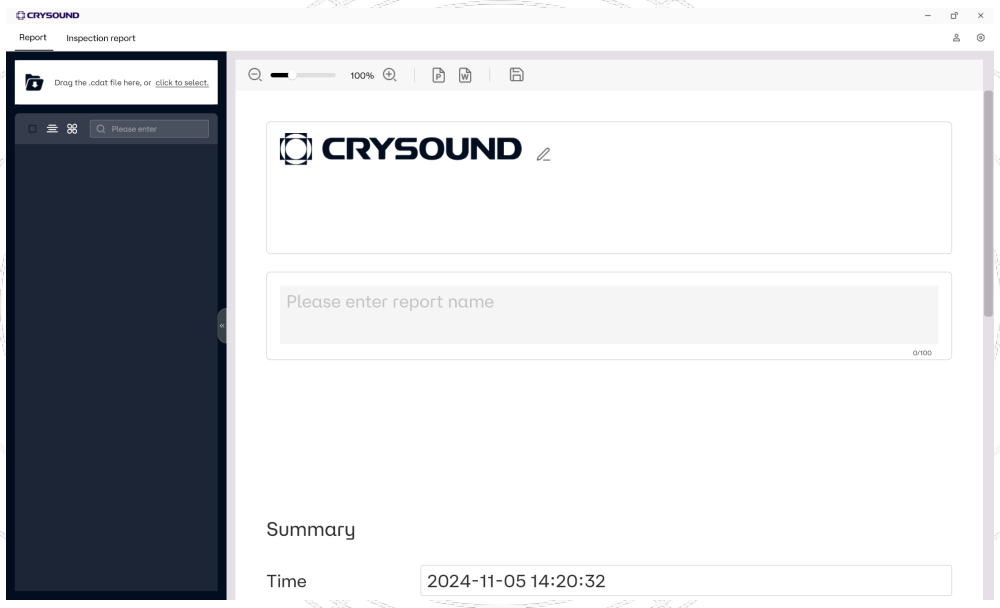
CRYSOUND

Reporting Software

User manual



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Revision History

Revision number	Description	Revision date
1.0	● Initial version	2024/11/04
1.1	● Optimization description	2025/01/11

01 User Notice

Legal Disclaimer

Compliance

This software has obtained Microsoft security certification authorization, please release it for use.

Hangzhou CRYSOUND Electronics Co., Ltd may update this manual for software version upgrades or other needs. The latest version of the manual can be found on the official website of Hangzhou CRYSOUND Electronics Co., Ltd.

02 Introduction

Reporting Software is the new generation of acoustic reporting software from Hangzhou CRYSOUND Electronics Co., Ltd. The reporting software provides real-time preview and report editing functions, allowing users to view results immediately during the process of editing reports and keep them consistent with the final exported report. As long as the Acoustic Imaging Camera and PC are in the same network, the reporting software can scan and connect the device to access the pictures and video data in the device. Select the required pictures and videos in the preview window and import them to the PC to generate a report with one click.

The Reporting Software function of the reporting software allows users to further analyze and process the data collected by the Acoustic Imaging Camera offline. With this function, users can conduct in-depth analysis of the Acoustic Imaging in the office, identify and analyze potential problems or anomalies. The reporting software also supports secondary analysis of the infrared data captured by the Acoustic Imaging Camera, and exports reports together with the sound and image data, presenting the health status of the equipment and the results of on-site inspections in multiple dimensions.

03 Product and accessories

3.1 Configuration requirements

Windows system version: Windows 10\11.

Processor: 1GHz or faster processor.

Graphics card: DirectX 9 or higher (including WDDM 1.0 driver).

Hard disk space: 16GB (32-bit) OS, or 20GB (64-bit) OS is recommended.

RAM: 1GB (32-bit) or 2GB (64-bit).

Display: 800*600 or higher.

Note: Windows 7 is not supported.

