examples of pictorial indications

Specific prohibitions may be displayed in the illustrations.

Display	Meaning
Important	Failure to observe the precautions indicated by this may result in malfunction of the software.
Note	Denotes special information that is helpful in utilizing the capabilities of the software but that is not directly related to safety.

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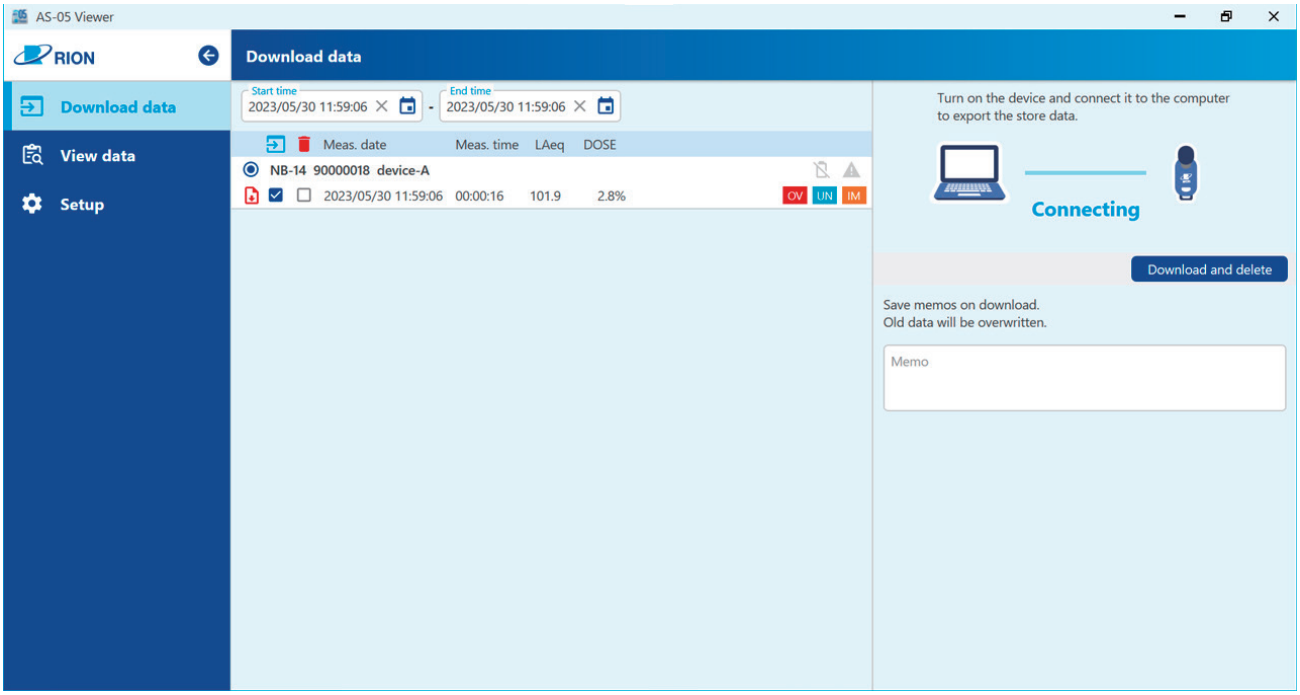
1

Outline of this Software

Noise Dosimeter Data Management Software AS-05 Viewer imports the data measured by the noise dosimeter into a computer, making it possible to view the measurement data and output reports.



2

Operating Environment

This software operates in the following environment:

Compatible OS	Microsoft Windows 10 64 bit .NET Framework 4.7.2
Supported language	English
Screen resolution	1366 x 728 or higher Minimum window size: 1280 x 680 Basic window size: 1920 x 1080 (Full HD)

Note

- A USB 2.0 port is required to connect a measuring instrument.
- When connecting multiple measuring instruments, one USB port is required for each instrument.

3

Installation Method

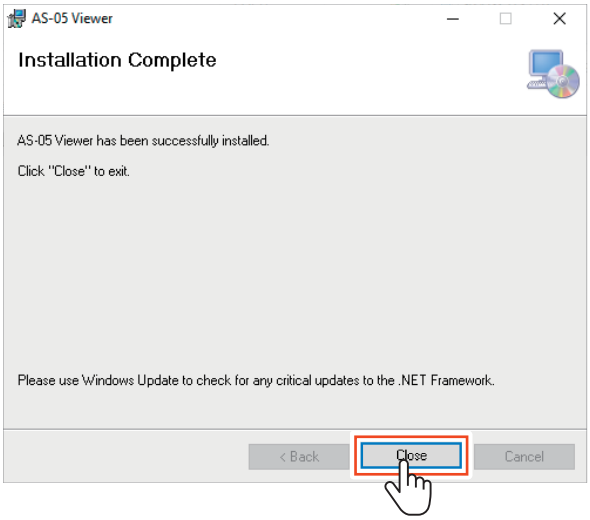
1 Download the installation file of this software.

1. **Access the following URL with a web browser.**
   You must complete user registration on Rion's website in advance.
   https://rion-sv.com/download/software
2. **Enter "AS-05" in the search window, and click "AS-05 Viewer" to download.**

2 Double-click the downloaded installer file to start it, and follow the instructions on the screen to install.

Installation is complete when the following screen appears.

Click [Close] to finish the installation.



Note

To uninstall

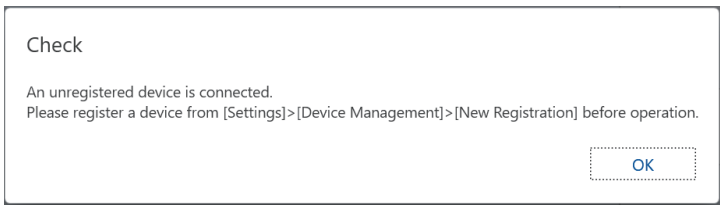
(1) Click the Microsoft Windows icon .
(2) Click [Settings] and select [App].
(3) Select "AS-05 Viewer" from the app list, and click [Uninstall].
(4) Follow the instructions on the screen to uninstall.

4

Registering the Measuring Instrument with the Software

Important

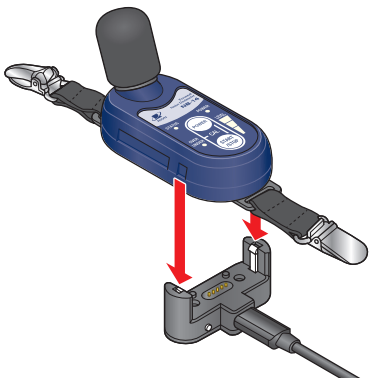
- Before importing measurement data, the measuring instrument needs to be registered with the software. (Measurement data cannot be imported from unregistered measuring instruments.)
- When connecting for the first time, the confirmation dialog box appears. Click [OK].



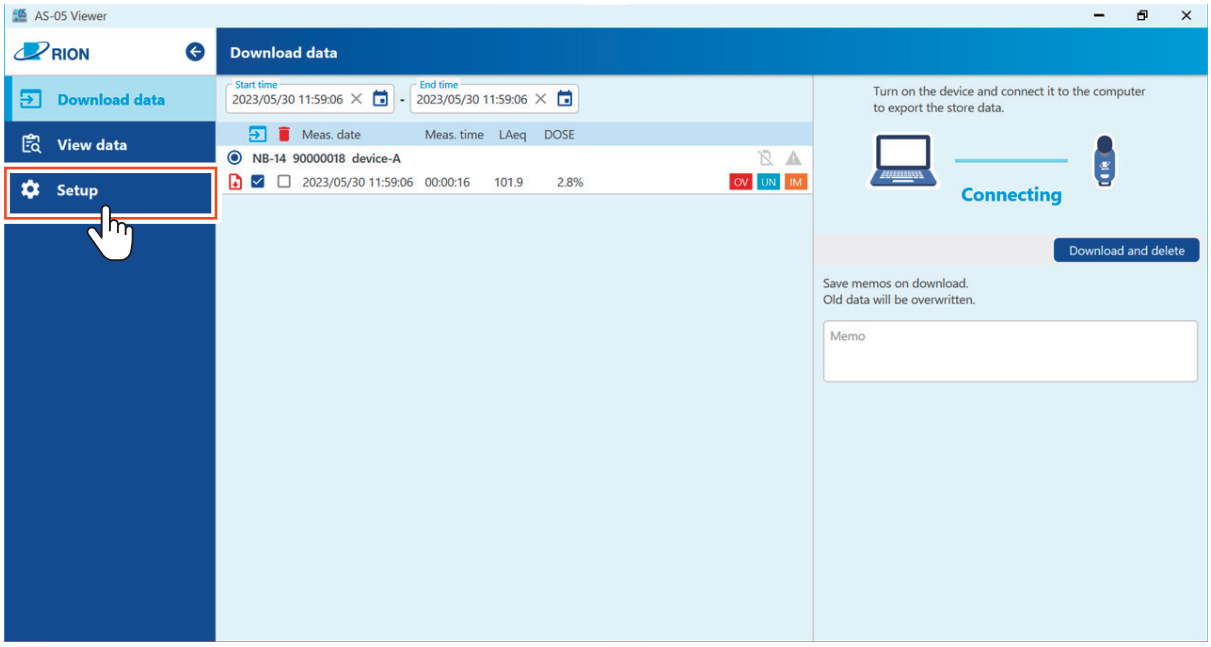
1 Connect the device to the dedicated USB cable.

