CRYSOUND

Sound Level Meter

Analysis Software

User Manual

Catalog

1 Introduction

The sound level meter data management software is specifically developed for real-time viewing and playback of sound level meter data. This software can connect to the sound level meter via Ethernet or Wi-Fi for remote data viewing. Users can monitor real-time data, query historical data, export test reports, and download monitoring data using the management software. Important acoustic parameters such as Lp, Lmax, Lmin, Leg, Lpeak, LN, SD, EA, LAE(SEL), 1/1 OCT, 1/3 OCT, and FFT can be viewed within the management software.

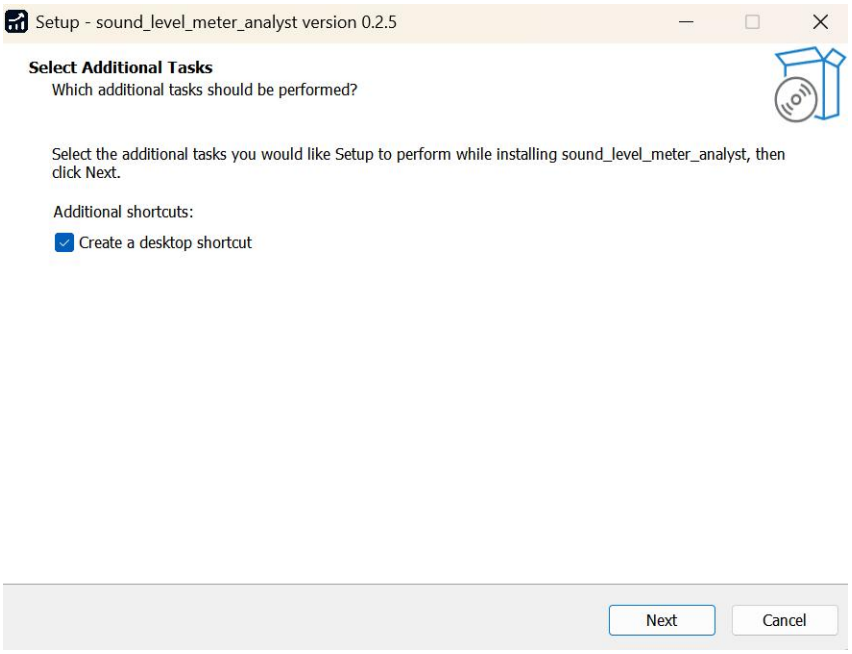
2 Software Installation

1- Find the sound_level_meter_analystV0.2.1 folder, and double-click the sound_level_meter_analystV0.2.1.exe application.

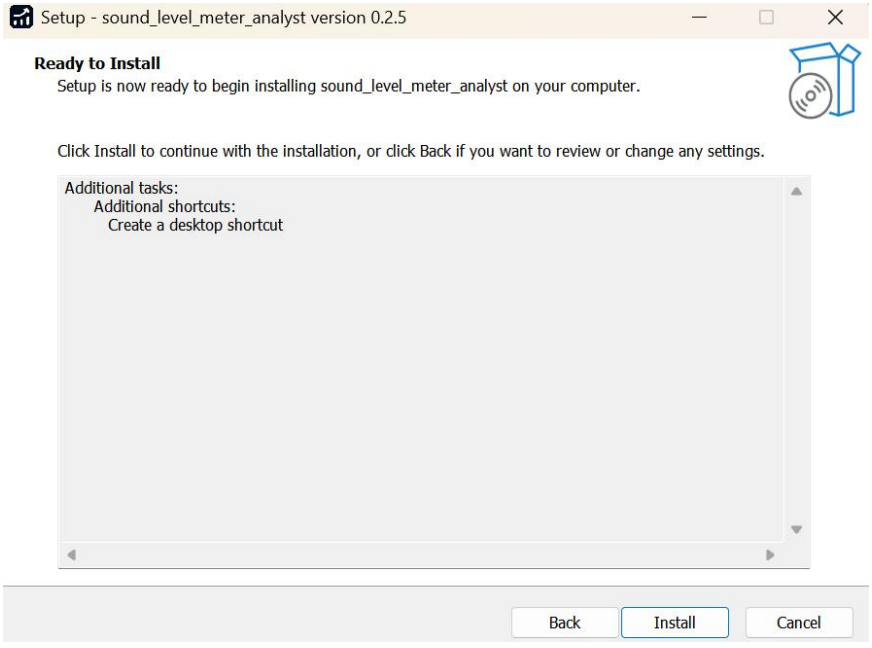
2-Select the installation language. Choose English as needed, and click OK.

2- Select the destination location. You can modify it as needed, and then click Next.

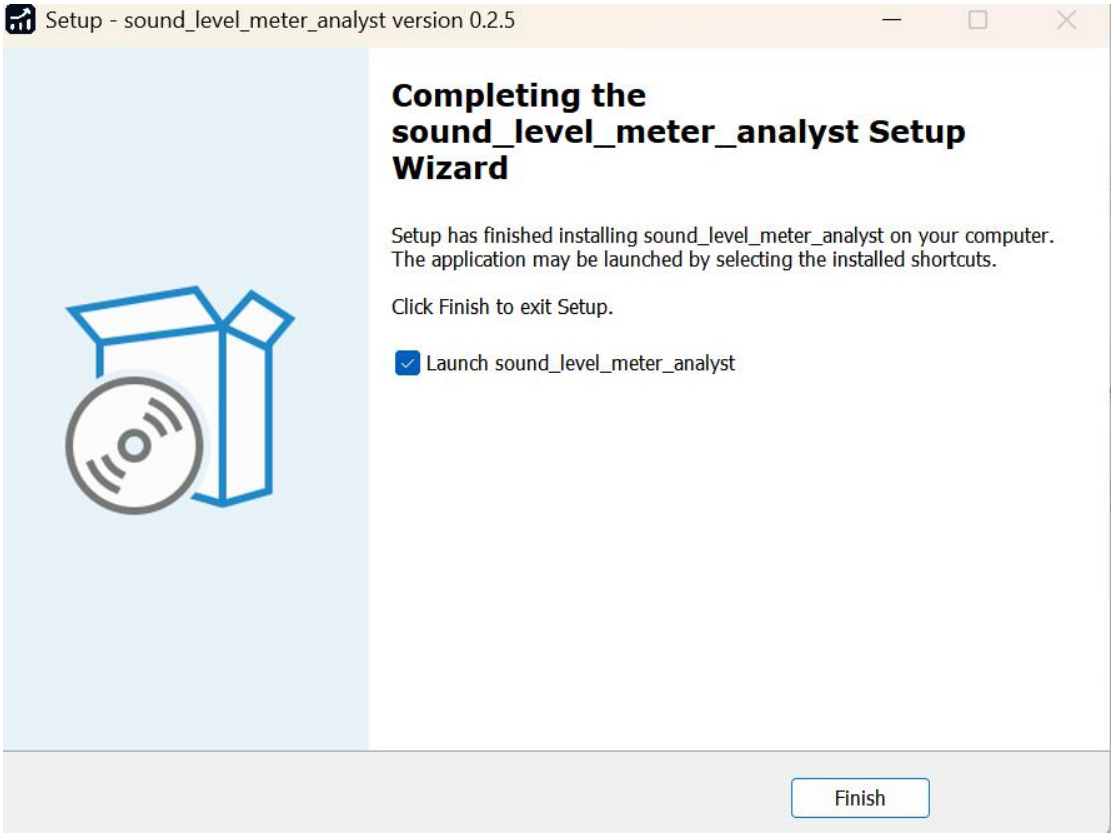
3- Select additional tasks. You can check the option to create a desktop shortcut. Click Next.



4- Click “Install”.



5- Click Finish to complete the software installation.



3 Quick Start

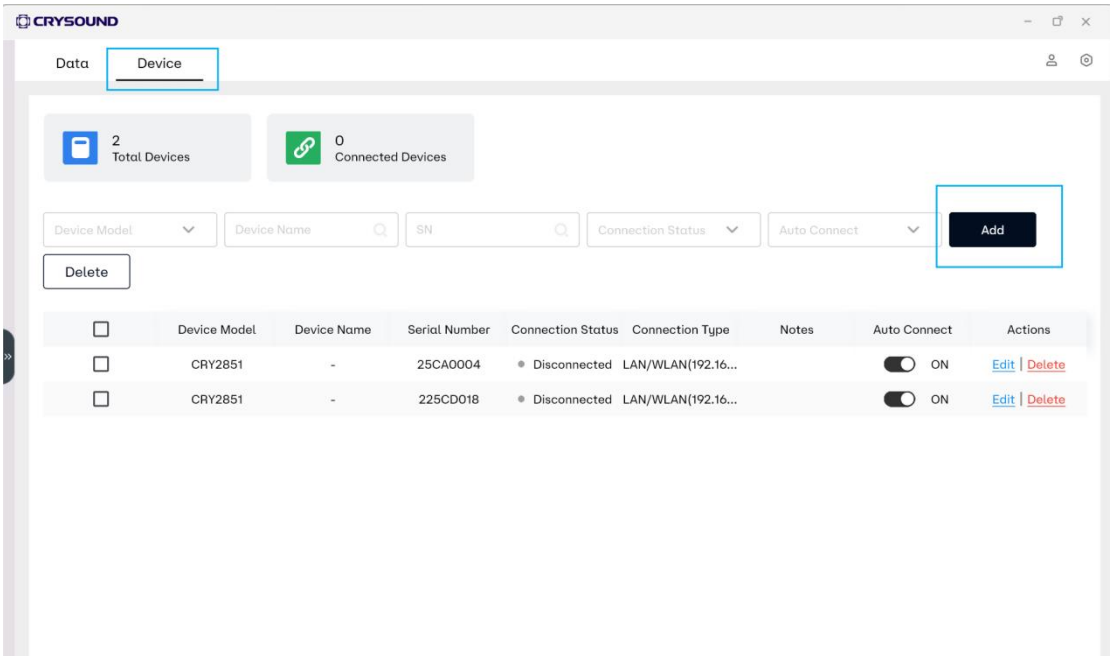
3.1 Usage Notes

1- When connecting the sound level meter data management software, please ensure that the sound level meter is ready and powered on.

