Installation Manual
Data Management Software for Environmental Measurement
AS-60/60RT/60VM

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http://www.rian.co.jp/english/
Organization of this manual

This manual describes how to install and uninstall Data Management Software for Environmental Measurement AS-60, and how to use the Online Help. See the Online Help for details about how to use this software. To ensure your safety and the correct use of this software, make sure to read the manual for the computer on which you install this software, as well as the manuals for each of the devices used to perform measurements.

Make sure to read the Usage License Agreement on pages iii to v before using this software.

The section starting on page vii contains important information and precautions about safety. Be sure to read and observe these in full.

This manual contains the following sections.

Software Usage License Agreement
   This section explains the license agreement.

Overview
   This section provides an overview of this software.

Installation and Uninstallation
   This section explains the procedures for installing this software and uninstalling it from your computer.

Starting the software
   This section explains the procedures for starting the software.

Online Help
   This section explains how to use the Online Help for this software.
   Online Help is installed automatically when you install this software.

Specifications
   This section explains the specifications for this software.

* Company names and product names mentioned in this manual are usually trademarks or registered trademarks of their respective owners.
Important

In order to use this Software, you must agree to the terms of the Software Usage License Agreement (hereinafter “this Agreement”). Please read the following text carefully, and only proceed to use the Software if you agree to be bound by all the terms and conditions of this Agreement.

Article 1 Authorized Use
You are authorized to use the Software only in conjunction with the Product, in such a way as stipulated in this Agreement.

Article 2 Ownership of the Software
All rights to this Software are retained by RION CO., LTD, (hereinafter “RION”) and/or its rightful owners. This Agreement grants you only a limited right to use the Software. This Agreement does not grant you any other rights other than specified herein.

Article 3 Limitations to Use and Transfer
1. This Agreement does not grant you any rights to copy the Software and any associated documentation.
2. This Agreement does not grant you any rights to alter or modify the Software.
3. This Agreement does not grant you any rights to reverse engineer, decompile, recompile, or disassemble the Software.
4. Unless prior written permission from RION has been obtained, this Agreement does not grant you any rights to lend the Software to any third parties, regardless of whether this is done for payment or free of charge.
5. This Agreement does not grant you any rights to transfer the rights specified in this Agreement to any third parties.

Article 4 Warranty Scope
1. RION does not make any representation or promise that this Software will be able to perform without problems under any and all conditions. If a problem occurs while the Software is being used under normal conditions, contact RION using the information provided in the instruction manual. As far as possible based on the information provided by you about the problem, RION will provide guidance and information about possible errors, improved operation procedures and similar.
2. RION (including any affiliated companies or subsidiaries) does not assume any liability
for any damage caused by alteration or loss of data stored in the Product, even if this is due to a defect or other problem with the Software.

3. 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.

4. 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.

5. Liability of RION for any damages will not exceed the actual price that was paid for the license to use the Software. This limitation does not apply in the case of intentional faults or gross negligence.

Article 5 Remedy

1. RION guarantees that the Software as supplied contains the functions that are explicitly listed in the specifications.

2. If the software does not operate according to specifications, and the cause is the responsibility of RION, and if this is detected and RION is informed of this fact within 90 days from the purchase date of the Software, RION will undertake to remedy the problem free of charge.

3. In cases other than above, RION will undertake to remedy the problem against charge.

Article 6 Duration of this Agreement

1. You can terminate this Agreement at any time by stopping to use the Software and destroying the Software and all associated documentation.

2. If you violate any of the conditions of this Agreement, RION can cancel this Agreement and terminate the usage of the Software. In such a case, you are obligated to destroy the Software and all associated documentation (including any unauthorized copies).

Article 7 Other Items

If the Software and the Product are taken from Japan to any other country, the Japanese Foreign Exchange and Foreign Trade Law, the United States Export Administration Act, and all other applicable laws and regulations must be strictly observed. This Agreement shall be exclusively governed by the laws of Japan.

Article 8 Third Party Beneficiaries

This Software includes components for which the rights are held by other parties except RION. In the case of a violation of this Agreement, in addition to RION, such third parties shall also have the right to demand compensation for damages.
FOR SAFETY

This manual presents warnings such as the following, calling for caution where necessary to prevent accidents. The content of these warnings concerns protection of your life and personal safety, and prevention of damage to the unit on which the software is installed and other equipment nearby.