Important

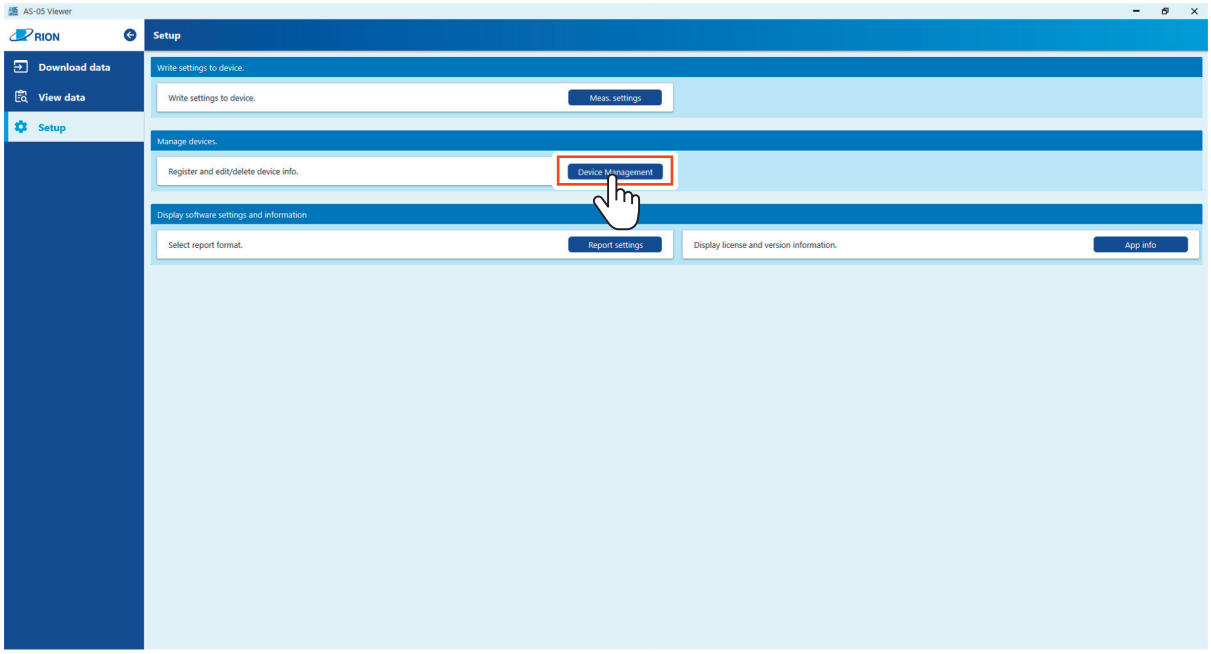
- When the device is connected to a computer, files stored in the internal memory of the device will appear on a removable disk, but please do not edit or delete these files. If files are edited or deleted, it will no longer be possible to use the software to import data, etc.



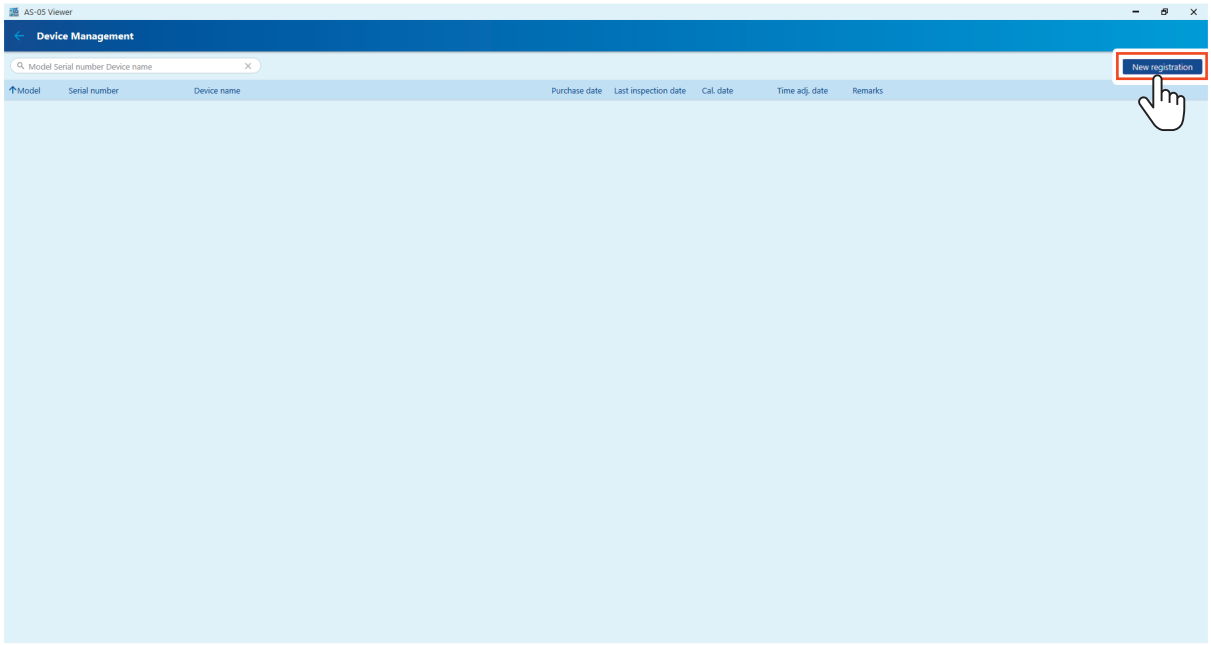
2 Launch the software, and click [Setup] from the side menu.



3 The [Setup] screen appears. Click [Device Management].

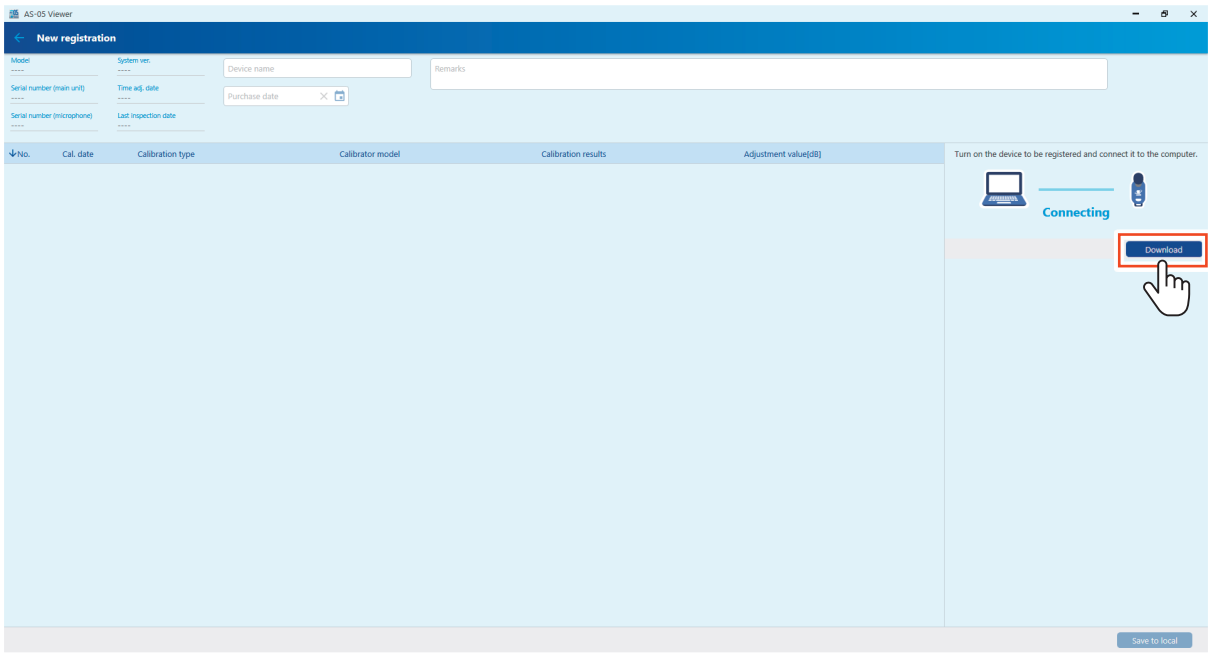


4 The [Device Management] screen appears. Click [New registration].

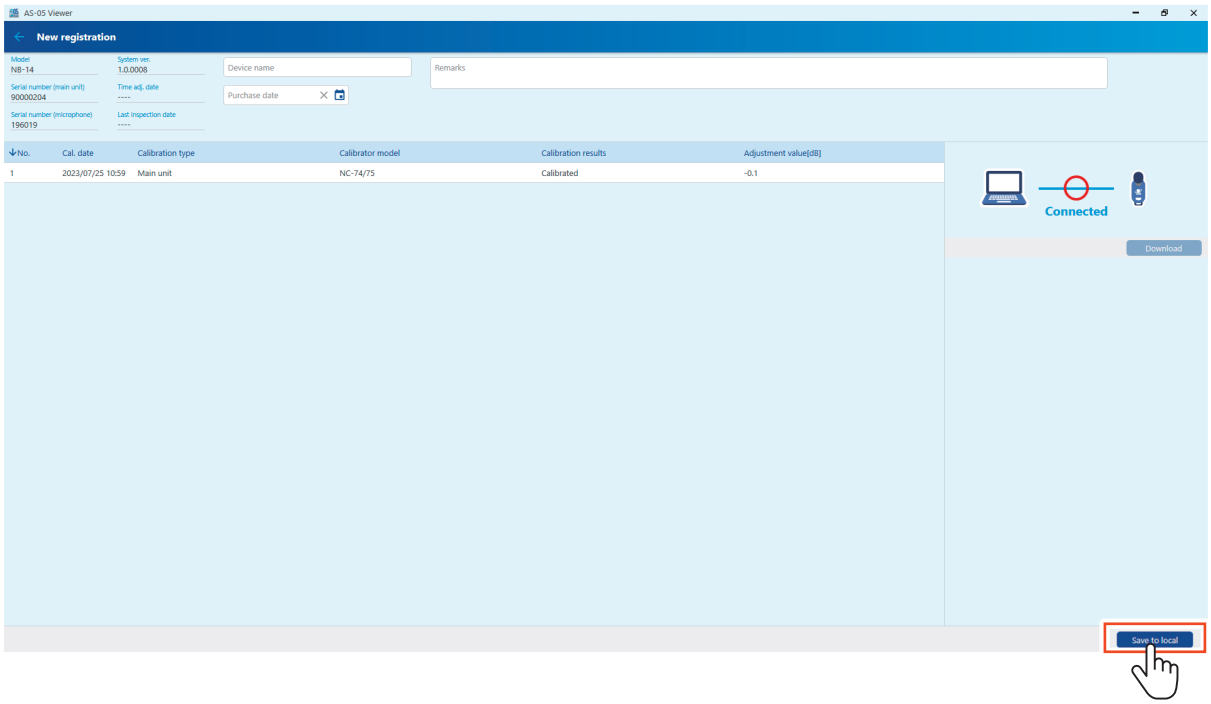


5 The [New registration] screen appears. Click [Download].

The [Device name] (up to 15 characters), [Purchase date], [Remarks] (up to 100 characters), etc. for the measuring instrument can also be set.