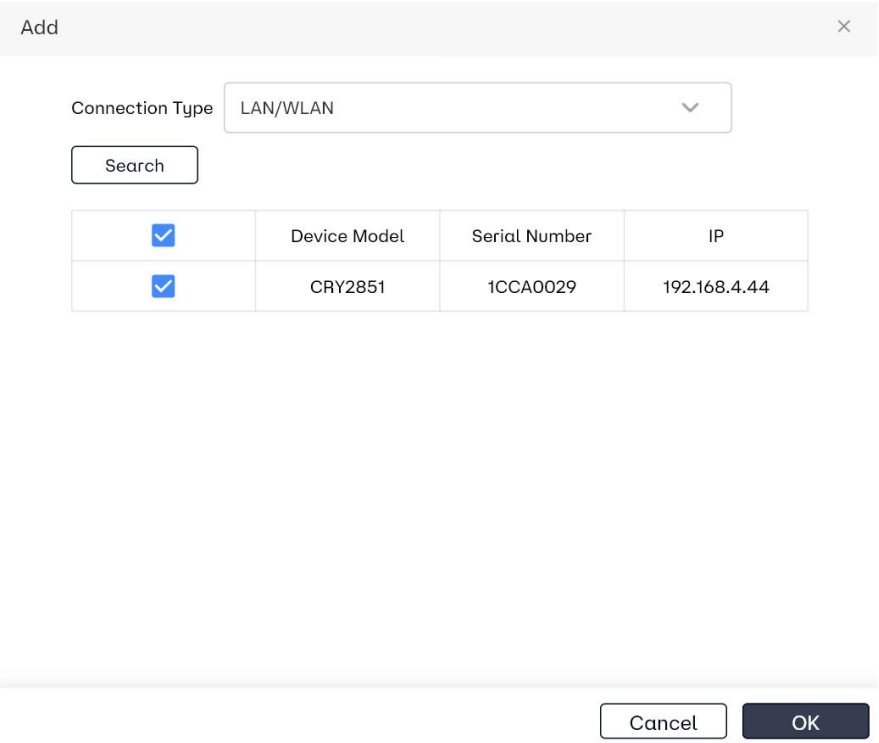
2- Ensure that the sound level meter data management software has a good communication network with the device.

3.2 Add Device

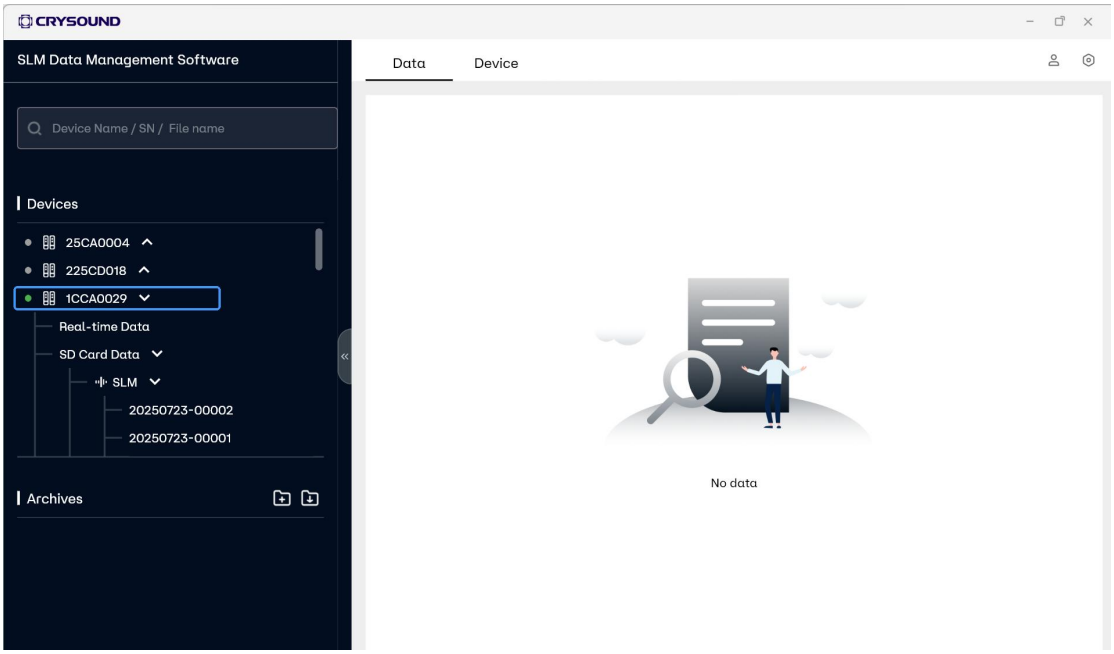
1- Open the PC management software and click on Device Management to enter the Device Addition interface.



2- Click on "Add" A new device pop-up window will appear. Click on "Search" The software can scan devices on the same network (via Wi-Fi or direct Ethernet connection). Devices can be identified by their serial numbers (SN). Select the desired device and click "OK" to add it.



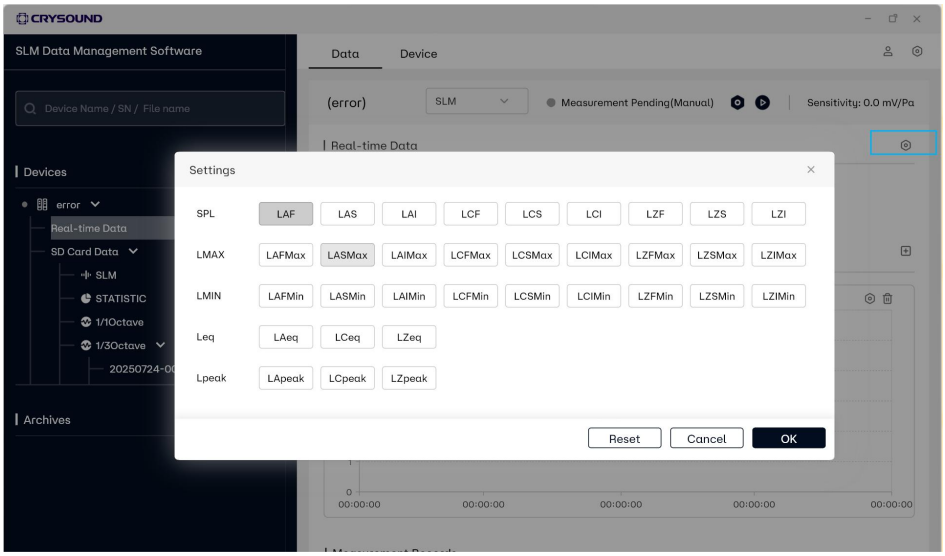
3- Return to the data viewing interface, where the added devices will be displayed in the device list on the left.



3.3 Add Test Items

3.3.1 Add Test Parameters

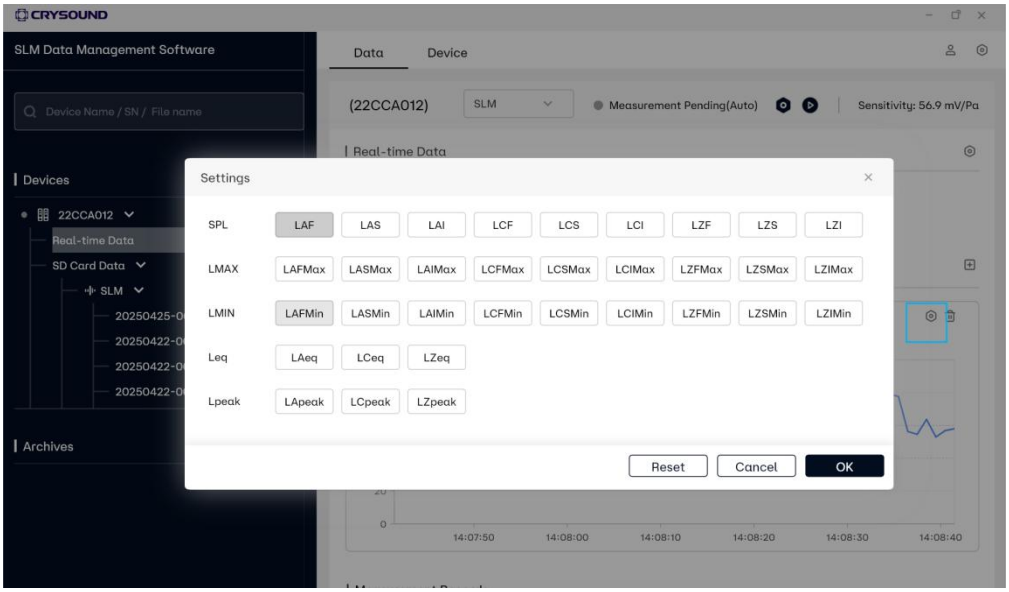
Click the edit button to open the test item editing box. Select the desired test parameter item and click confirm.



3.3.2 Add Test Charts

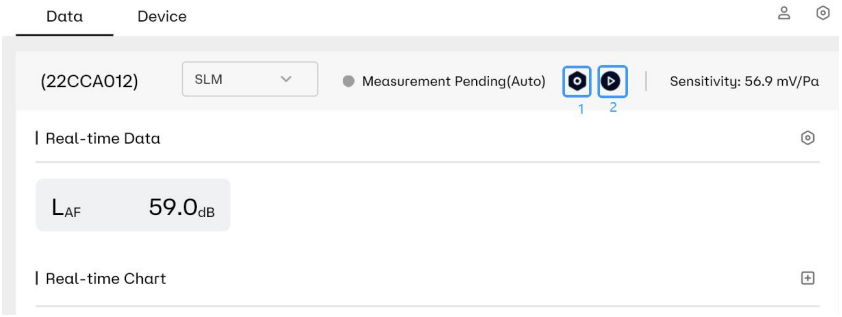
Click the add button, select the desired acoustic charts: 'Time Domain Graph', 'LN Distribution', and 'Sound Pressure Level Distribution', then click confirm to add.