⚠️ Caution

Disregarding instructions printed here incurs the risk of injury to persons and/or damage to peripheral equipment.

Important

Disregarding instructions printed here incurs the risk of damage to the software.

Note

Mentioned about the tips to use the software properly. (This messages do not have to do with safety.)
Do not play in a music CD player

The CD-ROM containing this software is not a music CD. Inserting the disc in a CD player poses the risk of excessive volume levels. This could cause hearing damage and damage to the CD player.
Check the installation disc before installation

Before inserting the installation disc into the CD-ROM drive of the computer, be sure to visually check the disc.
If you notice that the disc is scratched or deformed, do not insert it into the CD-ROM drive. Otherwise the drive may be damaged.
Precautions

Note about the descriptions in this manual and the Online Help

- The descriptions in this manual and the Online Help assume that users possess a certain level of knowledge regarding standards related to measuring quantities and actual measurement methods. If the explanations given in this manual or the Online Help prove to be insufficient and you require more information, please read the other corresponding documents, such as standards documents or the manuals for measuring instrument.

- Information related to the descriptions and detailed explanations are noted by the corresponding page number. The reference format is as follows:
  
  ...Sentence ... (⇒ page xxx)
  
  ...Sentence ... (⇒ page xxx: heading)
  
  ...Sentence ... (Details ⇒ page xxx: heading)

- All the GUI items described in this manual are for Microsoft Windows 7. The actual GUI items may vary, depending on the version of Microsoft Windows you are using and the environment of your computer.

- This manual does not describe the Microsoft Windows OS. For details about how to select commands and use the dialog boxes in Microsoft Windows, see the respective manuals and help documents.
## Contents

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Overview

Data Management Software for Environmental Measurement AS-60 is used to manage data measured with sound level meters on a computer. This software supports the following types of data:

- Auto-store data saved by the sound level meters: NL-42/52/62, NL-21/31, or NL-22/32
- The file that contains the converted version of the auto-store data for the application software NL-22PB1 (“rpl” is the file extension).
- The file saved in CSV format by the application software DA-40Viewer

The following data types are also supported if you have the Octave and 1/3 Octave data management software AS-60RT (option).

- Auto-store data including octave band or 1/3 octave band data saved by the sound level meters NL-42/52/62 in which Octave-1/3 Octave Real-time Analysis Program NX-42RT/62RT has been installed
- Auto-store data saved by the sound level meter NA-28 in sound level meter mode
- Auto-store data including octave band or 1/3 octave band data saved by the sound level meter NA-28 in analyzer mode
- Auto-store data including octave band or 1/3 octave band data saved by the platform RIONOTE in which 1/3 Octave Band Analysis Program SX-A1RT has been installed

The following data types are also supported if you have the Vibration level data management software AS-60VM (option).

- Vibration level data saved by the vibration level meter VM-53A, VM-55

The following data types are also supported if you have the Octave and 1/3 Octave data management software AS-60RT (option) and the Vibration level data management software AS-60VM (option).

- Auto-store data including 1/3 octave band data saved by the vibration level meter VM-55 in which 1/3 Octave Real-time Analysis Program VX-55RT has been installed

The collective term used in the Online Help for the items listed above is “auto-store data”, which is short for “automatically stored data”. However, an additional explanation is provided when the data needs to be distinguished from other types of data.

This software consists of two programs: a data management program and report creation program. The data management program displays multiple auto-store data. This allows you to see the individual data for the measurement site and the relationship of the data. To obtain an adequate measurement result in the report creation program, the data management
program organizes and collects data from the auto-store data and application software as one set of data.

The report creation program performs recalculations of the different time intervals for multiple auto-store data. It displays the result summary and outputs the statistical data value of the measurement site to the file or to the printer.