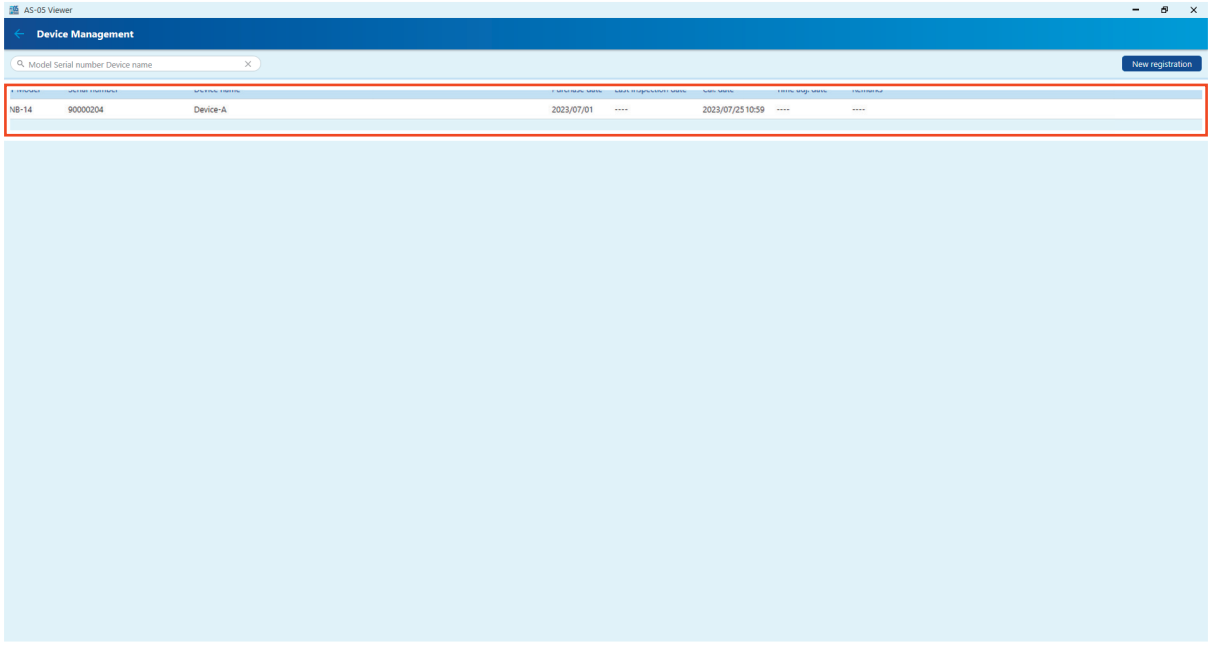


6 The data of the measuring instrument will be imported and displayed. Click [Save to local].



7 The display will switch to the [Device Management] screen. Check that the registered measuring instrument is displayed in the list.

Registration is complete if it is displayed in the list.
The registration information for measuring instruments can be set at any time afterwards.



5 Report Preparation Process

The process from measurement to report preparation is as follows.

Measuring » Hardware Guide

▼

Acquiring Data from the Measuring Instrument » Page 14

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Viewing the Measurement Data » Page 17

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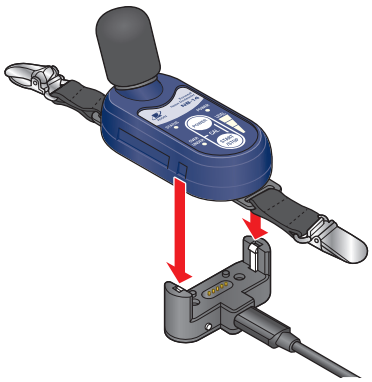
6

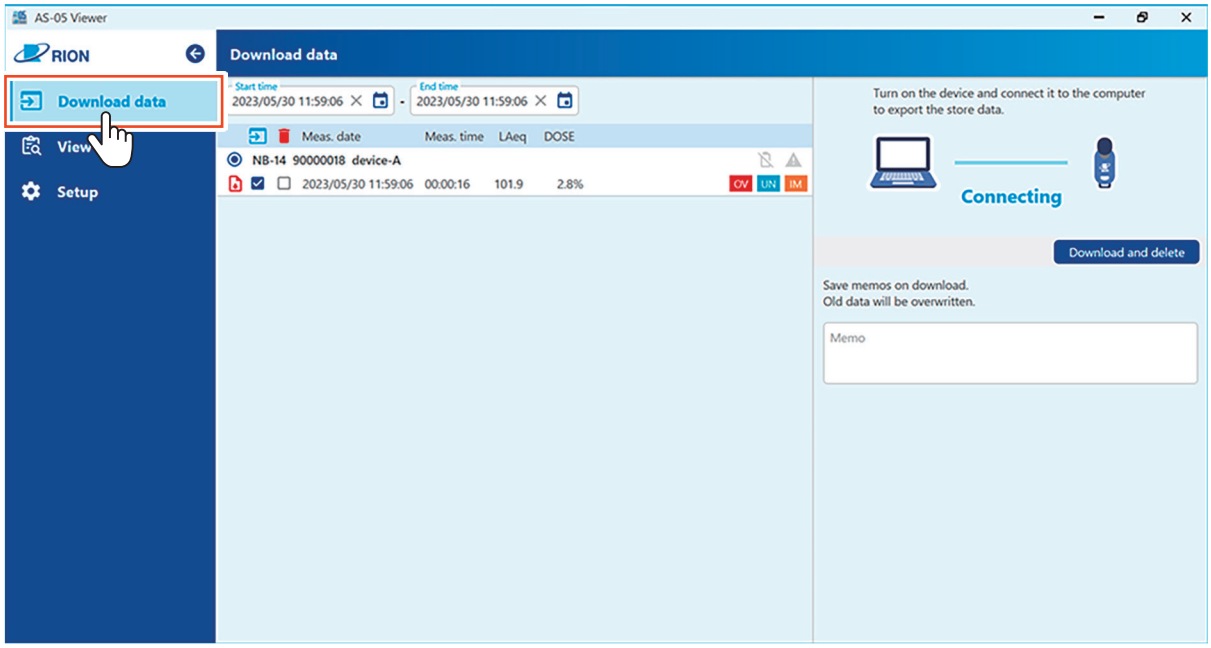
Acquiring Data from the Measuring Instrument

1 Connect the device to the dedicated USB cable.



2 Select [Download data] from the side menu.

The [Download data] screen appears.

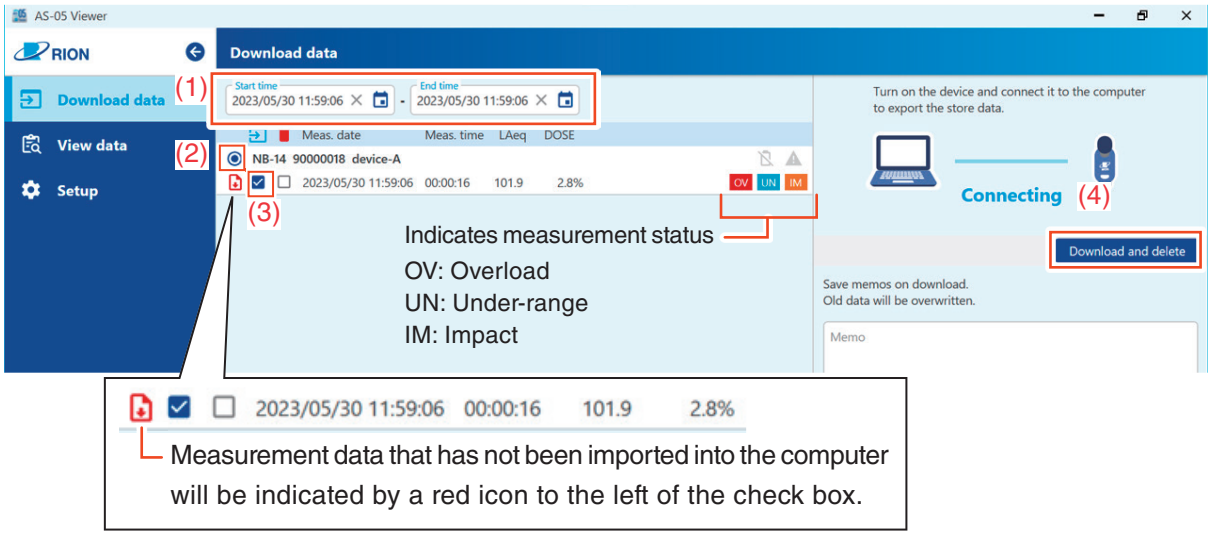


Note

- Before importing measurement data, the measuring instrument needs to be registered with the software. For registration, refer to Page 9.

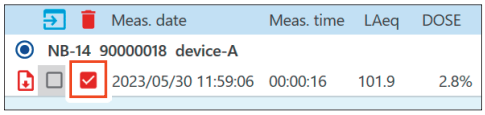
3 Import the data by following the steps below.

1. **Set the start date/time and the end date/time of the data you want to import.**
2. **If multiple measuring instruments are connected, select the measuring instrument to import.**
3. **Measurement data that has never been imported into the computer are pre-selected. Select all the data you want to import.**
   Shift-click to select all data between the first and second selections.
4. **Click [Download and delete].**

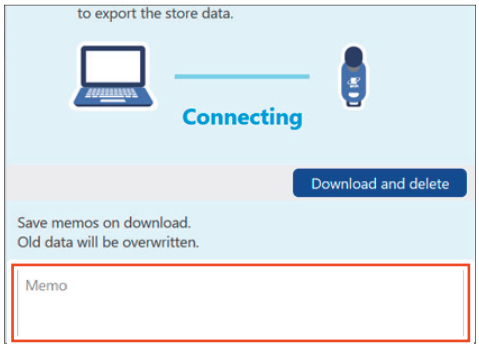


Note

- To delete measurement data, select the [Delete] check box (right side) and click [Download and delete].
  A red check mark will appear for deletion.

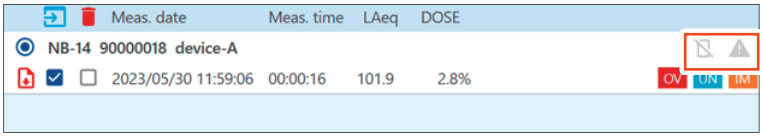


- If both the [Download] and [Delete] check boxes are selected, the measurement data will be deleted after being imported into the computer.
- To leave a note for the imported data, enter it in the [Memo] field. (Notes can be edited even after importing data.)