Click on 'Settings' on the chart to adjust the display parameters.



3.3.3 Start / Stop Test

The software has the capability to control devices. Click the button 2 to start the test, and click it again to end the test. During the test, click button 1 to pause the test, and click button 1 again to resume the test.

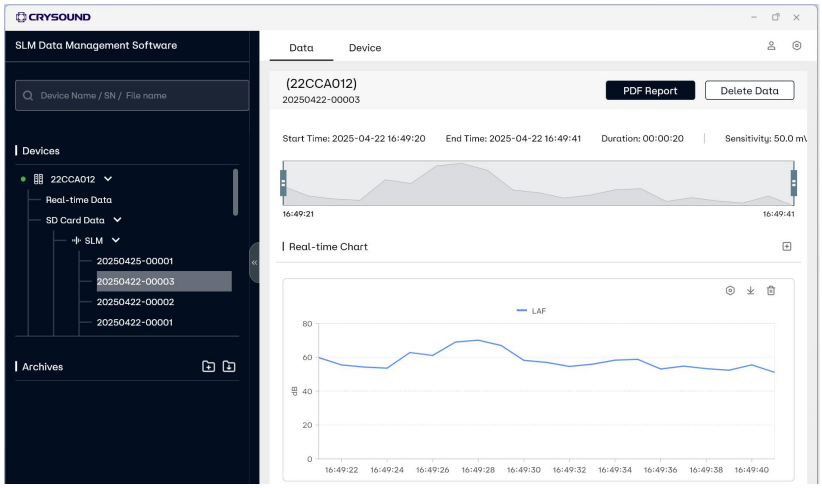


3.3.4 Data Playback

Click on the device list on the left, select 'SD Card Data' based on the test record's date and serial number, and click to enter the playback of the corresponding data regulations.

The system will record noise data during the testing process. In the

historical data view, you can see key noise parameters and the historical curve of the noise data.



4 Software Features Introduction

4.1 Software Interface Introduction

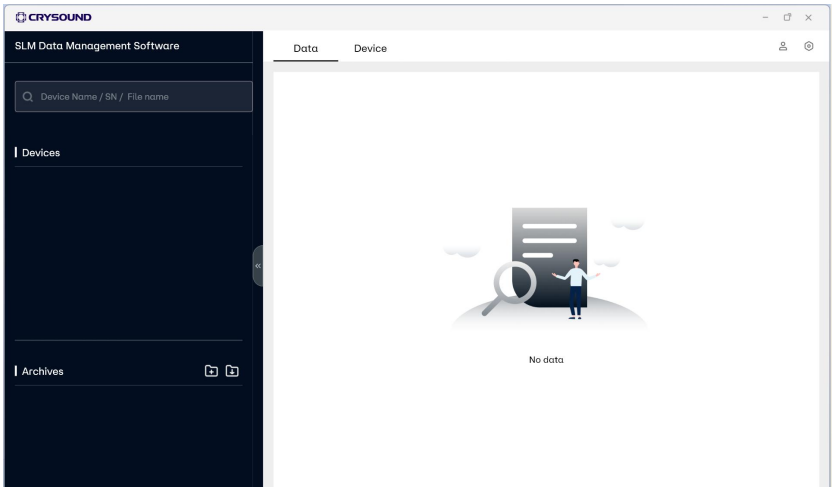
1- Double-click the icon to open the sound level meter data management software. When opened for the first time without any devices connected, the interface displays as shown in the figure.

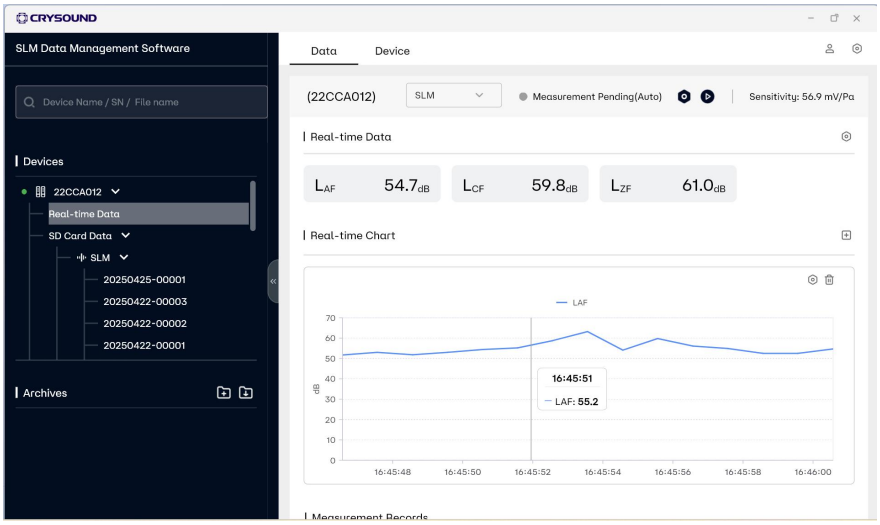
2- The right-side navigation tree displays search, devices, and local files. The device submodules include real-time data, historical playback, and calibration records. The historical playback submodules include sound level meter, statistical analysis, 1/1 octave band, 1/3 octave band, and spectral analysis.

3- The navigation bar at the top of the interface allows you to switch between data viewing, device management, accessing the personal center,

and settings.

4- The content area at the bottom can display real-time data, historical playback data, local file content, and device management content.





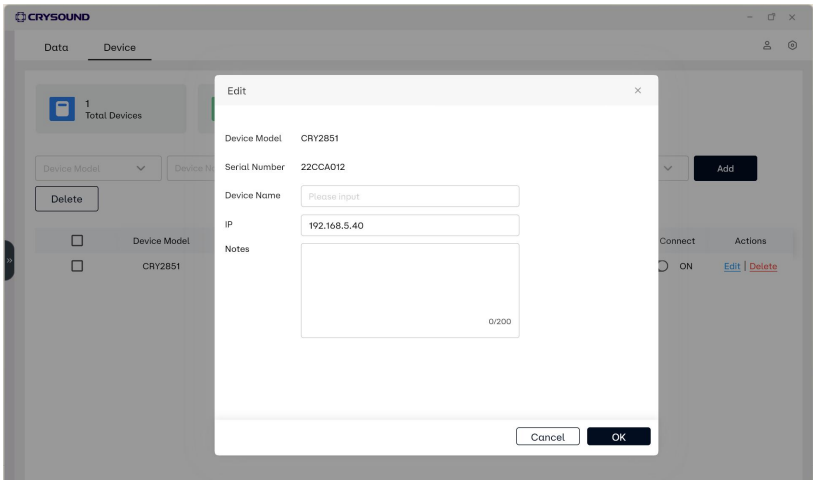
4.2 Software Usage Introduction

4.2.1 Device Management

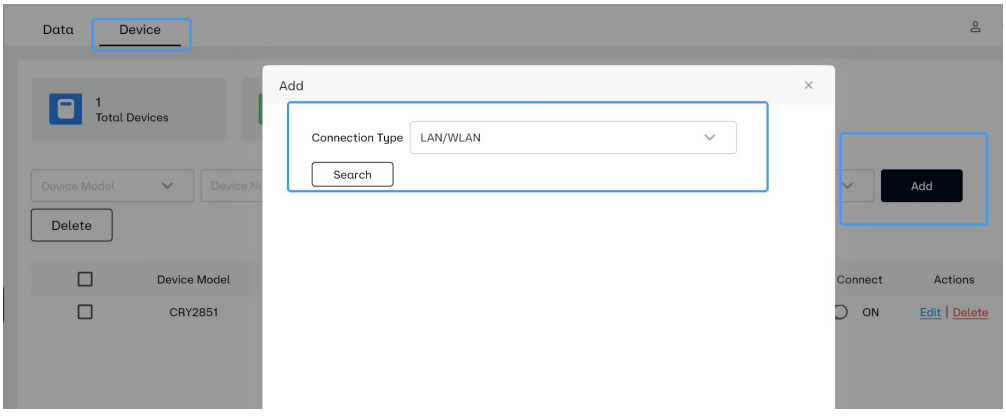
By clicking on <Device Management> in the navigation bar, you enter the device management interface, which shows the total number of devices, number of connected devices, a search box, options to add new devices,

batch delete, and a list of devices.

On the right side of the device information, you can enable/disable automatic connection, edit the device name, IP address, and notes, as well as delete devices.

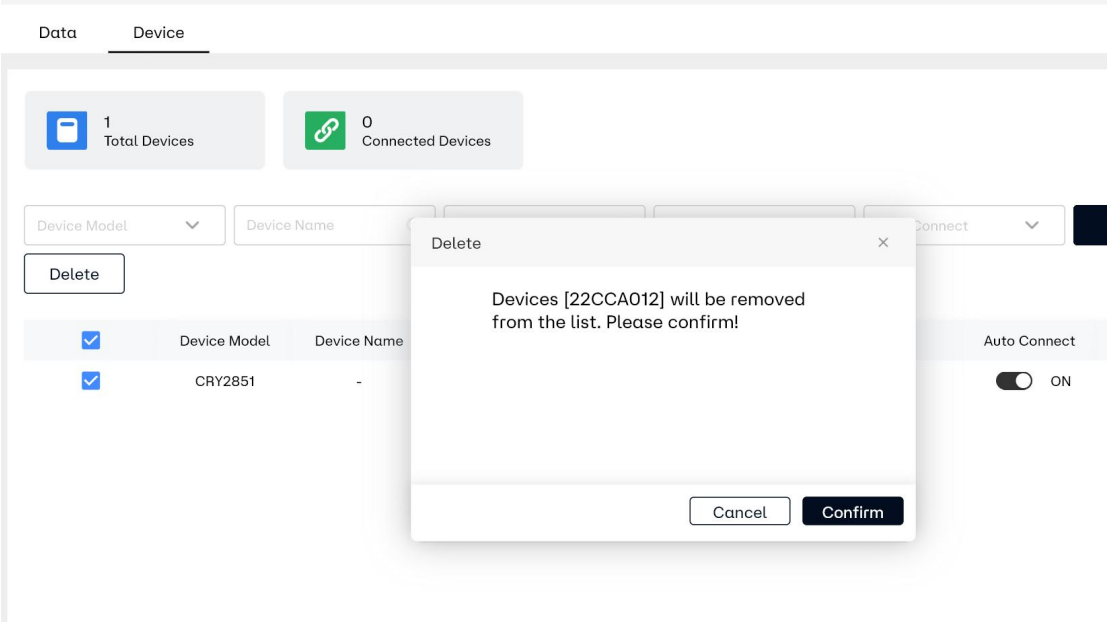


1- Add New Device in Device Management: In the device management interface, click the <Add> button. In the pop-up window, click the <Search> button. Clicking <OK> will enable automatic connection for the new device, while clicking <Cancel> will not connect the device.