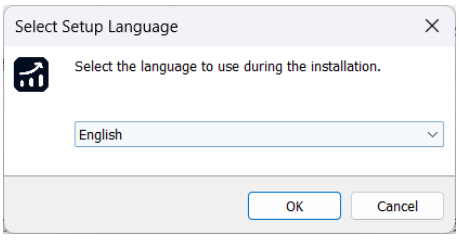
3.2 Software Download

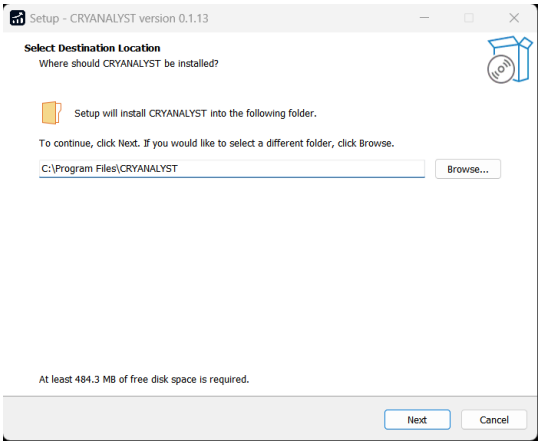
The Reporting Software report software can be obtained by contacting the sales manager or FAE engineer of Hangzhou CRYSOUND Electronics Co.,Ltd., or by visiting the download link below "https://ftp.crysound-global.com/cry/crysound/Download/01_Product%20Material/01_Acoustic%20Imaging/CRY8120%20Series%20Acoustic%20Imaging%20Camera/CRY8124/06_Analysis%20tool/CRYANALYST%ef%bc%882nd%20Generation%20report%20software%ef%bc%89/".

3.3 Installation

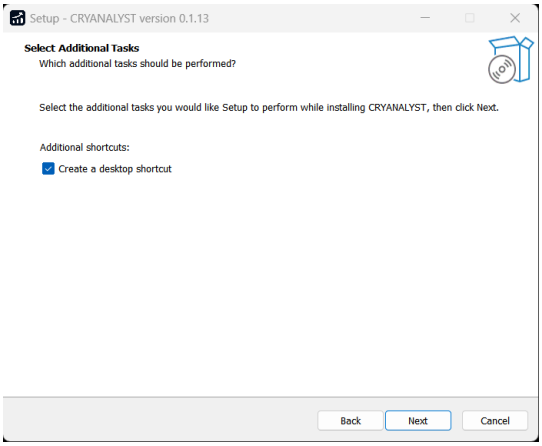
Download the Reporting Software report software "Reporting Software Installer V X.X.X.exe".
Step 1: Right-click and select "Run as Administrator".

Step 2: In the installation language selection interface, select "English" and click "OK". Select the installation path.

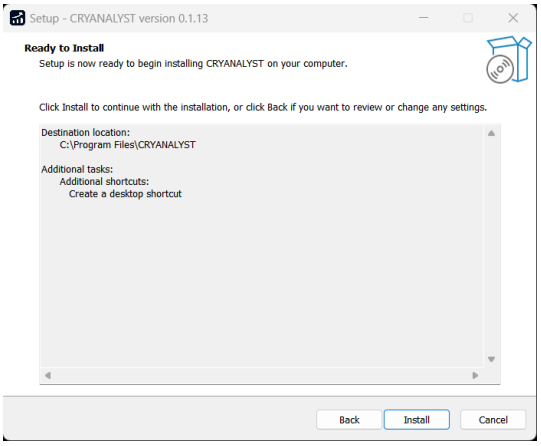


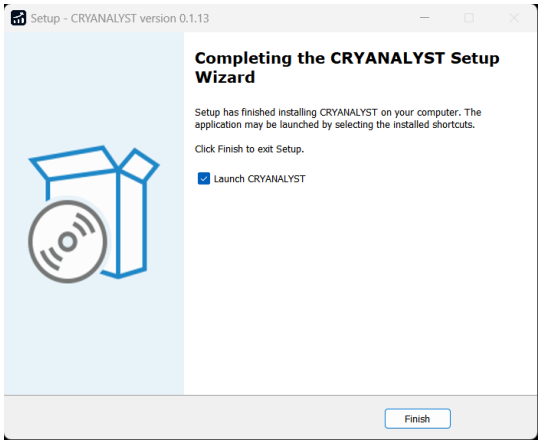


Step 3: Check "Create desktop shortcut" and click "Next".