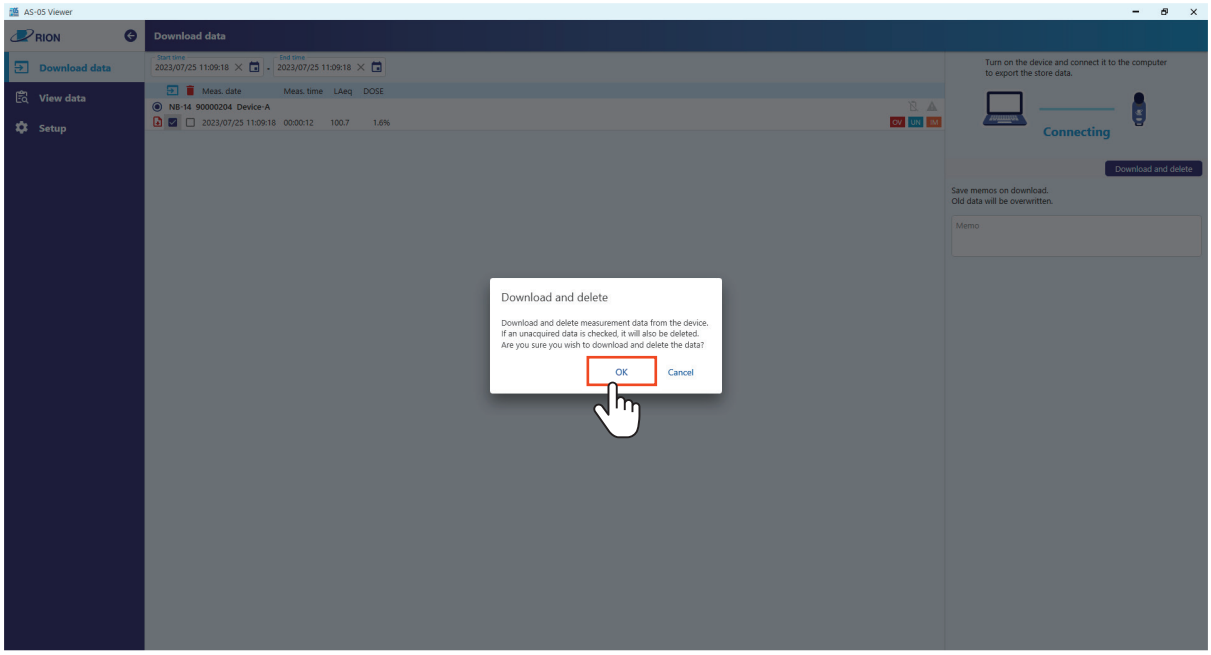


- The status of the measuring instrument is displayed with icons.

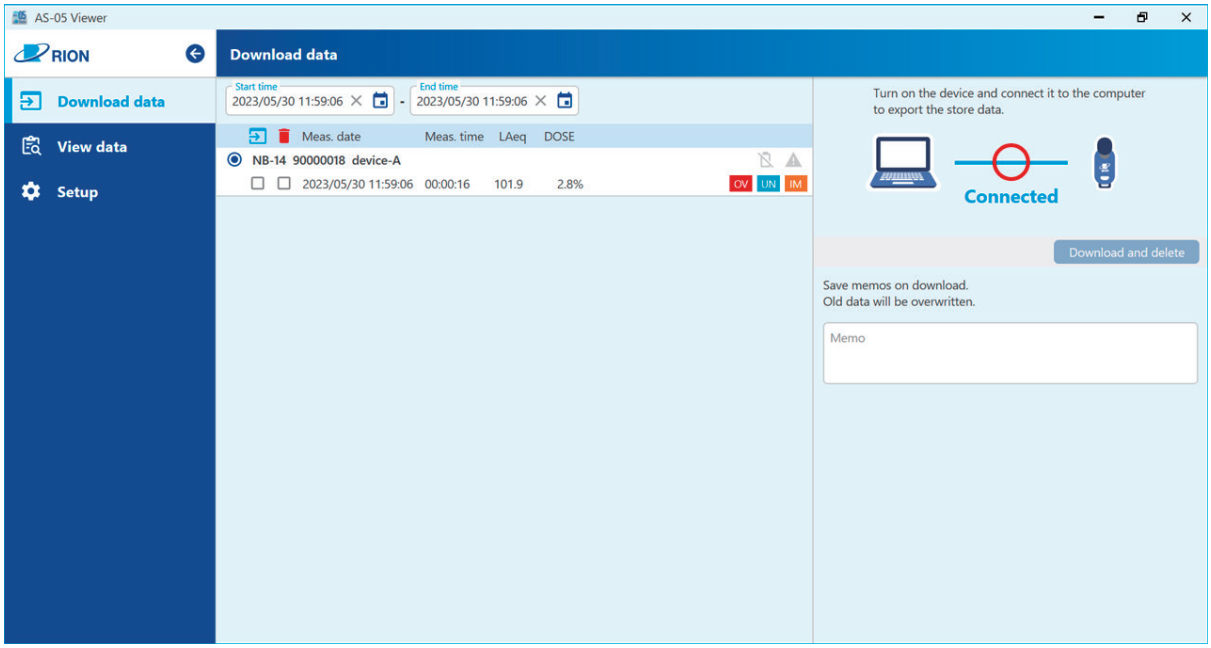
	Less than 50% battery remaining
	Less than 12 hours of memory remaining



4 The confirmation screen appears. Click [OK].



5 Data import is complete when [Complete] is displayed.

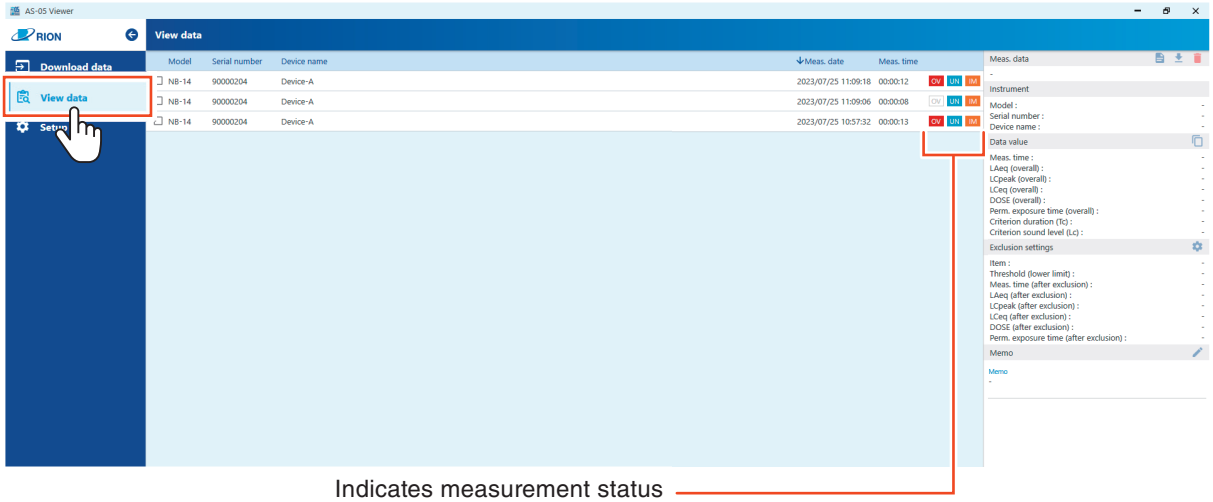


7

Viewing the Measurement Data

1 Select [View data] from the side menu.

The [View data] screen appears.

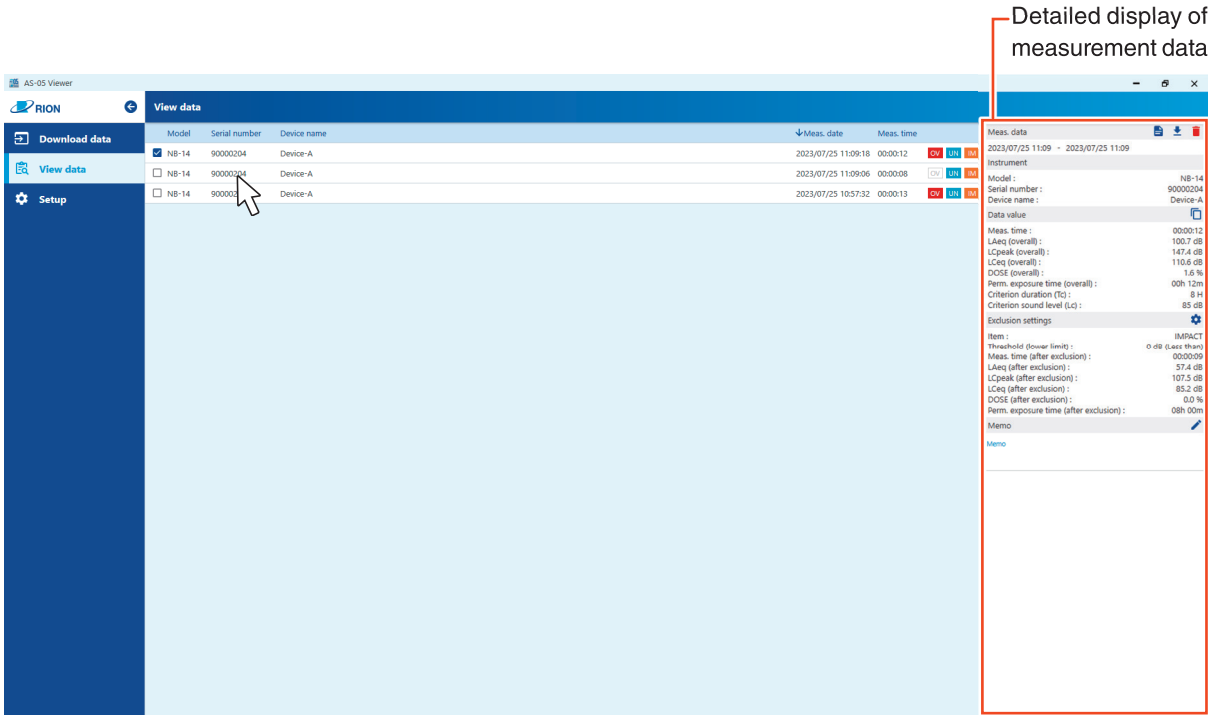


Indicates measurement status

OV	Overload Records sound pressure levels that exceed the measurement range
UN	Under-range Records sound pressure levels below the measurement range
IM	Impact Sensors on the main unit detect impact

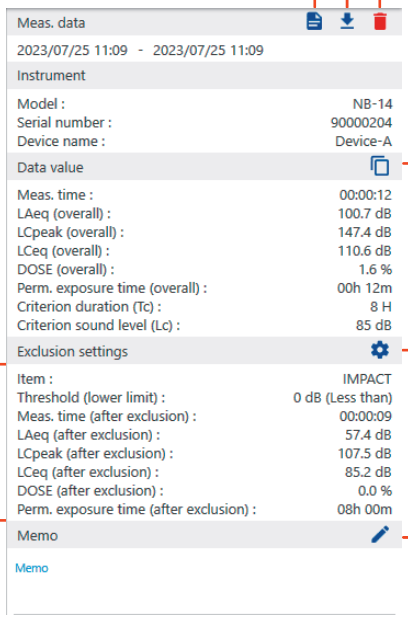
2 Select each data to check the details.

The details of the measurement data will not be displayed if multiple data are selected.



Detailed display of measurement data

Deletes the selected data.
Outputs the selected measurement data in CSV format.
Outputs the selected measurement data as a report in Excel format.