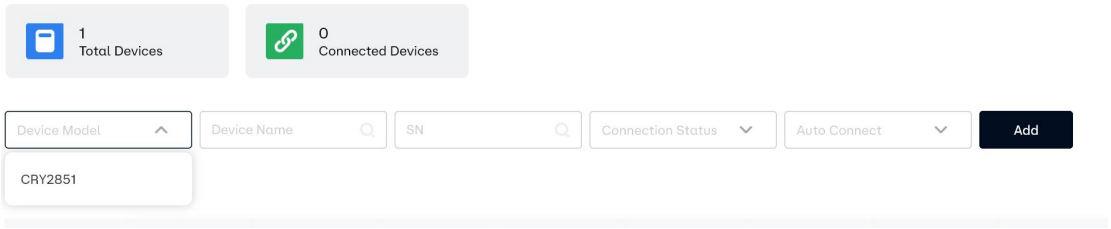


2- Batch Delete in Device Management: In the device management interface, check the boxes next to the devices you wish to delete, then click

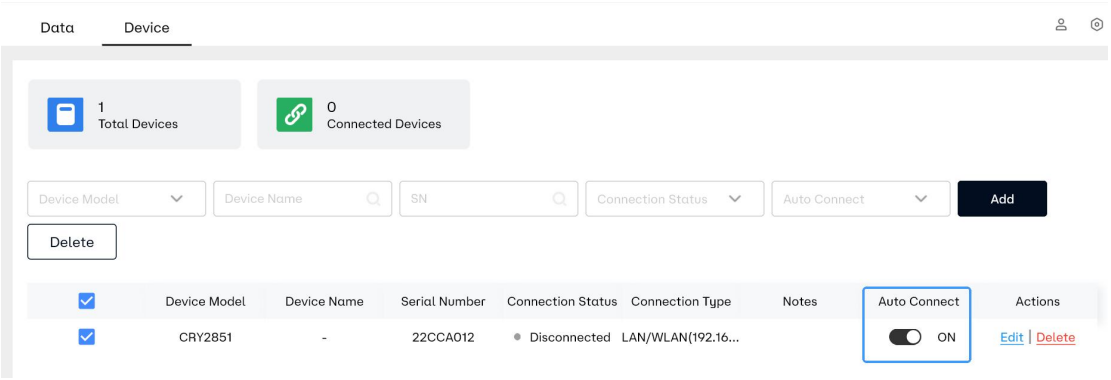
the <Delete> button. A confirmation window will appear; clicking <Confirm> will remove the selected devices, while clicking <Cancel> will not delete them.



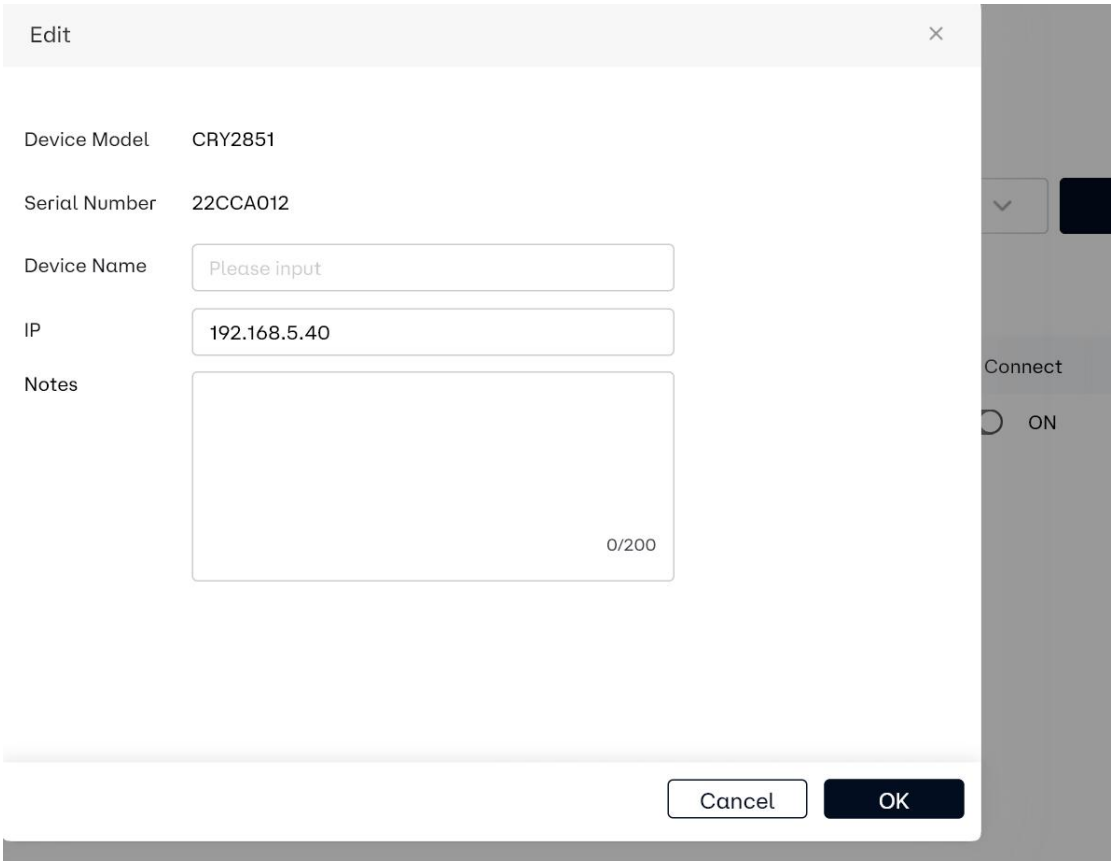
3- Search Function in Device Management: In the device management interface, use the product model dropdown to select a product model to search for the corresponding devices (currently only CRY2851). You can enter the device name to search for devices matching the input criteria (supports exact/fuzzy search), enter the SN number to find devices that meet the input criteria (also supports exact/fuzzy search), and use the connection status dropdown to select either "Disconnected" or "Connected" to search for devices in the corresponding state. The automatic connection dropdown allows you to select "On" or "Off" to search for devices based on the switch status.



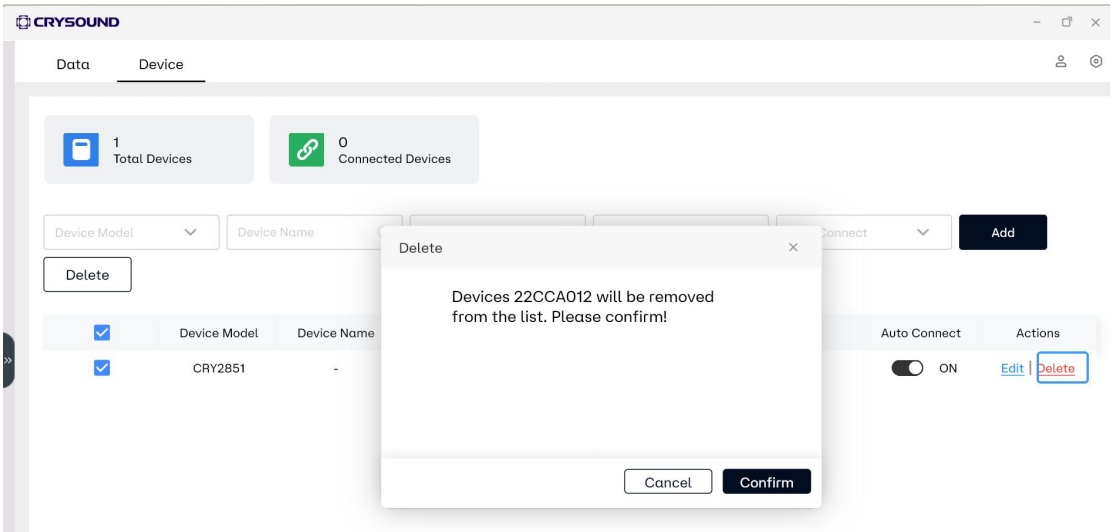
4- Automatic Connection in Device Management: In the device management interface, in the device list, the automatic connection button allows you to select "On" to automatically connect the device, which will then be displayed in the left navigation tree. If "Off" is selected, the connection will be disconnected, and the device will not appear in the left navigation tree.



5- Editing in Device Management: In the device management interface, click the <Edit> button on the right side of the device list. A pop-up window will appear, allowing you to edit the device name, IP address, and notes. Click the <OK> button to confirm the changes, or click <Cancel> to discard any modifications.

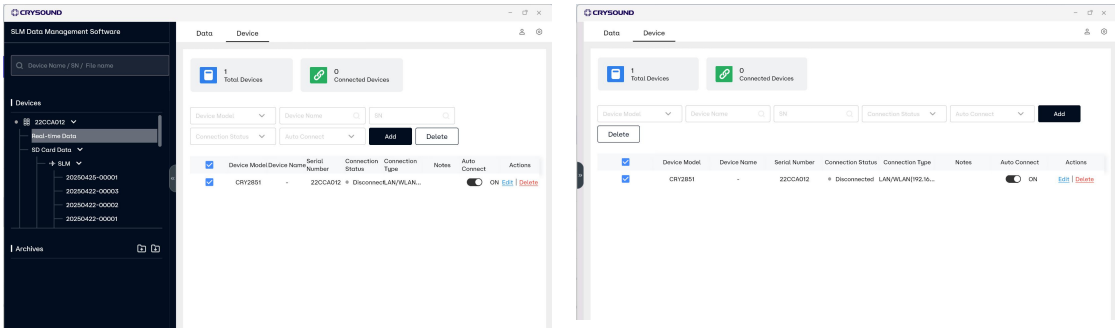


6- Deleting in Device Management: In the device management interface, click the <Delete> button on the right side of the device list. A confirmation pop-up will appear; clicking <Confirm> will remove the corresponding device, while clicking <Cancel> will not delete it.