Step 4: Click "Install", wait for the installation to complete, and then click "Finish" to complete the Reporting Software reporting software installation.

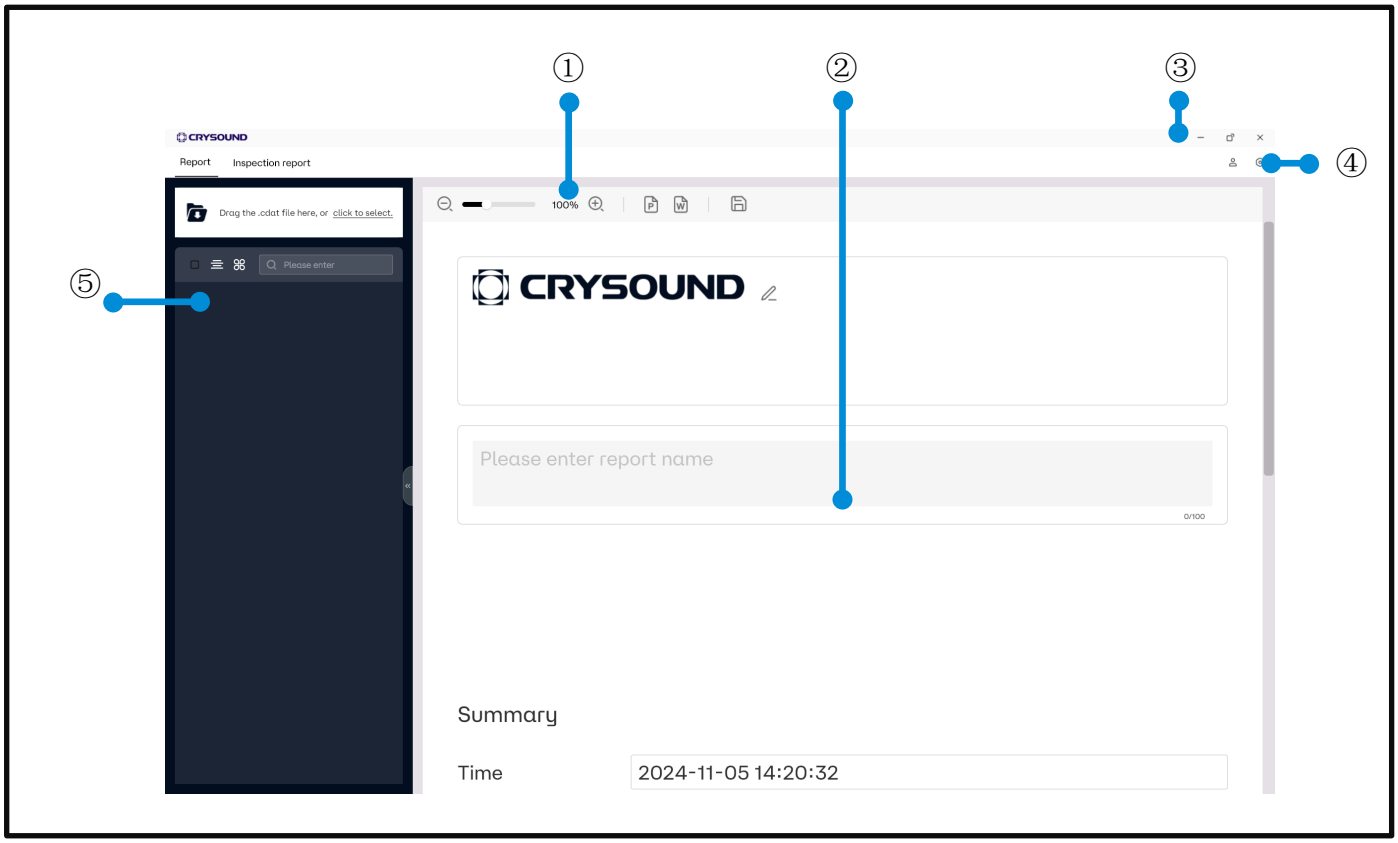




Step 5: Double-click the desktop "" icon to enter the reporting software main interface.

04 Function Instruction

4.1 Main Interface



① Report toolbar: Click " " to reduce the report bar, click " " to enlarge the report bar and display its ratio. 100% means that the current report bar width is just filled. Click " " to generate a PDF format report, click " " to generate a word format report, and click " " to save all edited content.

② Report : Display report cover information, report directory, and report data analysis details.

③ Title bar: Click " " to display the software interface to the maximum size of the current display. Click " — " to hide the software interface to the computer taskbar. Click " × " to close the software.