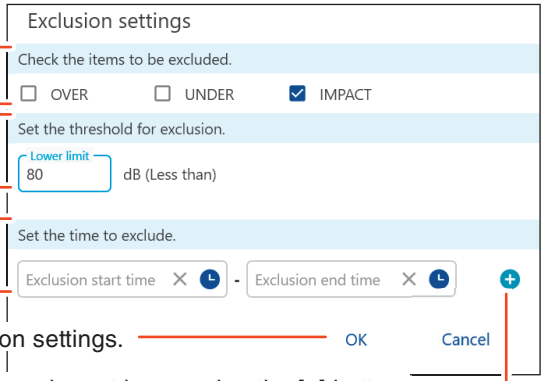
Copies data values to the clipboard. Copied data can be pasted directly into Excel and other applications.

Displays results after completing exclusion settings.

Edits notes.

Exclusion setting

Click to set the conditions for calculating exclusions.
The value after exclusion is quoted in the result column of the personal noise exposure measurement result report.



Select the items to be excluded.

Excludes measurements less than the set value.

Excludes measurements in the specified time range.

Click [OK] to apply the exclusion settings.

Up to 10 different time ranges can be set by pressing the [+] button.

Note

- The DOSE value represents the ratio of the exposure level when 100% is based on a criterion duration of 8 hours and criterion noise level of 85 dB (in the case of Japan).
- This application calculates and displays allowable time for exposure ([Data values] and [Exclusion setting]) until the DOSE value reaches 100%. However, even if 8 hours are exceeded, the time is set at 8 hours with consideration to the standard working hours of Japan.
- The values displayed in [Data values] (L_{Aeq}, L_{Ceq}, L_{Cpeak}, DOSE) are the results calculated internally by the dosimeter itself (rounded to one decimal place).
- The values displayed in [Exclusion setting] (L_{Aeq}, L_{Ceq}, L_{Cpeak}, DOSE) are calculated by the application using the values output from the main unit of the dosimeter to the first decimal place (rounded to one decimal place).

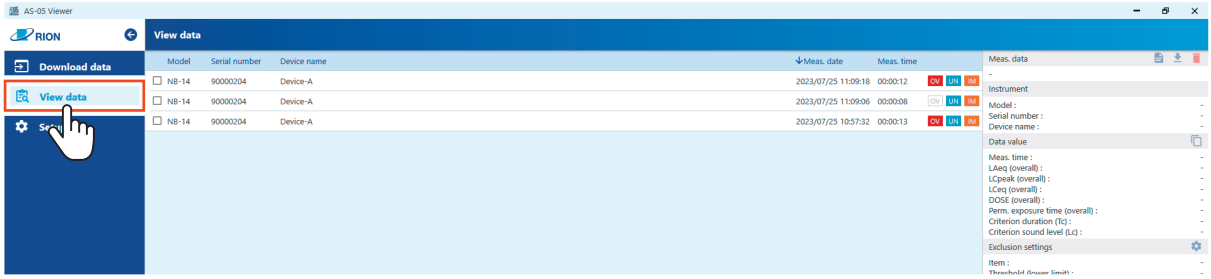
8

Outputting the Measurement Data

Measurement data can be output in CSV format or as a report including a personal noise exposure measurement result report.

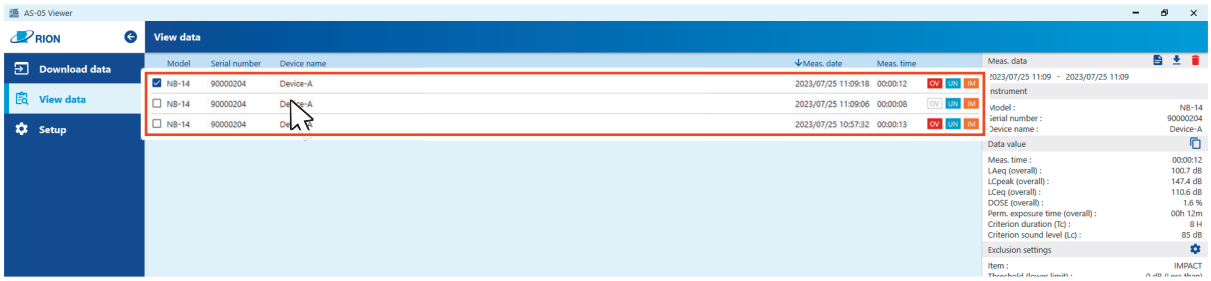
1 Select [View data] from the side menu.

The [View data] screen appears.

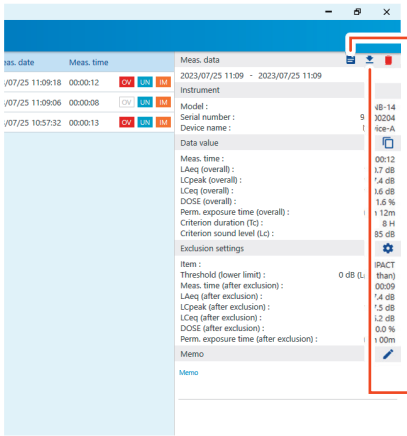


2 Select the data you want to output.

Shift-click to select all data between the first and second selections.



3 Click the [Data output] button or the [Report output] button.



[**Report output**] button
Outputs a report in Excel format.

- Up to five measurement data can be selected. If there are more than six measurement data, please output them in several batches.
- The first tab contains the personal exposure measurement result report, and the second and subsequent tabs contain the measurement report and measurement data, respectively.
  The value after exclusion is quoted in the report of personal exposure measurement results.

[Data output] button
Creates a new folder and the data is output in CSV format within that folder.

4 Select a save location, and the selected measurement data is output in CSV format or Excel format.

Name the file as needed before saving.

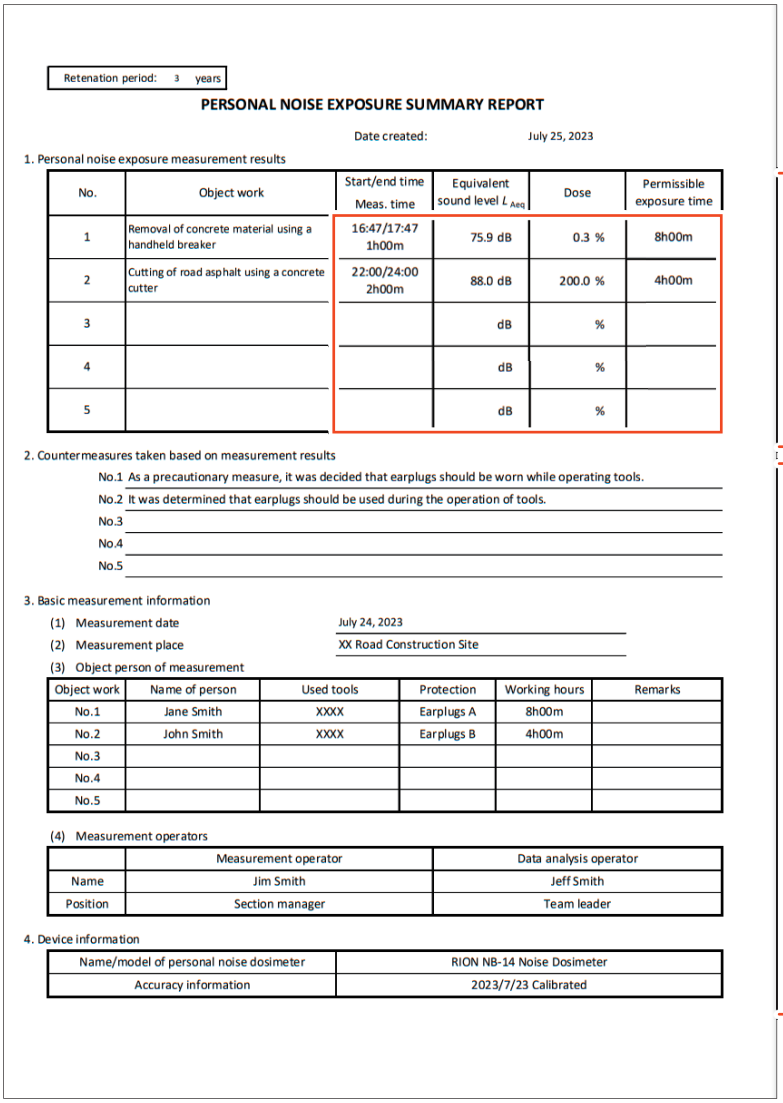
Report format

The report output function allows you to select one to five measurement data and create a report of personal noise exposure measurement results in Excel format.
The Excel file consists of the following three sheets:

- Report of personal noise exposure measurement results
- Report of selected measurement data
- Selected measurement data

<Report of personal noise exposure measurement results>

The first tab is a page of the report of personal noise exposure measurement results in accordance with the guidelines of the Ministry of Health, Labor and Welfare of Japan.
It summarizes the information required for reporting personal noise exposure measurements.



Retenation period: 3 years

PERSONAL NOISE EXPOSURE SUMMARY REPORT

Date created: July 25, 2023

1. Personal noise exposure measurement results

No.	Object work	Start/end time Meas. time	Equivalent sound level L_{Aeq}	Dose	Permissible exposure time
1	Removal of concrete material using a handheld breaker	16:47/17:47 1h00m	75.9 dB	0.3 %	8h00m
2	Cutting of road asphalt using a concrete cutter	22:00/24:00 2h00m	88.0 dB	200.0 %	4h00m
3			dB	%	
4			dB	%	
5			dB	%	

2. Countermeasures taken based on measurement results

No.1 As a precautionary measure, it was decided that earplugs should be worn while operating tools.
No.2 It was determined that earplugs should be used during the operation of tools.
No.3
No.4
No.5

3. Basic measurement information

(1) Measurement date: July 24, 2023
(2) Measurement place: XX Road Construction Site
(3) Object person of measurement

Object work	Name of person	Used tools	Protection	Working hours	Remarks
No.1	Jane Smith	XXXX	Earplugs A	8h00m	
No.2	John Smith	XXXX	Earplugs B	4h00m	
No.3					
No.4					
No.5					

(4) Measurement operators

	Measurement operator	Data analysis operator
Name	Jim Smith	Jeff Smith
Position	Section manager	Team leader