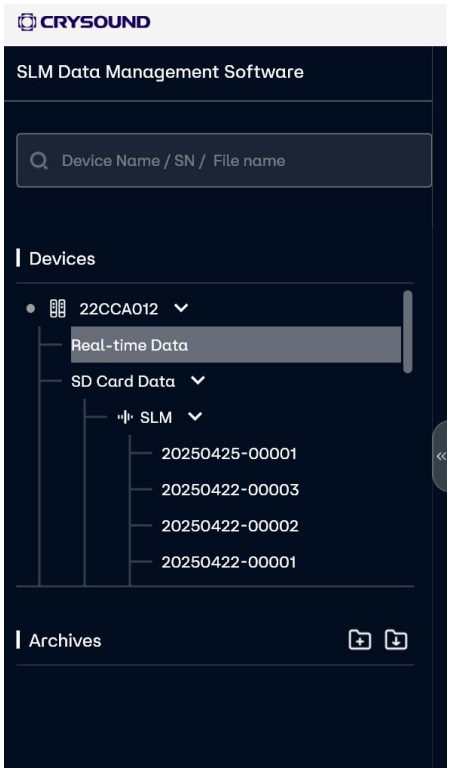


4.2.2 Navigation Tree

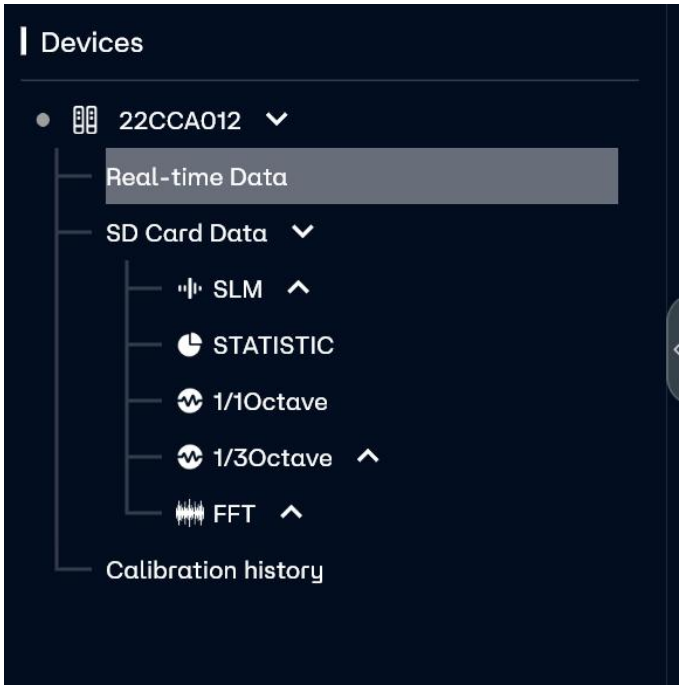
1- Collapse/Expand Navigation Tree: In the data viewing or device management interface, click the << or >> icon on the right side of the navigation tree to collapse or expand the navigation tree.



2- Navigation Tree Search Function: Enter the device name, SN number, or filename for precise searching. For example, input "test" in the search box and click the search button or press the Enter key to retrieve all devices and local file groups containing "test" in their names.



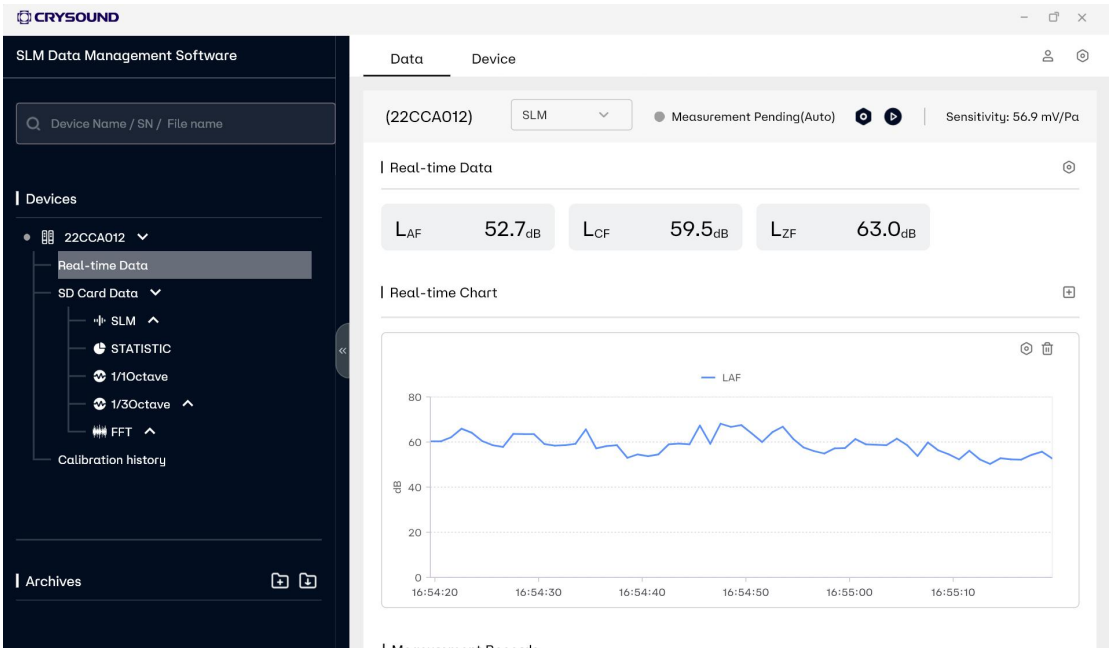
3- Navigation Tree Submodule Collapse/Expand: The navigation tree displays devices with automatic connections enabled. When a device is connected, a green dot appears on its left side; otherwise, a gray dot is shown. Clicking the arrow to the right of the device name and SN number will collapse/expand its submodules: real-time data, historical playback, and calibration records. Clicking the arrow to the right of historical playback will collapse/expand its submodules: sound level meter, statistical analysis, 1/1 octave band, 1/3 octave band, and spectrum analysis. Clicking the arrow to the right of the sound level meter (statistical analysis, 1/1 octave band, 1/3 octave band, spectrum analysis) will collapse/expand its historical data.



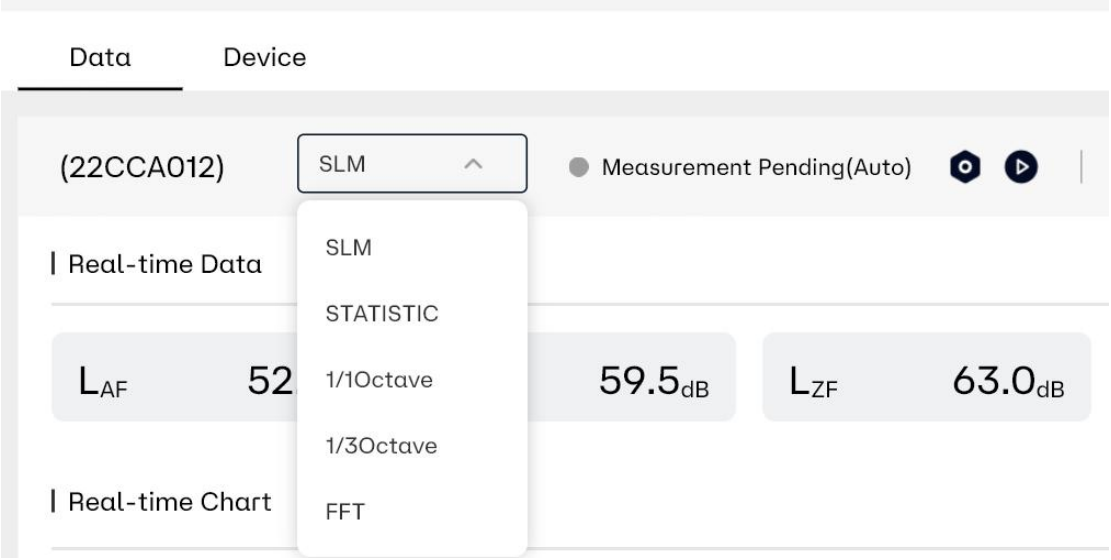
4.2.3 Real-Time Data

When the navigation tree expands the connected devices, clicking the <Real-Time Data> button will display the data viewing interface, which

includes the device name (SN), an APP switch dropdown menu, test settings and test buttons, sensitivity, real-time data, spectrum, and test records.



1- APP Switch: In the real-time data viewing interface, clicking the APP switch dropdown menu allows you to select from sound level meter, statistical analysis, 1/1 octave band, 1/3 octave band, and FFT analysis. The interface will switch the corresponding real-time data, spectrum, and test records accordingly.