④ About and settings: Click "About" to display Reporting Software report software version information, and click "www.crysound.com" to enter the official website of CRYSOUND. Click " " to enter the software settings interface.

⑤ Data bar: Import test data, display and manage imported test data.

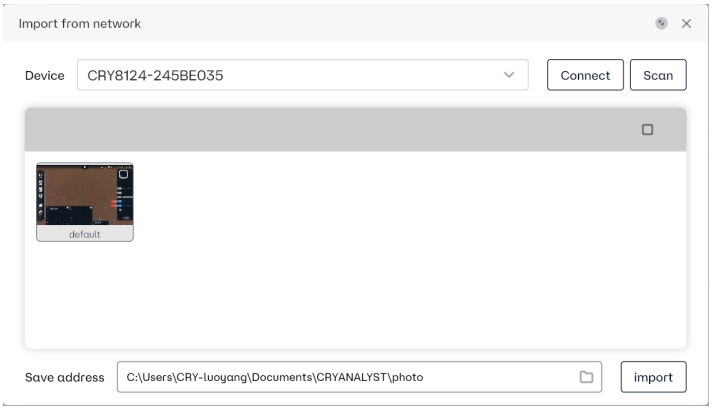
4.2 Data import

Import data from the network

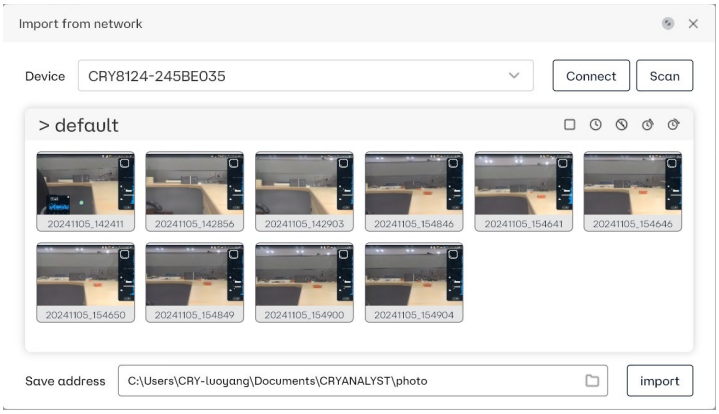
Step 1: Click the "Drag the .cdat file here, or click to select" button to pop up the file import pop-up window.
Step 2: Select "Import from network" to import from the network and enter the "Import from the network" pop-up window.

Step 3: Connect the PC to the "Acoustic Imaging Camera" hotspot, or connect the Acoustic Imaging Camera to the hotspot connected to the PC via Wi-Fi.