4. Device information

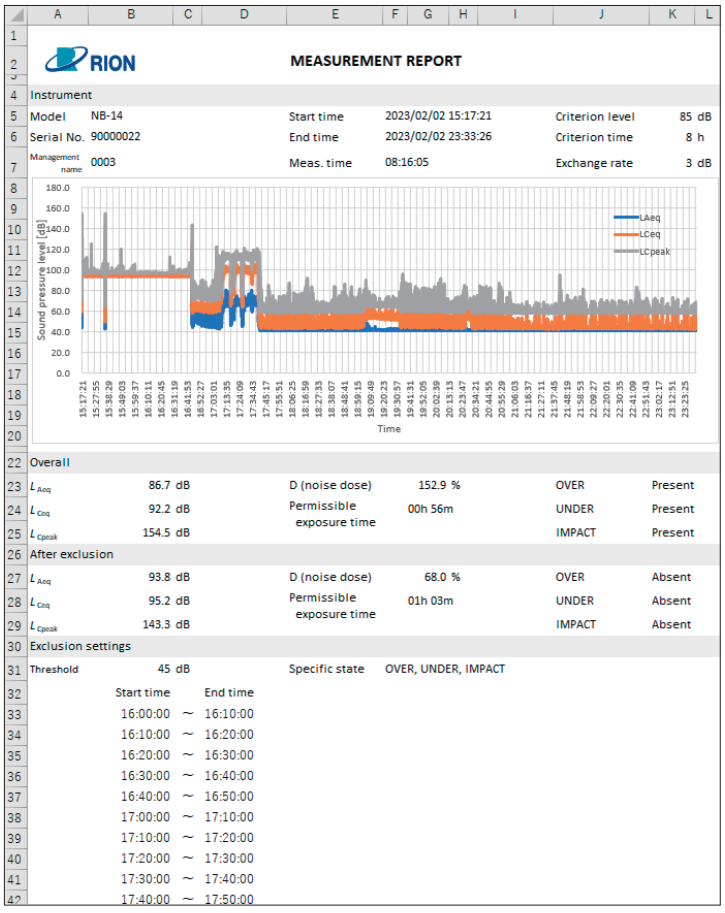
Name/model of personal noise dosimeter	RION NB-14 Noise Dosimeter
Accuracy information	2023/7/23 Calibrated

The [Creation date] and [Object work (annexed table)] fields are entered manually. Cells that need to be filled in are indicated in blue and turn colorless once filled in.
The red framed area is automatically populated with the values of the selected measurement data (up to five).

Items 2, 3, and 4 are entered manually. Cells that can be filled in are indicated in blue and turn colorless once filled in.

<Measurement report>

The measurement report displays a summary of the selected measurement data and a Time-Level graph.
The tab name No. X is related to the number of the first measurement result list and is created for each selected measurement data.



Information about the measuring instrument used, the measurement time and settings are displayed.

A Time-Level graph is displayed for each second of L_{Aeq}, L_{Ceq}, L_{Cpeak} data, with time on the X-axis and level on the Y-axis.

The measurement values of the entire measurement data are displayed.

The measurement values are displayed after exclusion of special conditions and levels.

The conditions under which the exclusion was made are displayed.

Note

- The initial data displayed in the graph of the measurement report is only L_{Aeq}. If you want to display data for L_{Ceq} and L_{Cpeak}, please edit the graph in Excel.

<Measurement data>

The measurement data shows the raw data (before exclusion) of the selected measurement data. The tab name No. X is related to the number of the first measurement result list and is created for each selected measurement data. The data content is the same as the data that is output in CSV format with [Data output].

	A	B	C	D	E	F	G	H	I	J	K
1	Store	Lc	Tc	ER	Permissible Exposure Time						
2	22	85	8	3	00h 56m						
3	File	Start Time	Measurer	LAeq	LCeq	LCpeak	Dose	Over	Under	Impact	
4	merged	2/2/2023 15:17	8:16:05	86.7	92.2	154.5	152.9	1	1	1	
5	Address	Start Time	Measurer	LAeq	LCeq	LCpeak	Dose	Over	Under	Impact	
6	1	15:17:21	0:00:01	44.2	60.7	72.5	0.0	0	1	0	
7	2	15:17:22	0:00:01	43.9	59.5	70.7	0.0	0	1	0	
8	3	15:17:23	0:00:01	44.9	60.4	73.4	0.0	0	1	0	
9	4	15:17:24	0:00:01	107.8	127.7	151.9	0.7	1	0	0	
10	5	15:17:25	0:00:01	117.0	125.5	154.5	6.2	1	0	1	
11	6	15:17:26	0:00:01	94.1	94.7	105.2	6.2	0	0	0	
12	7	15:17:27	0:00:01	93.7	101.2	119.9	6.3	0	0	0	
13	8	15:17:28	0:00:01	98.8	112.9	131.3	6.3	0	0	0	
14	9	15:17:29	0:00:01	93.8	93.8	97.1	6.4	0	0	0	
15	10	15:17:30	0:00:01	93.8	93.9	102.4	6.4	0	0	0	
16	11	15:17:31	0:00:01	93.8	93.8	97.0	6.4	0	0	0	
17	12	15:17:32	0:00:01	93.8	93.8	97.6	6.5	0	0	0	
18	13	15:17:33	0:00:01	93.8	93.8	97.1	6.5	0	0	0	
19	14	15:17:34	0:00:01	93.8	93.8	97.6	6.5	0	0	0	
20	15	15:17:35	0:00:01	93.8	93.8	97.5	6.5	0	0	0	
21	16	15:17:36	0:00:01	93.8	93.8	97.3	6.6	0	0	0	
22	17	15:17:37	0:00:01	93.8	93.8	97.2	6.6	0	0	0	
23	18	15:17:38	0:00:01	93.8	93.8	97.4	6.6	0	0	0	
24	19	15:17:39	0:00:01	93.8	93.8	97.4	6.6	0	0	0	
25	20	15:17:40	0:00:01	93.8	93.8	97.0	6.7	0	0	0	
26	21	15:17:41	0:00:01	93.8	93.8	97.4	6.7	0	0	0	
27	22	15:17:42	0:00:01	93.8	93.8	97.3	6.7	0	0	0	
28	23	15:17:43	0:00:01	93.8	93.8	97.5	6.7	0	0	0	
29	24	15:17:44	0:00:01	93.8	93.8	97.4	6.8	0	0	0	
30	25	15:17:45	0:00:01	93.8	93.8	97.2	6.8	0	0	0	
31	26	15:17:46	0:00:01	93.8	93.8	97.2	6.8	0	0	0	
32	27	15:17:47	0:00:01	93.8	93.8	97.0	6.9	0	0	0	
33	28	15:17:48	0:00:01	93.8	93.8	97.6	6.9	0	0	0	
34	29	15:17:49	0:00:01	93.8	93.8	97.3	6.9	0	0	0	
35	30	15:17:50	0:00:01	93.8	93.9	101.7	6.9	0	0	0	

Personal noise exposure report | Measurement report No.1 | Measurement data No.1

Criterion sound level (L_c), criterion duration (T_c), exchange rate (ER), and workable time (Permissible Exposure Time) are displayed.

L_{Aeq}, L_{Ceq}, L_{Cpeak}, and DOSE are displayed for the measurement start date and time, measurement time, and all measurement times from start to end.
Over, Under, and Impact are displayed as "1" if there is at least one "1" (detected) in the sixth and succeeding lines.

In regards to L_{Aeq}, L_{Ceq}, and L_{Cpeak}, measurement data is displayed per second.
The DOSE value is the total from the start of the measurement to that time.
For example, the DOSE value in Address line 10 shows the total up to 10 seconds after the start of the measurement.

Note

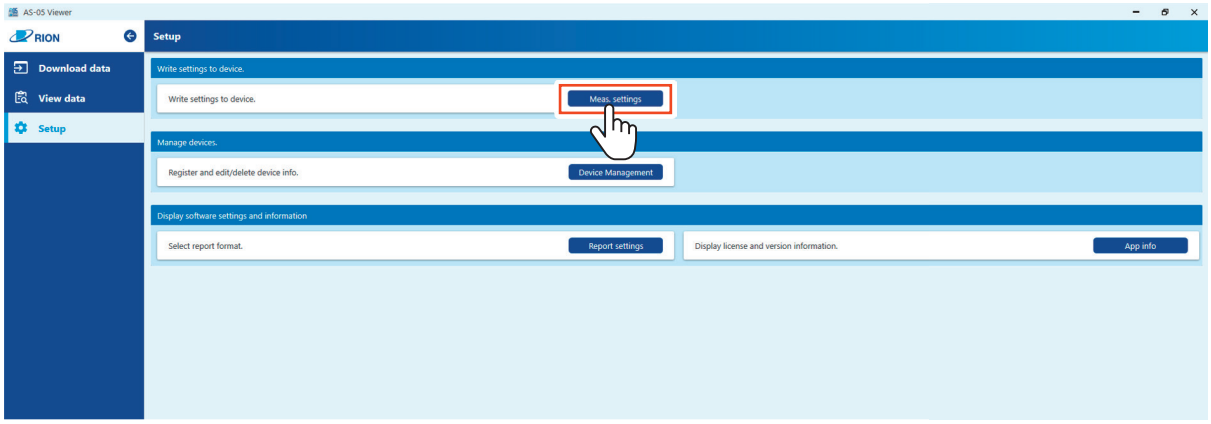
- The above data values (L_{Aeq}, L_{Ceq}, L_{Cpeak}, DOSE) are calculated within the dosimeter, including values with decimals included and are rounded to the second decimal place.

9 Setting

Select [Setup] from the side menu to display the settings screen.

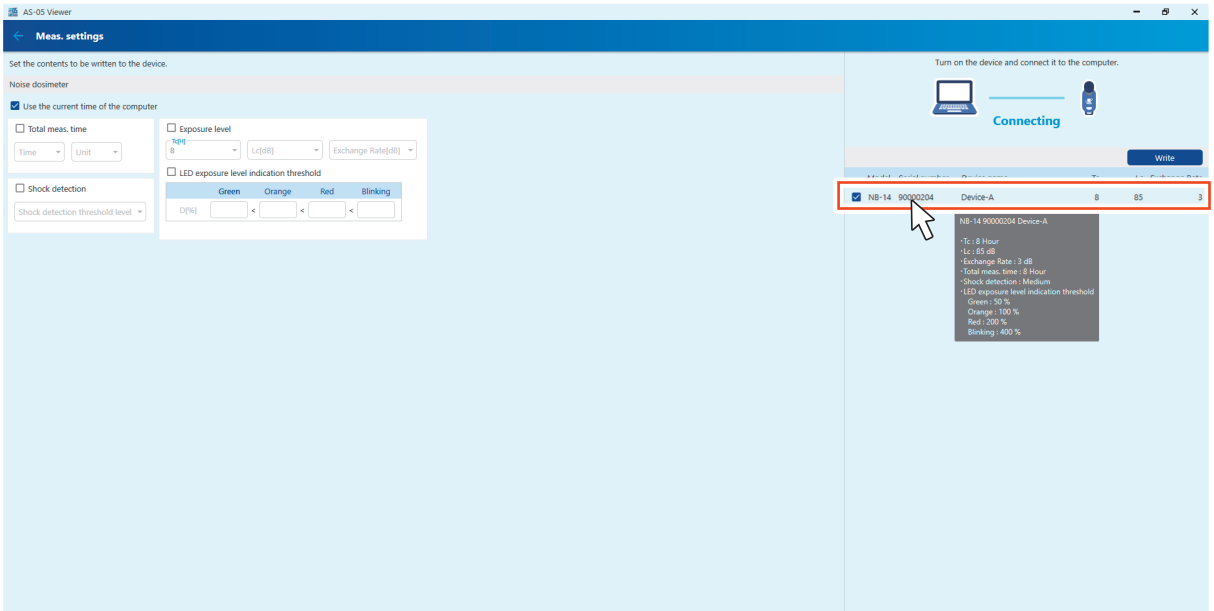
9.1 Setting the measuring instrument

1 **Select [Setup] from the side menu, and click [Meas. Settings].**



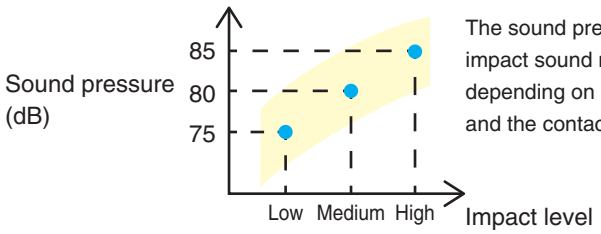
2 **The [Meas. Settings] screen appears. Click to select the measuring instrument you want to set.**

Write the setting information to the selected measuring instrument (the measuring instrument with a check mark). Multiple measuring instruments can be selected.
When you hover the mouse over a measuring instrument (red box), a pop-up displays information about the current settings for that instrument.