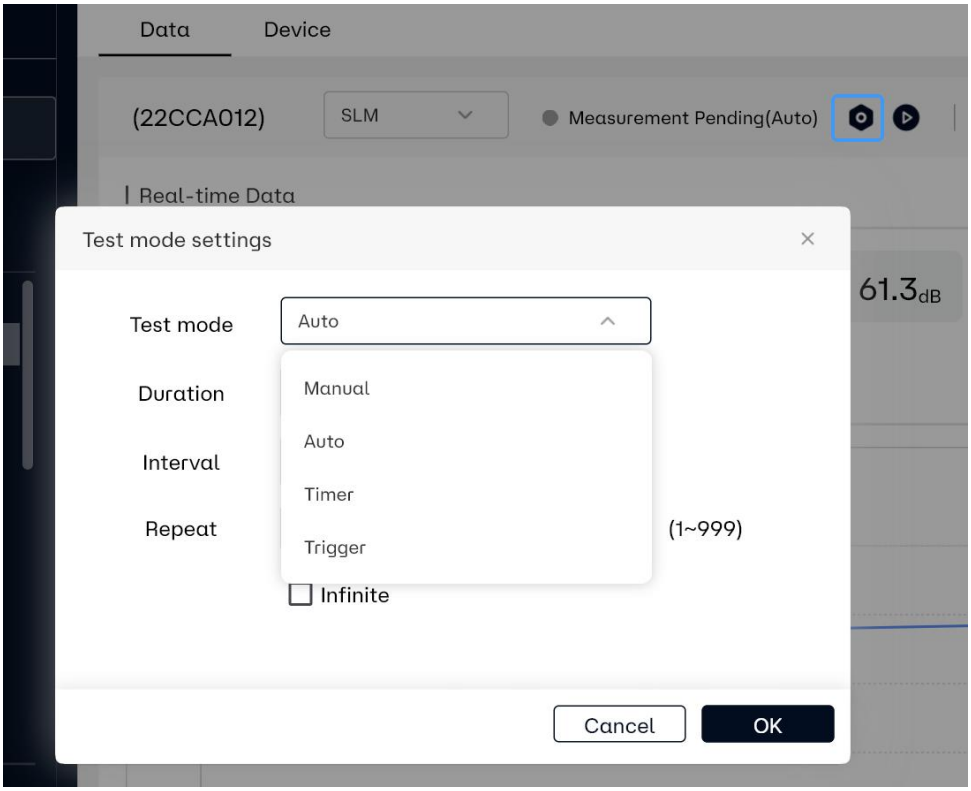
2- Test Settings: Clicking the test settings button icon will open a test mode settings dialog. In this dialog, clicking the test mode dropdown menu allows you to select from manual testing, automatic testing, timed testing, or triggered testing.

Automatic Testing: Requires setting the test duration, test interval, repeat count, or selecting infinite repeat.

Timer Testing: Requires setting the test duration and start time.

Triggered Testing: Requires setting the test duration, test interval, and LAF threshold.

Clicking the <OK> button will confirm the settings, while clicking <Cancel> will discard them.



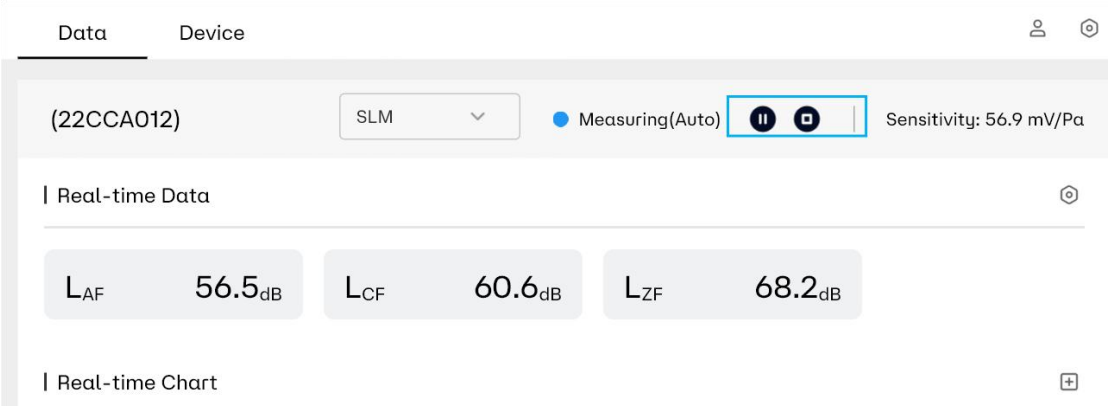
3- Testing:

Manual Testing Mode: Click the test button icon, and during manual testing, you need to manually click to pause or stop the test.

Automatic Testing: After clicking the test button, the test will run automatically based on the set duration, interval, repeat count, or infinite repeat.

Timer Testing: The test will execute according to the specified start time and duration.

Triggered Testing: The test will run based on the configured LAF threshold, duration, and interval.



4- Real-Time Data Viewing Interface:

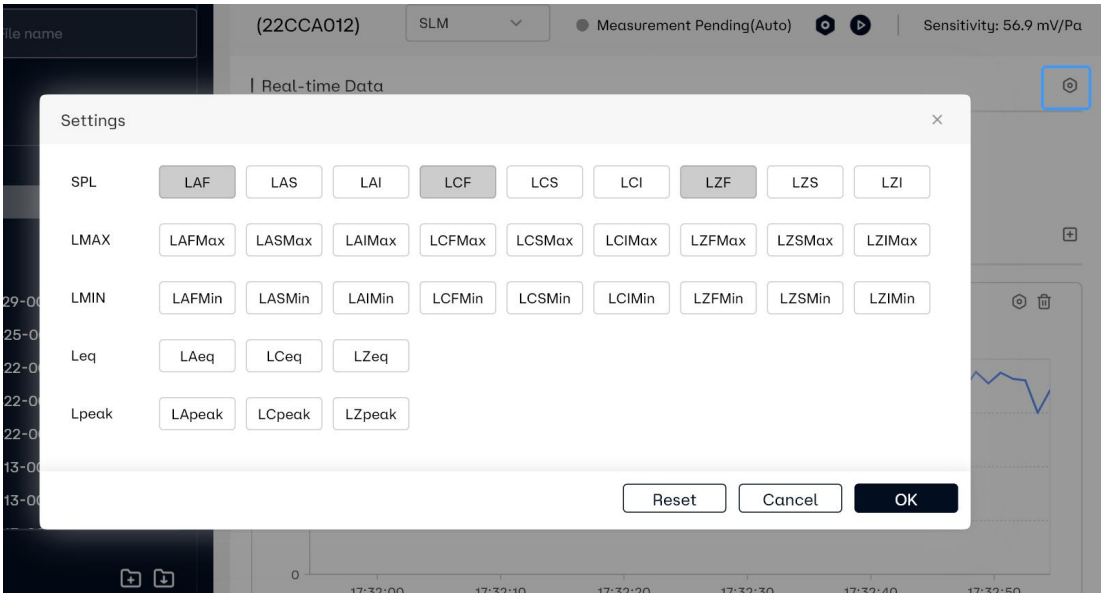
On the right side of the real-time data viewing interface, there is a settings button that allows you to choose which data to display in real-time.

Click the <Reset> button to uncheck all options.

Click the <Cancel> button to discard the settings.

Click the <OK> button to confirm the settings.

Once the settings are confirmed, the real-time data display will show the selected metrics, including Lmax, Lmin, Leq, and Lpeak, which will be displayed during recording.



5- Adding Spectrum

Click the plus icon on the right side of the spectrum to add the spectrum you want to display.

The sound level meter can only add time-domain graphs.

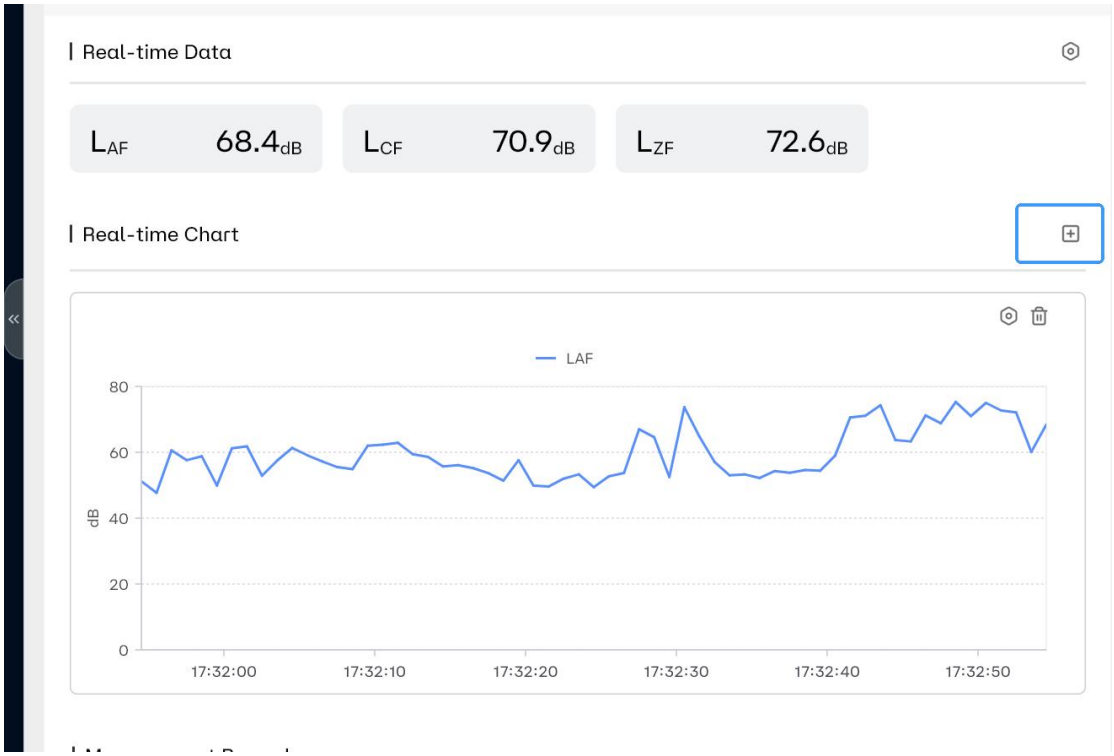
Statistical can add time-domain graphs, LN distribution, and sound pressure level distribution.

1/1 octave can choose time-domain graphs and octave band graphs.

1/3 octave can choose time-domain graphs and octave band graphs.

FFT analysis can add time-domain graphs and FFT.

Click the <Cancel> button to discard, and click the <OK> button to confirm. Once confirmed, the spectrum interface will display the added graphs.