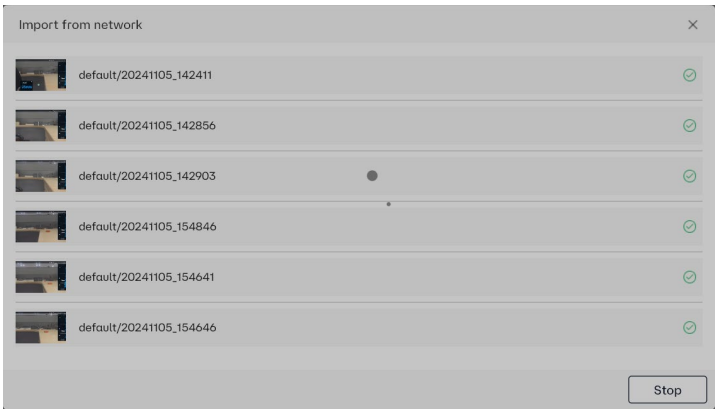
Step 4: Click "Scan" to scan the Acoustic Imaging Camera device, and select the device "CRY8124" to be connected in the device list. In the example, the product model is CRY8124 and the device SN number is 245BE035. Then click "Connect" to display the album of the connected device below after the connection is successful.



Step 5: Check the album, or double-click the album to enter the album, check the photos and videos to be imported, and then import them. Select "▢" to select all data, click "🕓" to enter the time filter interface, and you can filter the photos and videos taken in the selected time period. Click "🕓" to display all data in chronological order, and click "🕓" to display all data in reverse chronological order.



Step 6: Select the address of the imported PC save file, and then click the "import" button to start importing data. After the import is completed, the import file pop-up window will be automatically closed, and the imported file will be automatically loaded into the data column and analyzed.



Note: Importing too much data may cause lag. It is recommended to import less than 100 photos and less than 50 videos..

Import data from local

Step 1: Connect the device to the computer via a USB cable, open the device data folder "This computer\CRY8124\Internal shared storage space\imager\default", select multiple .cdat files, and copy the selected files to the local address of the computer such as the computer desktop.

Step 2: Click the "Drag the .cdat file here, or click to select" button to pop up the file import pop-up window.

Step 3: Select "Import from local" from local import again to enter the file selection pop-up window.

Step 4: Select the .cdat file to be imported, and then click "Open" to import the data into the data column and analyze it.

Drag and drop to import data

Step 1: Enter the local address of the computer, select the .cdat file, and press and hold the left mouse button. Drag the file to the data column area, and then release the left mouse button.

Step 2: Wait for the data to be loaded into the data column and analyze it.

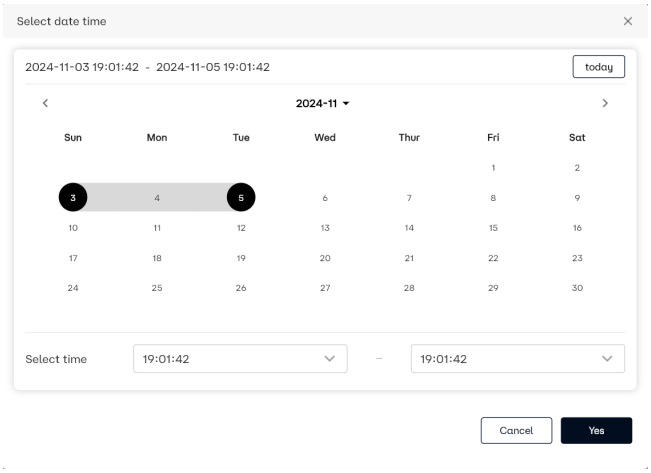
4.3 Data toolbar

When " ☐ " is checked, all data is selected, and analysis can only be performed in the checked state.

When " ≡ " is clicked, a tool pop-up window pops up:

Click " " to delete the selected data.