**System Requirements**

<table>
<thead>
<tr>
<th>OS</th>
<th>Microsoft Windows XP Professional SP3 (English)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Microsoft Windows 7 Professional 32/64 bit (English)</td>
</tr>
<tr>
<td></td>
<td>Microsoft Windows 8.1 Pro 64 bit (English)</td>
</tr>
<tr>
<td></td>
<td>Microsoft Windows 10 Pro 64 bit (English)</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel Core i5 2 GHz or higher</td>
</tr>
<tr>
<td>Display</td>
<td>XGA (1024 × 768) or greater</td>
</tr>
<tr>
<td>Memory</td>
<td>2GB or more (4 GB or more recommended)</td>
</tr>
<tr>
<td>USB port</td>
<td>1. Port for connecting to the hardware protect key (HASP)</td>
</tr>
<tr>
<td></td>
<td>2. Port for connecting to the SD/CF card reader</td>
</tr>
<tr>
<td>CD Drive</td>
<td>Required to install this software</td>
</tr>
</tbody>
</table>

**Note**

To use all features of this software, make sure to connect the hardware protect key (HASP) supplied with this software to the USB port.
Installation and Uninstallation

The following items are described in this chapter:
- Contents of the CD-ROM
- Installing and uninstalling the software

Contents of the CD-ROM

The CD-ROM for Data Management Software for Environmental Measurement AS-60 contains the following folders and files:

```
[English] [DotNetFX35]
  [Sentinel_HASP_Run-time_setup]
  [vcredist_x86]
  [WindowsInstaller3_1]
  AS-60 Setup(J).msi
  readme.txt
  setup.exe
  Installation Manual.pdf

[Japanese]
```

For more information, see the section about installing and uninstalling the software.

<table>
<thead>
<tr>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>readme.txt in the [English] folder is sometimes providing the information which isn’t being explained with the this manual. Always read before installing.</td>
</tr>
<tr>
<td>Before installing the software, you must first log on by using an administrator-level account (such as Administrator). You cannot correctly install the software if you attempt to log in using a different level account.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>All the GUI items listed in this document are for Microsoft Windows 7.</td>
</tr>
</tbody>
</table>
Installing the software

<table>
<thead>
<tr>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Explorer 5.5 or later must be installed in order for the Online Help of this software to work properly. If you do not have Internet Explorer 5.5 or later, make sure to download the browser from the Microsoft Web site and install it first before you install this software. During the first time installing the AS-60, any additional necessary software will also be installed. When you first install this software on Windows 8.1 or Windows 10, please be sure to connect to the internet or it will not install.</td>
</tr>
</tbody>
</table>

Installation on Windows 7

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the “Visual C ++ Runtime Libraries (x86)” is already installed, steps 5 and 6 will not be displayed. Please move on to step 7 if they are not displayed.</td>
</tr>
</tbody>
</table>

1. Insert the CD-ROM for Data Management Software for Environmental Measurement AS-60 into the CD-ROM drive of your computer.

2. From the [Start] menu, open [(My) Computer] and then select the CD drive.

3. The contents of the CD-ROM are displayed.


```
[English]
[D]otNetFX35
[Sentinel_HASP_Run-time_setup]
vcredist_x86
[WindowsInstaller3_1]
AS-60 Setup(J).msi
readme.txt
setup.exe

[J]apanese
Installation Manual.pdf
```
5. A window to install the “Visual C ++ Runtime Libraries (x86)” will be displayed. Click the [Install] button.

![Install Visual C ++ Runtime Libraries (x86) window]

**Important**
If you don’t install the “Visual C ++ Runtime Libraries (x86)”, you cannot install the software.

6. A window that indicates the installation progress for the “Visual C ++ Runtime Libraries (x86)” appears, and the installation begins.

![Installation progress window]

7. The setup wizard window will appear. Read the descriptions and then click the [Next>] button.

![Setup wizard window]
8. The License Agreement is displayed. If you agree with the terms of the agreement, select [I Agree] and then click [Next>].

   ![License Agreement Window]

   **Important**
   If you do not agree with the terms of the License Agreement, you cannot install the software. Click the [Cancel] button and quit the installation.

9. A window appears allowing you to select the folder in which to install the software. Enter the installation destination path in the folder name field. The default path is [C:\Program Files\RION\AS-60].

   ![Select Installation Folder Window]

   **Note**
   Clicking the [Browse...] button displays the [Browse for Folder] window. This window allows you to specify the folder in which to install the software.