6- Spectrum Settings

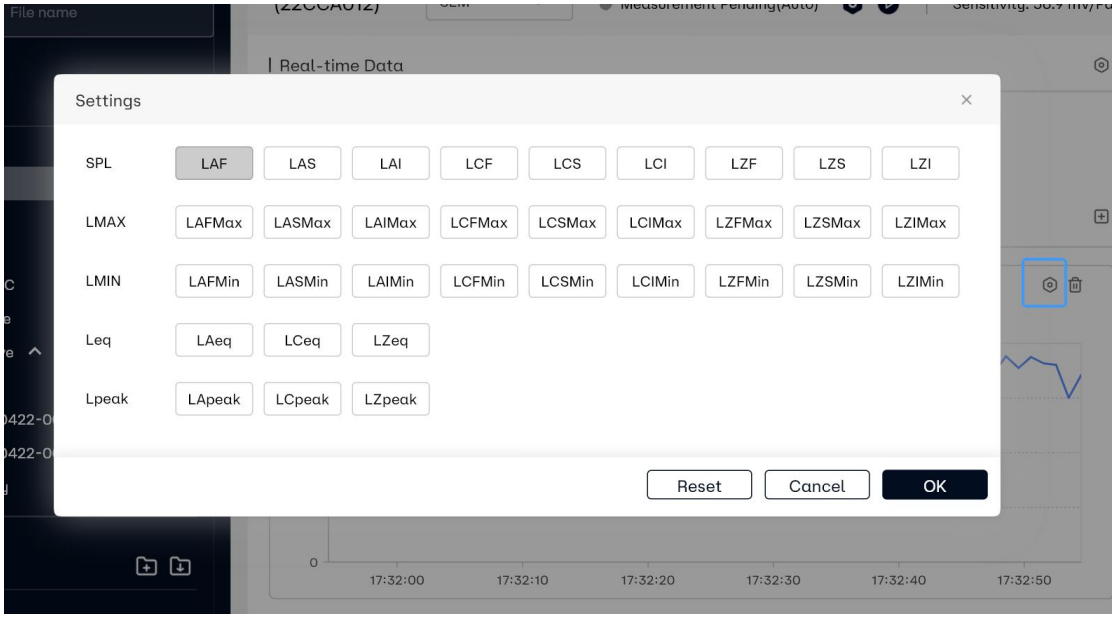
Click the settings button in the upper right corner of the spectrum to open the settings dialog, where you can choose the metric data to be plotted on the spectrum.

Click the <Reset> button to uncheck all options.

Click the <Cancel> button to discard the settings.

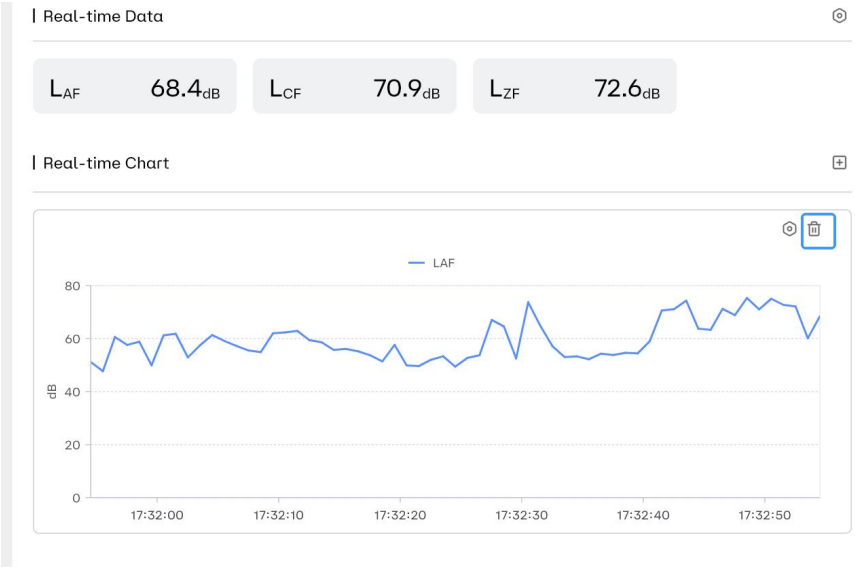
Click the <OK> button to confirm the settings.

Once confirmed, the selected metric data will be displayed on the spectrum, including maximum value, minimum value, equivalent sound pressure level, and peak sound pressure level, which will be shown during recording.



7- Deleting Spectrum

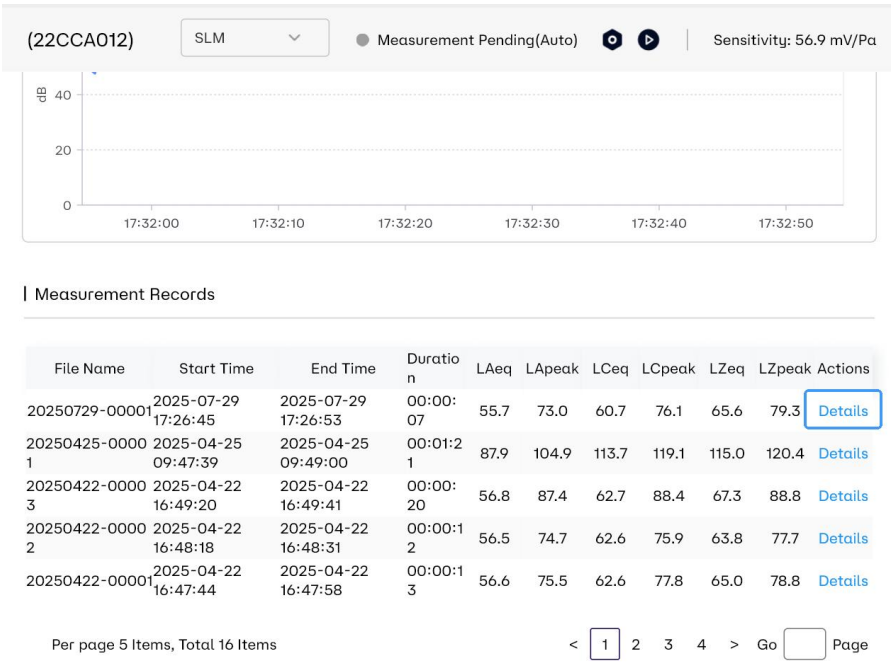
Click the delete button in the upper right corner of the spectrum to directly remove the spectrum.



4.2.4 Data Playback

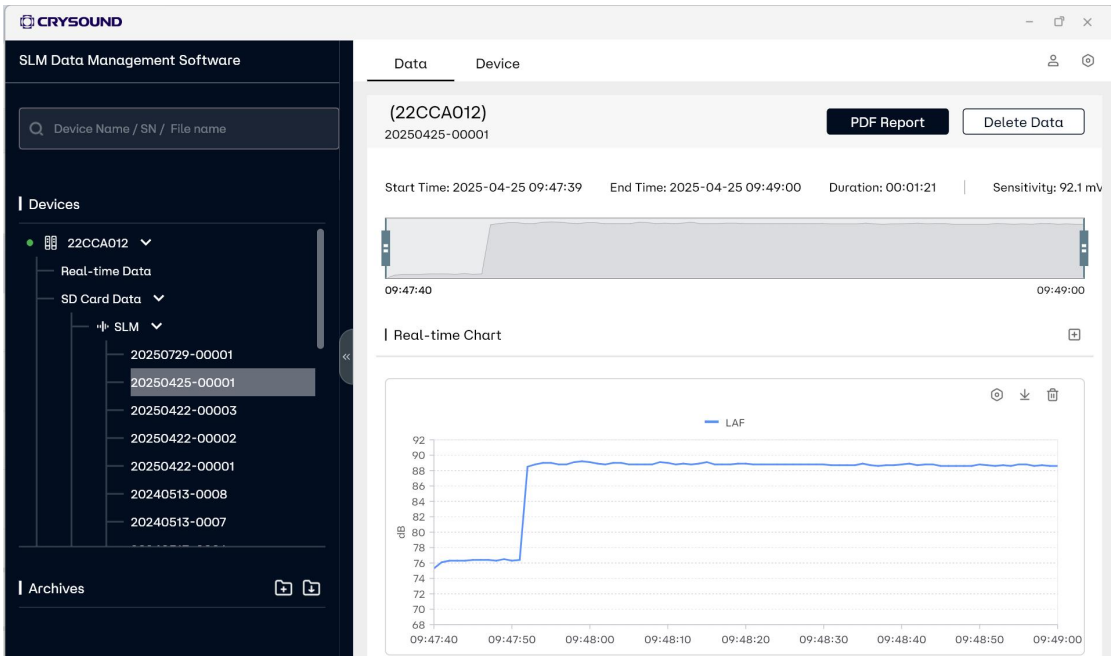
1-Test Record Details

After recording real-time data, the test records will include the name, start time, end time, test duration, and test metric values. Click the <Details> button on the far right to navigate to the historical playback interface, which displays detailed test data.



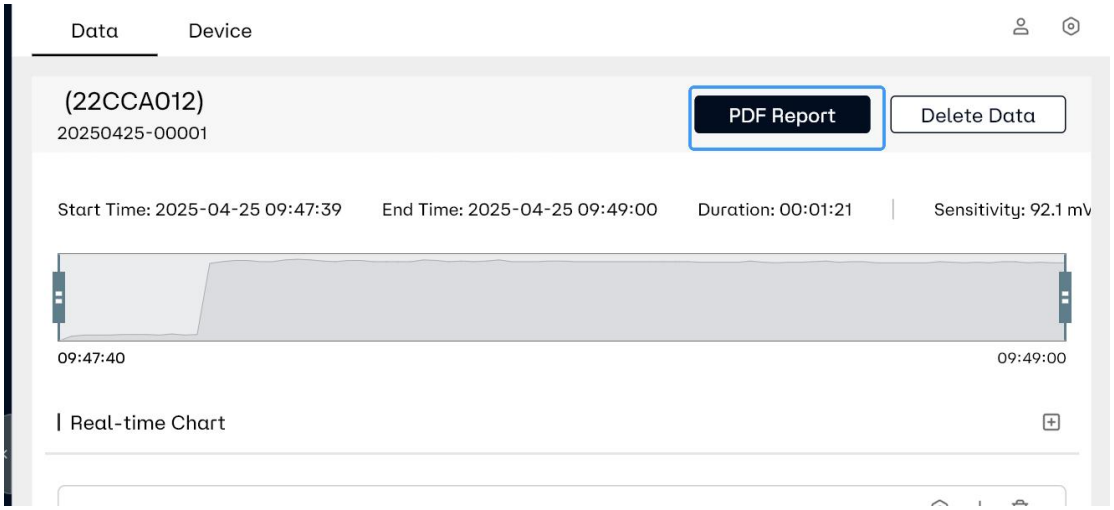
2- Historical Playback

Click the dropdown box on the right side of the historical playback to display options for sound level meter, statistical analysis, 1/1 octave, 1/3 octave, and FFT analysis. Click the dropdown box on the right to view the recorded data. By clicking any file name, the right interface will display the start test time, end test time, test duration, spectrum, and test data. You can drag the summary spectrum to select a specific time period to display the spectrum and table data.