Click " " to pop up a time filter pop-up window, select the start date and time, and then select the end date and time, and click " Yes " to display the data that meets the filter conditions in the data column.



When time filtering has been performed, you can click " " to cancel the time filtering.

Click " " to sort and display all data in chronological order.

Click " " to sort and display all data in reverse chronological order.

When " " is clicked, a data type filter button pops up.

When " " is clicked, basic data is selected, and the data column only displays data with a data type of "basic".

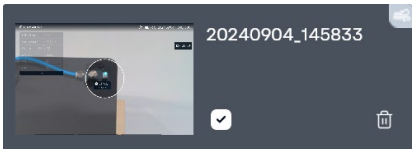
When " " is clicked, gas data is selected, and the data column only displays data with a data type of "gas".

When " " is clicked, power data is selected, and the data column only displays data with a data type of "power".

When " " is clicked, mechanical data is selected, and the data column only displays data with a data type of "mechanical".

Enter information in " Please enter " to search for data that meets the information, such as data name, time, text description, asset name, and asset ID.

Data information



20240904_145833: means the data was taken at 14:58:33 on September 04, 2024.

" " means the data is in a checked state. When it is checked, the data will be analyzed and displayed in the test report when the report is exported.

Click the " " button to delete the current data.

4.4 Report Toolbar

Click " " to zoom out the report page, minimum 50%.

Click " " to zoom in the report page, maximum 200%.

Click " " to generate a PDF format report, select the save location after clicking, and enter the report file name to save the report to the local computer.

Click " " to generate a WORD format report, select the save location after clicking, and enter the report file name to save the report to the local computer.

Click " " to save all the data in the report. For example, select 2 for the imaging point of the secondary analysis of the sound and image, and click Save. The next time you import this data, analyze it with the imaging point 2. The "test information", "test data", "result analysis" and other information on the report page can all be saved.

Cover

Logo: The company logo can be placed on the report cover. It is recommended to place a logo with an aspect ratio of 6:1~10:1. Click " " to enter the file manager interface to select the logo. It is recommended that the logo file be a PNG format image.

Report name: The user can enter the report name.

Overview information

Report time: The default time when the data is imported is the report time.

Company name: The user can fill in the company name in the report.

Equipment model: The model of the device used for shooting is automatically imported when importing data.

Equipment serial number: Automatically import the SN number of the device when importing data.
Test engineer: The user can fill in the name of the test engineer in the report.

Software version: Automatically import the model of the device when importing data.

Report suggestion: The user can enter the relevant suggestions for the test object involved in this report.

Basic summary and mechanical summary

File name: Same as the data name, default "date_time".

Asset name: Same as the data "test information"-"asset name", the asset name in the data comes from the Acoustic Imaging Camera "Gallery"-"Label"-"Asset name". The name of the device under test can be filled in.

Asset ID: Same as the data "test information"-"asset ID", the asset ID in the data comes from the Acoustic Imaging Camera "Gallery"-"Label"-"Asset ID". The ID/SN number of the device under test can be filled in.

Sound pressure: The sound pressure comes from the sound and image data analysis.

Severity: Same as the data "result analysis"-"severity", the severity in the data comes from the Acoustic Imaging Camera "Gallery"-"Label"-"Severity". The degree of failure of the device under test can be filled in.

Whether to repair: Same as "Result Analysis" - "Whether to repair", the data of whether to repair comes from the Acoustic Imaging Camera "Gallery" - "Label" - "Severity". You can fill in whether the tested equipment needs to be repaired.

Gas Overview

Leakage: Same as "Test Data" - "Leakage", the leakage in the data comes from the leakage estimated based on the sound pressure of the acoustic image analysis.
Note: This leakage is fitted by laboratory test data and may deviate from the actual leakage.

Economic loss: Same as "Test Data" - "Economic Loss", the economic in the data comes from the economic loss estimated based on the leakage size of the acoustic image analysis. The estimation formula is as follows:

If the gas type is selected as air.