3 Configure the settings as needed.

By turning on the check box for each setting item, you can write that setting to the measuring instrument. Setting items that are turned off will not be written to the measuring instrument.
Generally, in Japan, measurements are taken with a criterion sound level of 85 dB, a criterion duration of 8 hours, an ER (Exchange Rate) of 3, and a lower limit of 80 dB for the sound pressure level to be excluded (the lower limit of the Page 18 exclusion setting).

Use the current time of the computer	Set the time set on the computer to the measuring instrument. If the measuring instrument continues to run with the POWER LED of the instrument flashing red, the power may be turned off and the time setting of the measuring instrument may be initialized. In this case, reset the clock date and time using this function.
Total meas. time	Set the time from when measurement starts until it automatically stops. The default value is 8 hours. **<Setting range>** When hours are selected as the unit: 1 to 16 When minutes are selected as the unit: 1 to 59
Shock detection	Set the sensitivity of the impact detected by the sensor inside the dosimeter from low, medium, and high. The default value of the measuring instrument is “medium”. When a “medium” sensitivity impact is detected, the L_{Aeq} of the impact sound recorded by the measuring instrument will be about 80 dB (approximate value). However, the sound pressure level generated will vary greatly depending on the way the impact is applied to the measuring instrument and the material.  The sound pressure level detected as an impact sound may differ from the set value depending on how the instrument is attached and the contact material. Fig. Approximate values for impact sound detection and range of detected sound pressure
Exposure level	<table><tr><td>Criterion duration (T_c)</td><td>This is the criterion value for exposure time. It is fixed to 8 hours and cannot be changed.</td></tr><tr><td>Criterion sound level (L_c)</td><td>This is the criterion value for the exposure level. Select from 85 dB or 90 dB. The default value is 85 dB.</td></tr><tr><td>Exchange Rate</td><td>This is the value used to convert the exposure level. Select from 3 dB or 5 dB. The default value is 3 dB.</td></tr><tr><td>LED exposure level indication threshold</td><td>Set the threshold for illuminating the exposure level indication LED. The value that can be set is the DOSE [%] value. Enter the value in the range from 0 to 1250 so that the LED transitions from green < orange < red < flashing. Default values are green: 50%, orange: 100%, red: 200%, and flashing: 400%.</td></tr></table>

Important

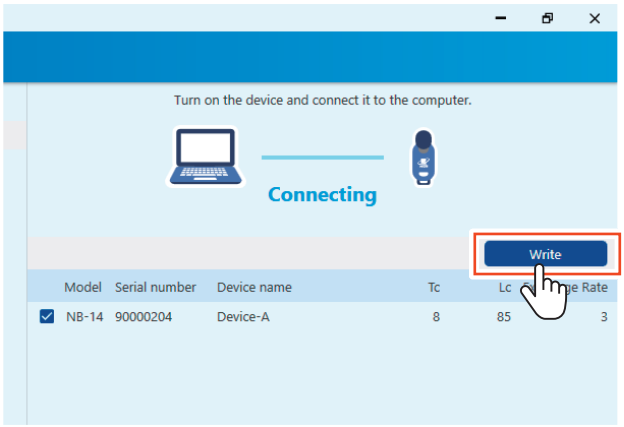
- Battery life for the NB-14 is up to 12 hours. Be careful if the total Auto store measurement time is to be set to 12 hours or more.

Note

- Change the criterion sound level and exchange rate in accordance with standards of each country.
- The time cannot be checked on the main unit of the dosimeter. Make sure to adjust the time before measuring. Adjust the time, especially when multiple dosimeters are used.

4 Click [Write].

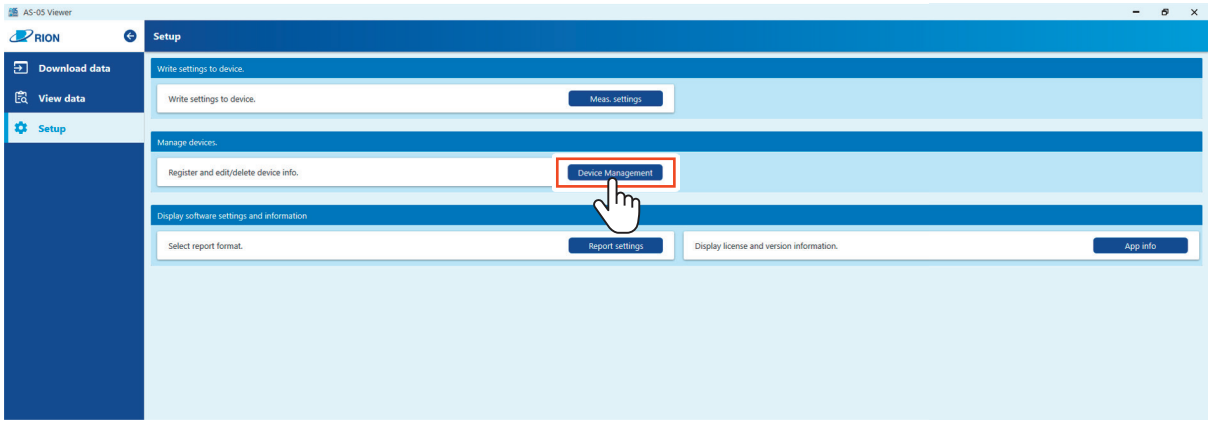
The time setting is complete when [Complete] is displayed and the [Setup] screen appears.



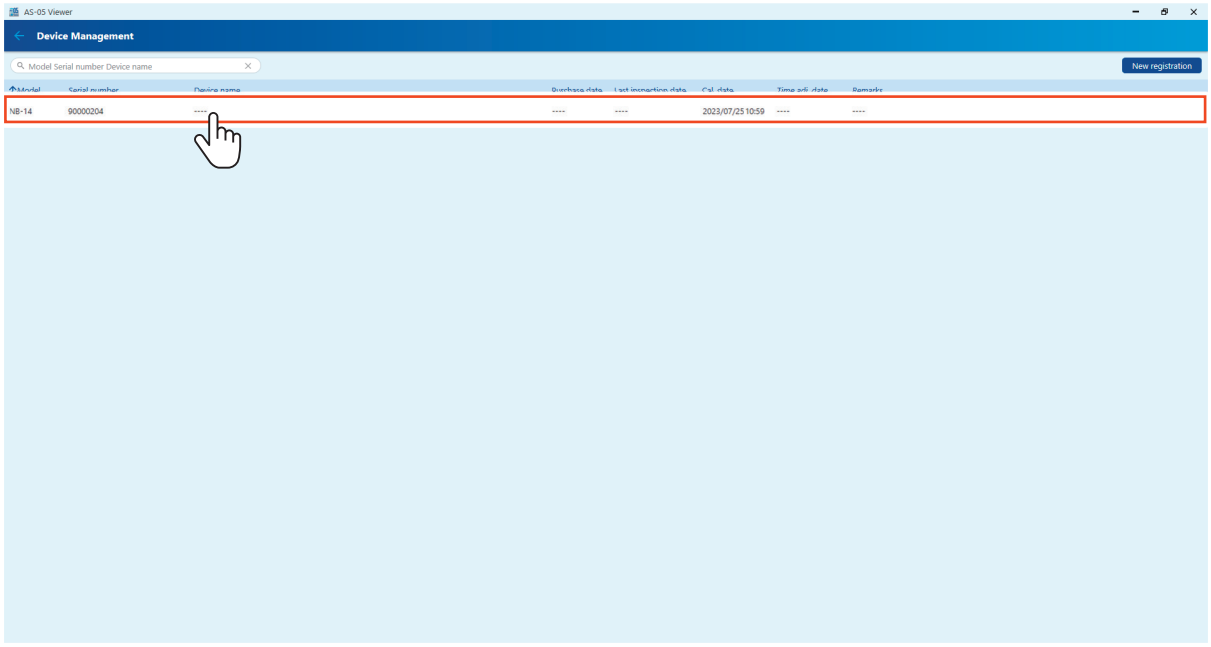
9.2 Setting the information of the measuring instrument

The list of registered measuring instruments can be displayed, and the device name and purchase date can be set.