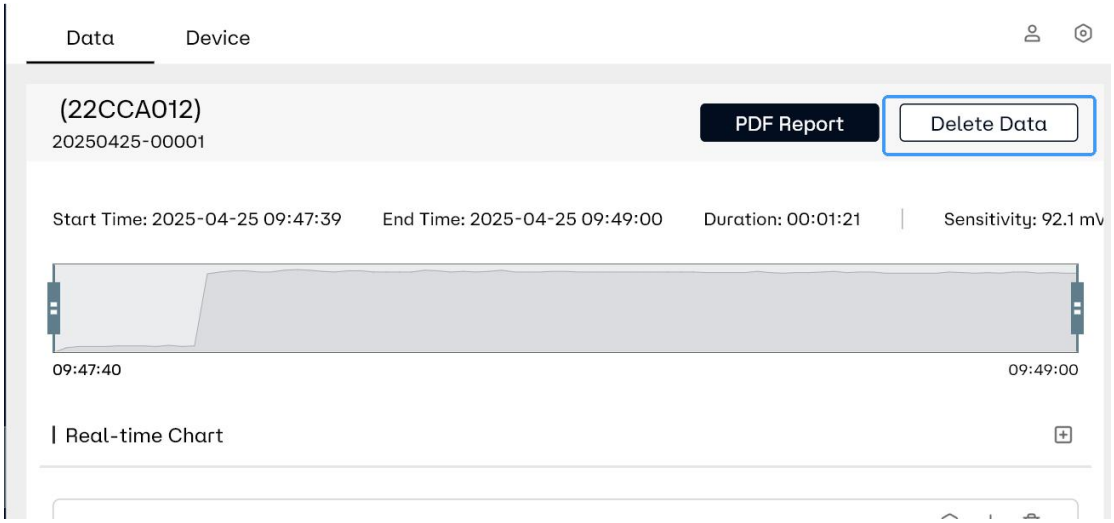
3- Export Report

In the upper right corner of the historical playback data interface, click the <Export Report> button, select the file storage path, and you can export the data report for the current page.



4- Delete Historical Playback Records:

In the upper right corner of the historical playback data interface, click the <Delete Record> button to open the delete history record dialog. Click the <Cancel> button to cancel the deletion, or click the <Confirm Delete> button to confirm the deletion of the current historical record data.

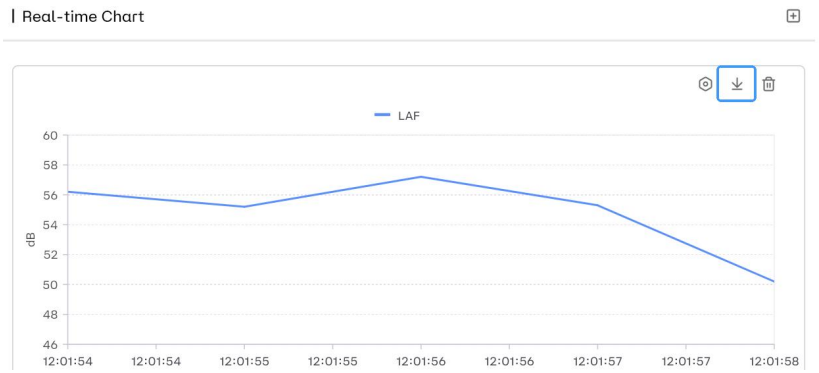


5- Historical Playback Spectrum

In the historical playback interface, adding, setting, and deleting spectra is the same as in the real-time data interface. Additionally, there are buttons to save images and save data, which can be downloaded by clicking the

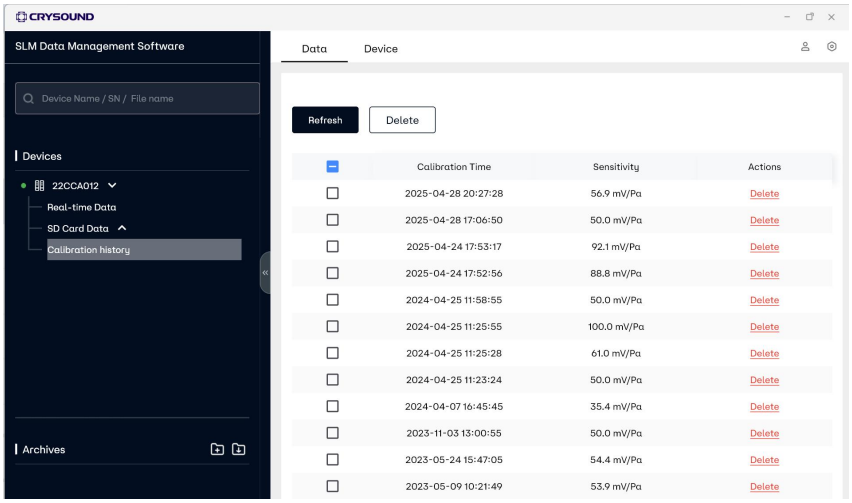
download icon.

Note: To view the LN distribution and sound pressure level distribution spectra in statistical analysis, you must set the display settings on the sound level meter device to LN distribution or sound pressure level distribution for data recording.



4.2.5 Calibration Records

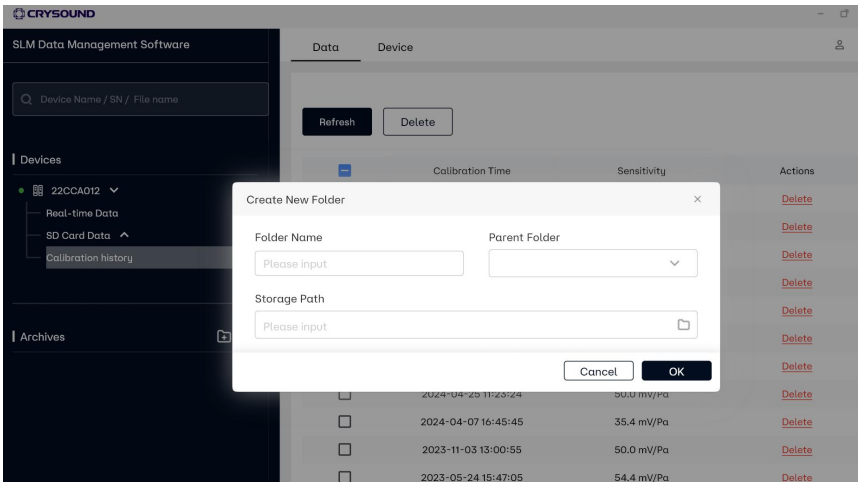
You can click the <Refresh> button in the upper left to refresh the calibration records. To batch delete calibration records, check the desired records and click the <Delete> button. To delete a specific calibration record, click the <Delete> button on the right side of that record.



4.2.6 Data Grouping

1- Create New Group

Click the plus icon on the right side of the local files to open the new group dialog. Enter the group name; if the parent group is left empty, you must enter a storage path. If the parent group is selected, no storage path is needed. Click the <OK> button to create the new group, or click <Cancel> to cancel the creation.



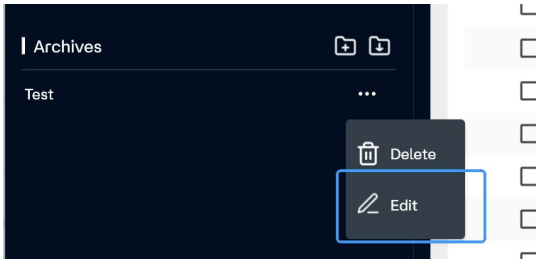
2- Edit Group

Click the ... icon on the right side of the group name, then click the <Edit> button to open the modify group dialog. Enter the new group name. Click the <Cancel> button to discard the changes, or click the <OK> button to confirm the modifications.

3- Delete Group

Click the ... icon on the right side of the group name, then click the <Delete> button to open the delete group dialog. Click the <Cancel> button to cancel

the deletion, or click the <Confirm> button to proceed with the deletion, which will also remove all files under the group.



4- File Import:

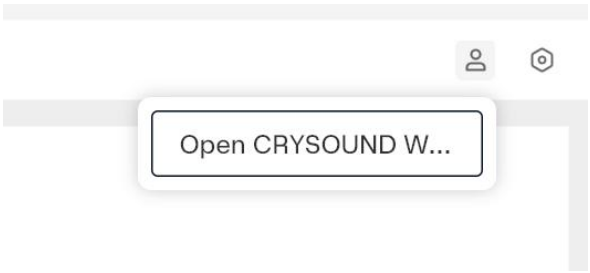
Click the downward arrow icon on the right side of the local files to open the file import dialog. Select the parent group and choose the file. Click the <Cancel> button to cancel the import, or click the <OK> button to confirm the file import.

Only sound level meter test files can be imported. After import, you can perform data review, report export, and other functions.

4.3 Others

4.3.1 Personal Center

Click the personal center icon in the upper right corner of the interface to open the CRYSOUND official website. After clicking this button, the interface will redirect to the CRYSOUND website.



4.3.2 Language Settings

Click the settings icon in the upper right corner of the interface to open the settings dialog. In the language dropdown menu, you can select Simplified Chinese or English (US). Click the <Close> button to cancel the settings or click the <Save> button to confirm the settings.