   Enter the installation destination path and then click the [Next>] button.
10. A window to confirm the installation appears. Click the [Next>] button.

11. A window that indicates the installation progress appears, and the installation begins.

12. When the installation finishes, a message window appears to indicate the installation is complete.

Click the [Close] button to finish and exit the installation procedure.

When installation is finished, two shortcuts are created on your computer’s desktop. One is for “AS-60 data management” program, and the other for “AS-60 report creation” program.
Installation and Uninstallation

Installation on Windows 8.1 or Windows 10

Note
If the “.NET Framework 3.5” and “Visual C ++ Runtime Libraries (x86)” are already installed, steps 5 to 10 might not be displayed. Please proceed to the next step if they are not displayed.

1. Insert the CD-ROM for Data Management Software for Environmental Measurement AS-60 into the CD-ROM drive of your computer.
2. From the [Start] menu, open [(My) Computer] and then select the CD drive.
3. The contents of the CD-ROM are displayed.

```
[English]
[DotNetFX35]
[Sentinel_HASP_Run-time_setup]
[vcredist_x86]
[WindowsInstaller3_1]
AS-60 Setup(J).msi
readme.txt
setup.exe

[Japanese]

Installation Manual.pdf
```

5. A window to install the “.NET Framework 3.5” will be displayed.
   If you agree with the terms of the agreement, click [Accept]
Installation and Uninstallation

Important

If you do not agree with the terms of the License Agreement, you cannot install the software. Click the [Cancel] button and quit the installation.

6. “Visual C ++ Runtime Libraries (x86)” installation window will appear. Click the [install (I)] button.

7. A window that indicates the progress for the installing “Visual C ++ Runtime Libraries (x86)” will appear, and the installation begins.

8. After step 7 disappears, an installation window to confirm the “.NET Framework 3.5” will appear. [Install this feature] the letters are grayed out at first, but can be clicked after they are no longer gray in color.

Important

If you click [Skip this installation], you cannot install the software.
9. The progress for the installation will be displayed.

10. The following window is displayed when the installation is finished.
   * Your computer may restart at this point.

11. The setup wizard window will appear.
    Read the descriptions and then click the [Next>] button.
12. The License Agreement is displayed. If you agree with the terms of the agreement, select [I Agree] and then click [Next>].

![License Agreement Image]

**Important**

If you do not agree with the terms of the License Agreement, you cannot install the software. Click the [Cancel] button and quit the installation.

13. A window appears allowing you to select the folder in which to install the software. Enter the installation destination path in the folder name field. The default path is [C:\Program Files\RION\AS-60].

![Select Installation Folder Image]

**Note**

Clicking the [Browse...] button displays the [Browse for Folder] window. This window allows you to specify the folder in which to install the software.

Enter the installation destination path and then click the [Next>] button.
14. A window to confirm the installation appears. Click the [Next>] button.

15. A window that indicates the installation progress appears, and the installation begins.

16. When the installation finishes, a message window appears to indicate the installation is complete.

Click the [Close] button to finish and exit the installation procedure. When installation is finished, two shortcuts are created on your computer’s desktop. One is for “AS-60 data management” program, and the other for “AS-60 report creation” program.
Uninstalling the software

Use one of the following methods to uninstall (delete) the software:

- Use the setup wizard on the AS-60 CD-ROM
- Use [Programs and Features] listed in [Control Panel] of Microsoft Windows OS

This section describes the method using the setup wizard on the CD-ROM.
For information on how to use [Programs and Features] in [Control Panel] of Microsoft
Windows, see the help for the Microsoft Windows OS.

1. Insert the CD-ROM for Data Management Software for Environmental Measure-
ment AS-60 into the CD-ROM drive of your computer.
2. From the [Start] menu, open [(My) Computer] and then double click the CD drive.
3. The contents of the CD-ROM are displayed.
4. The CD-ROM contains the following folders and files. Select [Setup.exe] in the
   [English] folder.

```
[English] -> [DotNetFX35]
  [Sentinel_HASP_Run-time_setup]
  [vcredist_x86]
  [WindowsInstaller3_1]
  AS-60 Setup(J).msi
  readme.txt
  setup.exe

[Japanese]
  Installation Manual.pdf
```

HASPUserSetup.exe
readme.html
5. The following window appears.