Economic loss = leakage (working condition) * specific power * energy cost * annual working time of the system.

If the gas type is selected as other gases (such as oxygen).
Economic loss = gas value (oxygen) * leakage (standard condition) * annual working time of the system.

Note: The specific power is related to the compressor itself. The specific power can be set to be consistent with the specific power of the compressor. The energy cost is ¥/kWh. The value of gas changes with the market cycle. Modifying the gas value to be consistent with the market will make the estimated economic loss more accurate.

Carbon dioxide emissions: calculated based on the carbon emissions generated per kWh. The average carbon dioxide emission factors in different regions are different. You can enter the corresponding CO2 coefficient in "Settings" to estimate CO2 emissions more accurately.

Power Summary

Phase sequence: "Test data" - "Phase sequence" of the same data. The phase sequence in the data comes from the Acoustic Imaging Camera "Gallery" - "Label" - "Phase sequence".

4.5 Acoustic analysis

After importing the data, you can reanalyze the audio-visual data in the audio-visual data analysis interface.

Dynamic range: The dynamic range is consistent with that of the Acoustic Imaging Camera, and the user can reset it.

Audio-visual color: The audio-visual color is consistent with that of the Acoustic Imaging Camera, and the user can reset it.

Number of imaging points: The number of imaging points is consistent with that of the Acoustic Imaging Camera, and the user can reset it.

Imaging threshold: The imaging threshold is consistent with that of the Acoustic Imaging Camera, and the user can reset it.

Test data-sound pressure: Select 2, 3, 4, or 5 for the number of imaging points, and the user can select which point's sound pressure is to be calculated and analyzed. If you select unlimited and 1 point, the maximum sound pressure is displayed by default, and the analysis is performed with the maximum sound pressure.

Spectrum: The user can select the spectrum that needs to be exported with the report, and can select FFT graph, PRPD graph, time domain graph, or time-frequency graph.

Picture tag: The user can select the photos taken in the "Gallery"-"Picture tag" of the Acoustic Imaging Camera to be exported with the report.

4.6 Thermal analysis

The test information and result analysis are consistent with the sound and image. Emissivity and ambient temperature: derived from the "thermal imaging parameters" of the Acoustic Imaging Camera, and are consistent with the emissivity and ambient temperature in the thermal imaging parameters during shooting.

Thermal image secondary analysis

Temperature measurement point: Click "+" to add a temperature measurement point to the thermal image screen to display the temperature in the center.

Temperature measurement area: Click "□" to add a temperature measurement area to the thermal image screen to display the highest and lowest temperatures in the temperature measurement area.

Highest and lowest temperatures: Click "⇳" to display the highest and lowest temperatures in the entire thermal image screen.

Target temperature: You can select the temperature of the temperature measurement point or temperature measurement area from the thermal image screen.

Temperature: You can select the temperature of the temperature measurement point or temperature measurement area from the thermal image screen, or you can enter the temperature value.

Temperature rise: The temperature rise is automatically calculated based on the selected target temperature and temperature, and the temperature rise = target temperature - temperature.

4.7 Setting

Language: Users can set the language to "Simplified Chinese", "Traditional Chinese", "English", etc.

Logo: Users can turn on or off the display of CRYSOUND Logo in the report footer.

Header: Users can enter header text information, up to 15 characters.

Footer: Users can enter footer text information, up to 15 characters.

Currency: Users can set the exchange rate of currency relative to the US dollar.

Distance unit: Users can set the distance unit in the report to m and ft, and the default value follows the data.
Gas pressure: Users can set the gas pressure in the report to "kPa", "MPa", "PSI", "Bar", and the default value follows the data.

Leakage unit: Users can set the gas leakage unit in the report to "mL/min", "L/min", "L/h", CFM, CCM, and the default value follows the data.

Temperature unit: Users can set the temperature unit in the report to "℃", "℉", "K", and the default value follows the data.