1 **Select [Setup] from the side menu, and click [Device Management].**

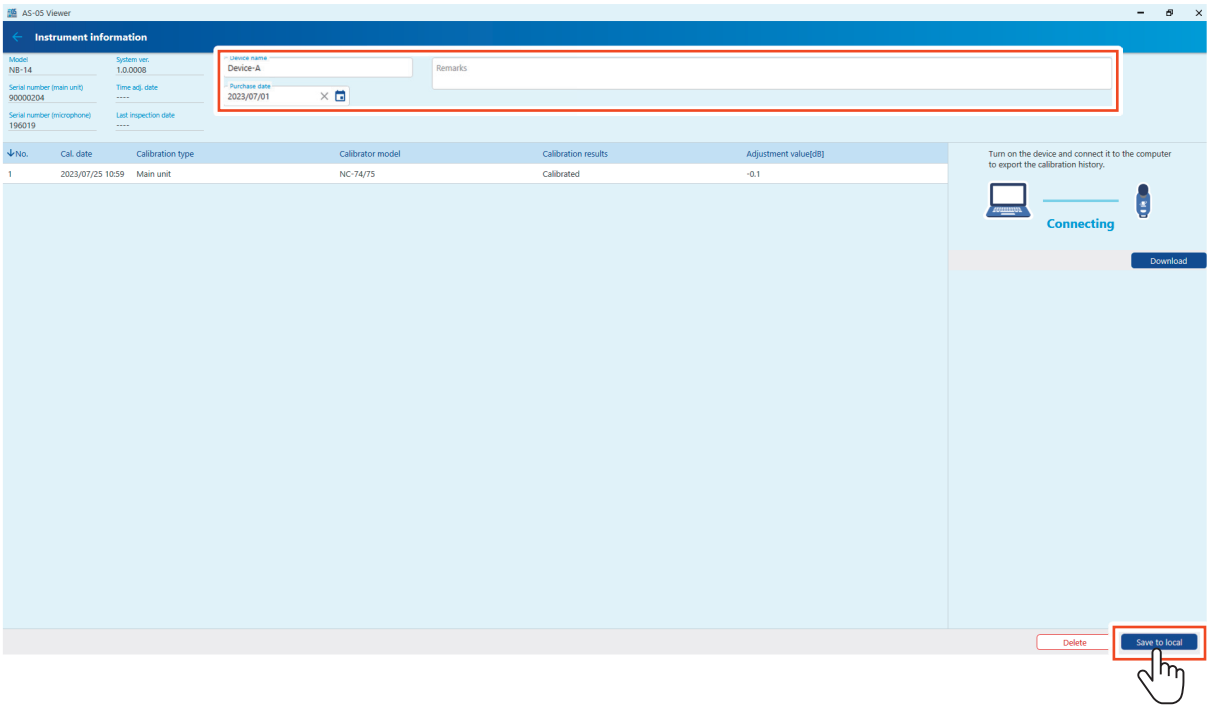


2 **The [Device Management] screen appears. Click to select the measuring instrument for which to set the information.**



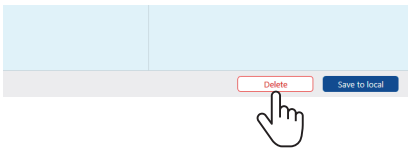
3 Set [Device name], [Purchase date], etc., and click [Save to local] to save.

- [Device name] should be within 15 characters.
- [Remarks] should be within 100 characters.



Note

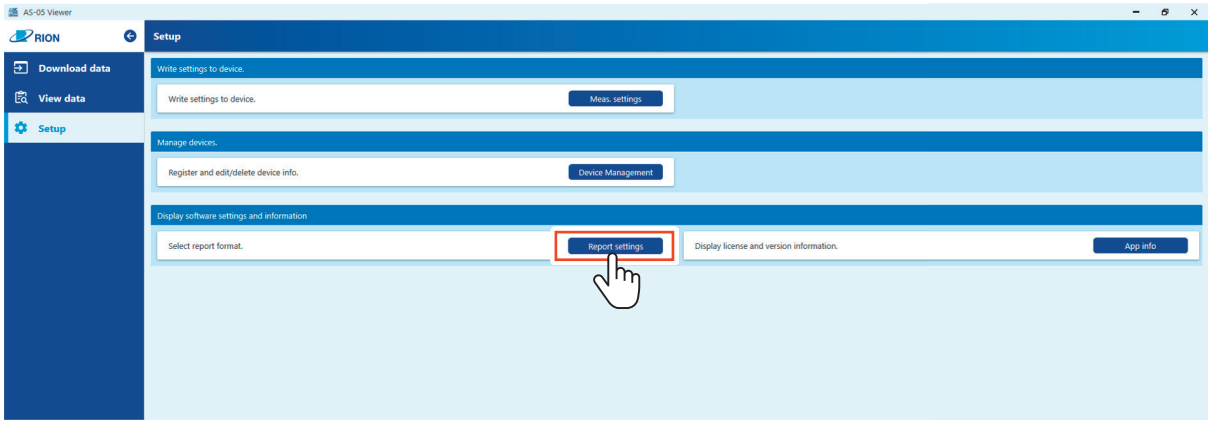
- Click [Download] to save the acoustic calibration history stored in the main unit of the dosimeter to your computer. After importing the acoustic calibration history, click [Save to local] to save it.
- Please note that the optional fields you entered, such as device name, remarks, and date of purchase, are stored in the computer and will not be transferred when the main unit is connected to another computer.
- Click [Delete] to delete the registration of the selected measuring instrument.
- When deleting the registration of a measuring instrument, the imported data will be deleted at the same time, so please output the data and store the necessary data in a separate location in advance.



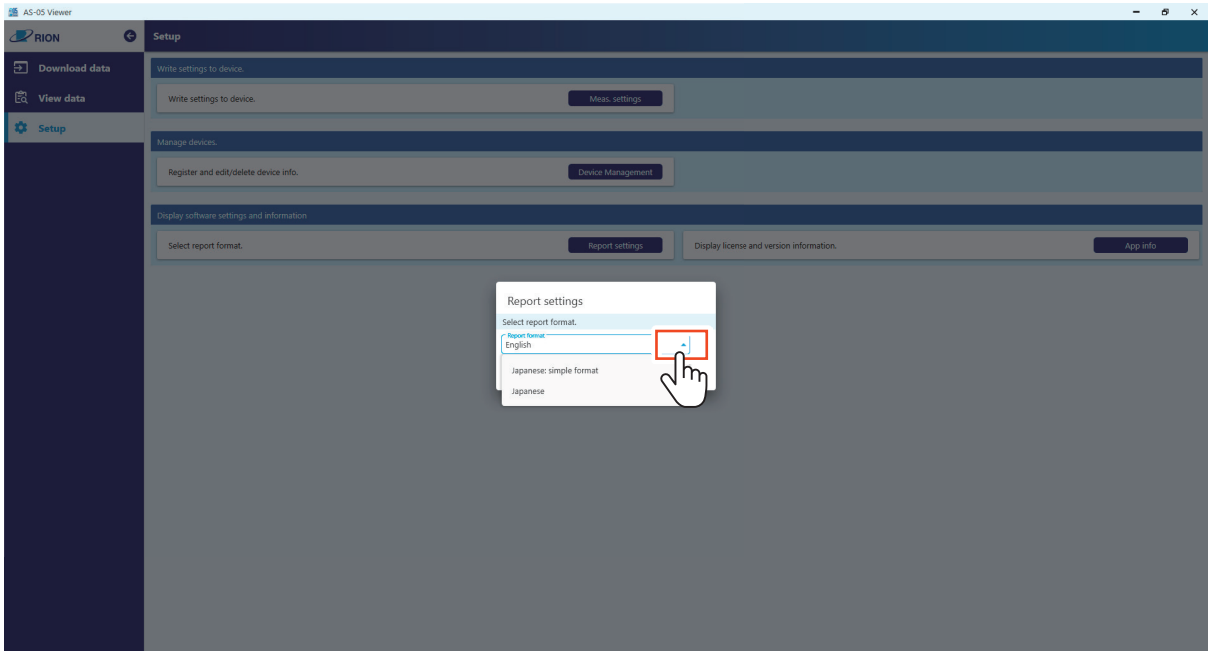
9.3 Setting the Report Format

You can change the format of the report including the personal exposure measurement result report.

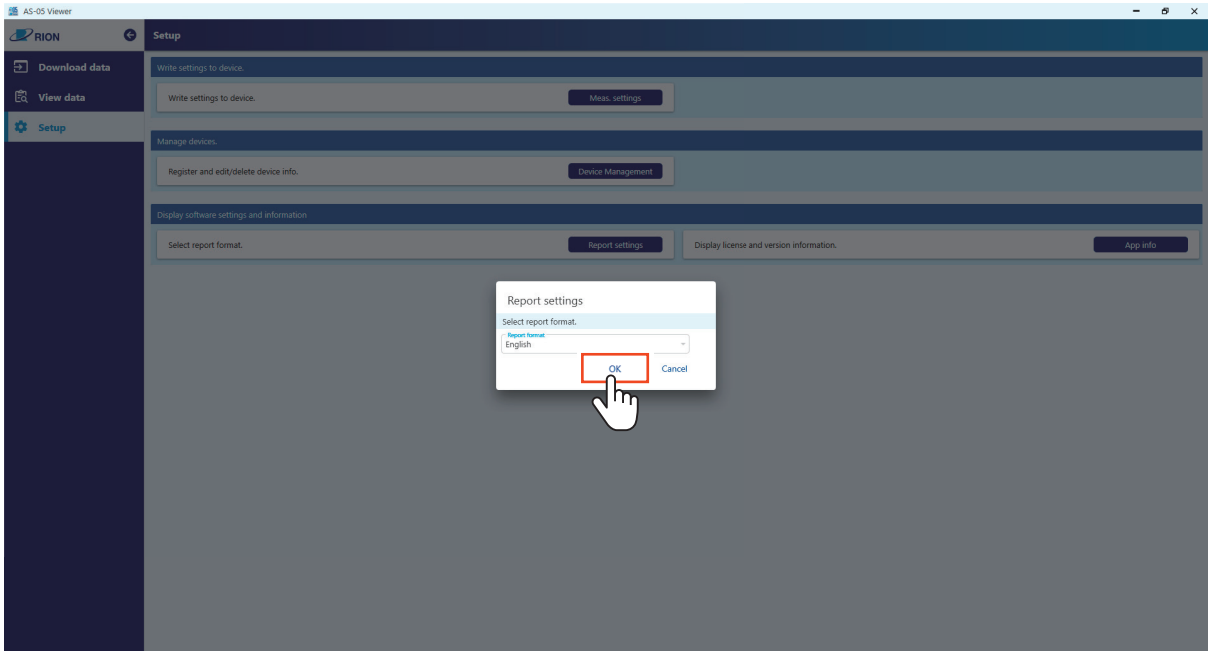
1 **Select [Setup] from the side menu, and click [Report Settings].**



2 **A pop-up window for report settings will appear. Click the pull-down list and select a report format.**



3 Click [OK] to complete the report setting.



10 FAQ

Question	Answer
I have the measuring instrument connected to my computer but my computer does not recognize it.	Check that the cable is properly connected.
	Check that the measuring instrument is turned on.
	Check that the measuring instrument is registered.
I would like to use the measuring instrument on an Apple Macintosh (Mac).	Mac is not supported.
The time information in the measurement results is incorrect.	If the measuring instrument continues to run with the POWER LED flashing red, the power may turn off and the time setting initialized. In such a case, recharge the measuring instrument and reset the clock information (see 9.1 “Setting the measuring instrument”).
Do I need to connect the measuring instrument when preparing the report as well?	Data is stored in the computer when data capture is complete. After data has been captured, operation can be performed on the [View data] screen even after the measuring instrument is disconnected.
I deleted the data on the USB drive.	The Software does not have a function for restoring measurement data. Please check carefully before deleting.
I accidentally deleted measurement data.	

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RION CO., LTD.

https://www.rion.co.jp/english/

3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan

No. 66761 24-01