Select [Remove RION AS-60] and then click [Finish].
The uninstallation begins.
When the uninstallation is complete, the following window appears:

Click the [Close] button to finish the uninstallation.

**To reinstall the software**

If you experience problems and want to update or reinstall the software, always make sure to uninstall the software (⇒ page 13) first, and then follow the procedure described on page 4 to reinstall the software.

<table>
<thead>
<tr>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you attempt to reinstall the software before it has been uninstalled from your computer, the software may not work properly.</td>
</tr>
</tbody>
</table>
Starting the software

Use one of the following methods to start the software:

Method 1 – Select the [Start] menu. Next select [All Programs], [RION], [AS-60], and then [Data management] or [Report].

Method 2 – Double-click the [AS-60 data management] or [AS-60 report] shortcut on the desktop.

Selecting [Data management] in Method 1 or double-clicking the [AS-60 data management] shortcut in Method 2 starts the data management program. The data management window opens, as shown below:

Data management window

Selecting [Report creation] in Method 1 or double-clicking the [AS-60 report] shortcut in Method 2 starts the report creation program. The report creation window opens, as shown below:

Report creation window
Starting the software

**Note**

See the Online Help for information about how to use this software. For information about how to use the Online Help, see the next chapter “Online Help”.

Method 3 – Drag and drop one of the following folders or files onto the [AS-60 data management] or [AS-60 report] shortcut on the desktop.

(1) Auto-store data folder or its header file
(2) Project folder or its header file

If you drag and drop (1), the specified auto-store data is loaded and the data management program or report creation program starts.

If you drag and drop (2), the project data is loaded and the data management program or report creation program starts.

This figure provides an example of starting the data management program by dragging and dropping the auto-store data folder onto the [AS-60 data management] shortcut:

The data management window appears, displaying the auto-store data that was loaded.
Starting the software

This figure provides an example of starting the report creation program by dragging and dropping the project folder onto the [AS-60 report] shortcut:

Drag and drop.

Message indicating that the program is starting.

The report creation window appears, displaying the project folder data that was loaded.

Note

This software refers to a set of multiple auto-store data as a “project”, and considers this set to be a single unit. For more information on projects, see the Online Help (“Project”).

For more information on header files for projects, see the Online Help (“File configuration: Auto-store folders and project folders”).

For more information on header files for auto-store data, see the instruction manual for the respective measuring instrument.
Starting the Online Help

The Online Help is installed automatically when you install the software. It describes how to use the software and its functions.

Use one of the following methods to start the Online Help:

- Select [Help] from the [Help] menu if the software is already running.
  (The Online Help starts with the [Contents] tab already selected.)
- Select [All Programs] from the [Start] menu, then select [RION], [AS-60], and [Help].

The Online Help starts and the following window appears:
Displaying topics from the table of contents
Click the [Contents] tab to display the table of contents. The table of contents is displayed when the Online Help starts.
Each book icon in the [Contents] pane represents a category of related topics. Double-clicking the book icon of a category displays a list of topics for that category. Select and then click the topic you want to see.
The following illustration shows how to display the topic [Project overview] in the category [Project].
Displaying topics by keyword

Clicking the [Index] tab displays a list of keywords.

You can display the topics related to a particular keyword by selecting the keyword from the list and clicking the [Display] button, or by double-clicking the keyword.

Important

In this version, it is not providing an index feature.
Using the search function to display topics

Clicking the [Search] tab allows you to use the search function. Enter the keyword you want to search in the keyword field, and then click the [List Topics] button. A list of topics related to that keyword appears. Select a topic from the list, and then click the [Display] button or double-click the topic to display the description.
Browsing the table of contents
Use the “◀ ▶” arrows to the upper right of the topic.
Click “◀” to move to the previous topic, and “▶” to move to the next topic.

Move to the top of the current topic
Click the “To the head of this Topic” icon at the lower left of the topic.

Move back to the previously displayed topic
Click the “Back” icon in the main menu of the Online Help.