Gas type: Users can select the gas type and modify the parameters for calculating economic losses.

When air is selected, you can set the specific power parameter (default 12), the energy cost (1￥/kWh), and the carsbon emission coefficient per kilowatt-hour (default 0.6 kg/kWh).

When oxygen is selected, users can modify the oxygen gas value (default oxygen 0.681 ￥/m^3).

Working hours: The duration of gas leakage each year.

05 Software functions

5.1 Main interface

Step 1: Import gas type data.

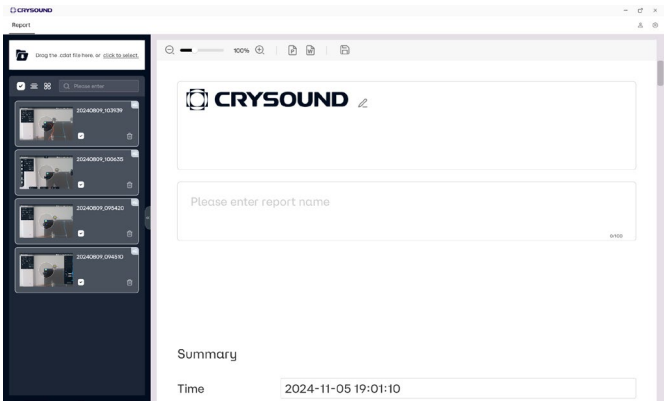
Step 2: Enter the report name, company name, and test engineer name.

Step 3: Edit each test data information.

Step 4: Click the " " button to save all data.

Step 5: Click the " " button to pop up the report save path setting pop-up window and select the report save location.

Step 6: Click the "Save" button to save the gas leak report and complete the report generation.



5.2 Interface operation

Step 1: Import power type data.

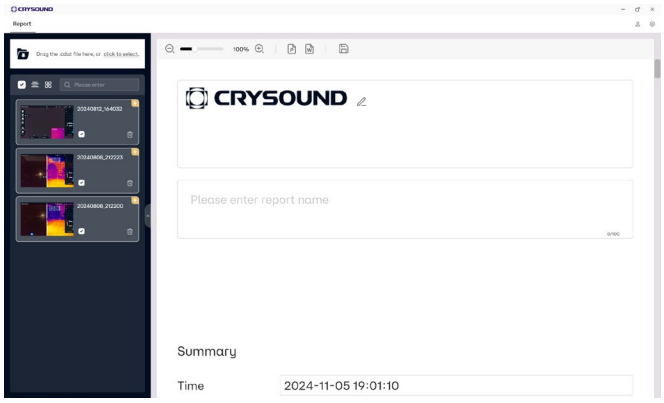
Step 2: Enter the report name, company name, and test engineer name.

Step 3: Edit each test data information.

Step 4: Click the " " button to save all data.

Step 5: Click the " " button to pop up the report save path setting pop-up window and select the report save location.

Step 6: Click the "Save" button to save the gas leak report and complete the report generation.


CRYSOUND
Report
100%
CRYSOUND
Please enter report name
Summary
Time
2024-11-05 19:01:10

06 Contact us

6.1 Hangzhou headquarters

Tel: 0571-88225198, 0571-88225128
E-mail: info@crysound.com
Add: No.10, Xianqiao Road, Zhongtai Street, Yuhang District, Hangzhou, Zhejiang Province, China
Web: www.crysound.com

6.2 Dongguan branch

Tel: 0769-21688120
E-mail: info@crysound.com
Add: 7F, B1 Bldg, Songhu Lake, Intelligent Valley, Liaobu Town, Minfu Rd, Donguan City, Guangdong Province, China
Web: www.crysound.com

6.3 Houston Office

Tel: (877) 215-7752
E-mail: info@crysound.com
Add: 13777 Stafford Point Dr, Stafford, TX 77477, US
Web: www.crysound.com

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