Move to the first topic of each chapter in the table of contents
Click the “TOP” icon at the upper right of the topic.
Specifications

System Requirements

OS
Microsoft Windows XP Professional SP3 (English)
Microsoft Windows 7 Professional 32/64 bit version (English)
Microsoft Windows 8.1 Pro 64 bit version (English)
Microsoft Windows 10 Pro 64 bit version (English)
(Internet Explorer 5.5 or later must be installed)

Display
XGA (1024 × 768) or greater

CPU
Intel Core i5 2 GHz or higher

Memory
2 GB or more (4 GB or more recommended)

USB port
Port for connecting to the hardware protect key (HASP)
Port for connecting to the SD/CF card reader

CD Drive
Required to install this software

Supplied media
1 CD-ROM

Functions

Data Management Program

Load measurement data

AS-60/60RT/60VM can load the following data:
• Measurement data (auto-store data: \(L_p\) (Auto1) mode data or \(L_{eq}\) (Auto2) mode data) saved by sound level meters (NL-42/52/62, NL-21/31, and NL-22/32)
• Files (with “.rp1” extension) converted from the auto-store data for NL-22PB1 application software
• Files saved CSV format by the DA-40Viewer application software

The following data types are also supported if you have the Octave and 1/3 Octave data management software AS-60RT (option).
• Auto-store data including octave band or 1/3 octave band data saved by the sound level meters NL-42/52/62 in which Octave-1/3 Octave Real-time Analysis Program NX-42RT/62RT has been installed
• Auto-store data saved by the sound level meter NA-28 in sound level meter mode
• Auto-store data including octave band or 1/3 octave band data saved by the sound level meter NA-28 in analyzer mode
• Auto-store data including octave band or 1/3 octave band data saved by the platform RIONOTE in which 1/3 Octave Band Analysis Program SX-A1RT has been installed
The following data types are also supported if you have the Vibration level data management software AS-60VM (option):
- Vibration level data saved by the vibration level meter VM-53A and VM-55

The following data types are also supported if you have the Octave and 1/3 Octave data management software AS-60RT (option) and the Vibration level data management software AS-60VM (option):
- Auto-store data including 1/3 octave band data saved by the vibration level meter VM-55 in which 1/3 Octave Real-time Analysis Program VX-55RT has been installed

The following methods are used to load data:
- Loading data from the AS-60 menu
- Dragging and dropping the measurement data into the AS-60 window
- Dragging and dropping the measurement data onto the AS-60 desktop shortcut

**Display graphs**
Allows you to display the loaded measurement data as a graph.

**Zoom in/out**
Allows you to zoom in on the selected part of the graph, or zoom out to view the entire graph (time-axis and vertical axis). You can also zoom in and out on the time axis and vertical axis of each graph. Even if you zoom in or out on the time axis, the maximum and minimum values in the graph are not lost.

**Simultaneously display multiple measuring quantities**
When the calculated data is loaded, multiple measurement values are displayed in the graph. These values overlap each other when they are displayed.

**Display data from multiple measuring instruments**
Allows you to graph measurement data from multiple measuring instruments in multiple panes (up to 32 graphs). Up to four graphs can be displayed simultaneously. To display the other panes, scroll through the data management window.

**Display the same stored data in multiple windows**
Allows you to graph the same stored data in multiple windows as separate graph data. If you modify the stored data in one graph, the stored data displayed in the other windows is also updated to reflect the change.

**Change the graph positions**
Allows you to change the graph positions when displaying multiple graphs.
Specifications

Combine measurement data
Allows you to combine measurement data from different graphs, enabling these data to be treated as a series of data when they are arranged in chronological order. However, you can only combine data from NL-42/52/62 measuring instrument. Up to three measurement data can be combined.

Full view of the measurement data
Allows you to display the measurement data for all time periods, and notify users which time period the currently processed data (displayed in the graph) corresponds to.
Full view can only be used for a single measurement data that is loaded.

Marker
Allows you to display the following markers on the corresponding time axis of the graph:
i. Recording time period (from the start until the end) for a real sound file.
ii. The time period during which the user recorded the marker with the measuring instrument.
iii. The time period during which this software recorded the marker.
iv. The time period during which the user recorded the pause with the vibration level meter.

Display cursors
Allows you to display cursors, as well as display the measurement values and calculations values for the cursors in the graph. The octave band analysis results for the cursors are displayed by AS-60RT.

Display overloads and underranges
Allows you to display the overloads and underranges that are added to the measurement data.

Synchronize multiple graphs
Allows you to synchronize the time axes of multiple graphs that are displayed.

Display and playing real sound files
Display real sound file markers
Allows you to display real sound files recorded during measurement as markers on the graph.

Play real sound files
Allows you to play the real sound files recorded during measurement. The functions [Play], [Pause], [Forward] and [Back] are provided.

Calculations
Calculations for arbitrary interval
Allows you to calculate $L_{eq}$, $L_E$, $L_{max}$, $L_{min}$, $L_{N1}$, $L_{N2}$, $L_{N3}$, $L_{N4}$ and $L_{N5}$ for the selected time interval. However, $L_E$ from the vibration level data will not be available. The percentile can be set an integral number for N1 to N4 and the first decimal place for N5. Calculations are carried out for each octave band by AS-60RT.
Specify excluded interval
Allows you to specify a selected interval as the excluded interval from calculations. The excluded interval setting that is specified in the data management window is also applied to the report creation window.

Copy calculation results to the clipboard
Allows you to copy the interval calculation results and the octave band analysis results of interval calculation using AS-60RT to the clipboard.

Comparing Oct. data (only AS-60RT)
Compares two Oct. data and displays differential graph and overlays level values.

Output data to files
Allows you to output the data for the range selected by the user as text.

Convert the markers for measuring instrument to excluded interval

Measuring instrument information
Allows you to check the measurement conditions of the loaded data (such as the model, serial number, index number, measurement mode, store/calculation interval and measurement time).

Memo
Allows you to attach simple memos to the measurement data that is loaded.

Report creation program
This program is equipped with two functions, [term report] and [daily report]. [term report] creates reports for the period specified by the user, while [daily report] creates daily reports. Each aggregation function creates reports for the [Calculations value] result of the specified calculations interval, the [1hour-average] which calculates the average value per hour, and the calculation value for each reference time interval. The results are shown in graphs and tables.

Allows you to select the calculations values that are shown in the graphs. AS-60RT carries out a report creation using the Main band of the octave band analysis data. AS-60VM carries out a report creation using the AP (All-pass) data.

Term report
Creates a report by performing calculations of the period specified by the user.

<table>
<thead>
<tr>
<th>Line: Calculation interval</th>
</tr>
</thead>
</table>

| Column: Valid time, calculations values, overload/under-range information (excluding printing), presence/absence of excluded interval |

Daily report
Creates a daily report for the period specified by the user.
Print Allows you to print the created reports.
Output to files Allows you to output the results for the selected term report or daily report as an Excel, CSV, or TSV file. Note that graphs cannot be displayed in CSV and TSV files.
Copying to the clipboard Allows you to copy graphs and windows to the clipboard.

Others

Saving/loading projects
This software refers to a set of files recorded by measuring instrument as a “project”, and considers this set to be a single unit.
A project contains project files in which settings are described. In addition to these files, a project also contains measurement data (store files and binary data), WAVE files, report files, and other files. Users can restore the status of a task by specifying the project folder or the project file.
Measurement data of AS-60RT/60VM and AS-60 can be managed within the same project without any discrimination. Sound level data measured by the NL-42/52/62 and octave analysis data measured by the NX-42RT/62RT can also be managed within the same project.

Date setting
You can select one of the following date expressions:
- yyyy/MM/dd
- MM/dd/yyyy
- dd/MM/yyyy
“yyyy” indicates the year, “MM” signifies the month, and “dd” represents the day.

Text output setting
You can select one of the following formats for text output:
- CSV (delimiter: comma; decimal point: dot)
- TSV (delimiter: tab; decimal point: dot)
- TSV (delimiter: tab; decimal point: comma)
You can select one of the following character codes:
- UTF-8
- Shift-JIS

Supplied accessories

CD-ROM 1
A set of installation software
Installation Manual PDF file
Hardware protect key (HASP) 1
Inspection certificate 1