

HIKMICRO Analyzer Acoustic

User Manual

Legal Information

©2023 Hangzhou Microimage Software Co., Ltd. All rights reserved.

About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the HIKMICRO website (<u>http://</u>www.hikmicrotech.com) company website.

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

Trademarks

HIKMICRO and other HIKMICRO's trademarks and logos are the properties of HIKMICRO in various jurisdictions.

Other trademarks and logos mentioned are the properties of their respective owners. Trademarks and logos mentioned are the properties of their respective owners.

Disclaimer

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS MANUAL AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". HIKMICROOUR COMPANY MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. THE USE OF THE PRODUCT BY YOU IS AT YOUR OWN RISK. IN NO EVENT WILL HIKMICROOUR COMPANY BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA, CORRUPTION OF SYSTEMS, OR LOSS OF DOCUMENTATION, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, IN CONNECTION WITH THE USE OF THE PRODUCT, EVEN IF HIKMICROOUR COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSS.

YOU ACKNOWLEDGE THAT THE NATURE OF THE INTERNET PROVIDES FOR INHERENT SECURITY RISKS, AND HIKMICROOUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER-ATTACK, HACKER ATTACK, VIRUS INFECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKMICROOUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW. ESPECIALLY, YOU ARE RESPONSIBLE, FOR USING THIS PRODUCT IN A MANNER THAT DOES NOT INFRINGE ON THE RIGHTS OF THIRD PARTIES, INCLUDING WITHOUT LIMITATION, RIGHTS OF PUBLICITY, INTELLECTUAL PROPERTY RIGHTS, OR DATA PROTECTION AND OTHER PRIVACY RIGHTS. YOU SHALL NOT USE THIS PRODUCT FOR ANY PROHIBITED END-USES, INCLUDING THE DEVELOPMENT OR PRODUCTION OF WEAPONS OF MASS DESTRUCTION, THE DEVELOPMENT OR PRODUCTION OF CHEMICAL OR BIOLOGICAL WEAPONS, ANY ACTIVITIES IN THE CONTEXT RELATED TO ANY NUCLEAR EXPLOSIVE OR UNSAFE NUCLEAR FUEL-CYCLE, OR IN SUPPORT OF HUMAN RIGHTS ABUSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATTER PREVAILS.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
A Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
i Note	Provides additional information to emphasize or supplement important points of the main text.

Contents

Chapter 1 Introduction		
Chapter 2 Settings	2	
2.1 Switch Language	2	
2.2 Switch Distance Unit	2	
2.3 Leak Cost Calculation	2	
Chapter 3 Help	3	
3.1 Feedback	3	
3.2 About	3	
Chapter 4 Image Analysis	4	
4.1 Navigation for Image Analysis Page (Gas Leakage)	4	
4.2 Navigation for Image Analysis Page (Partial Discharge)	5	
4.3 Import Image	5	
4.4 Palettes	6	
4.5 Adjust Acoustic Palette Opacity	8	
4.6 Adjust Sound Level Range	8	
Chapter 5 Save Image	9	
Chapter 6 Export Report 1	.0	

Chapter 1 Introduction

The client is used to view and analyze images captured by the acoustic imaging camera. The acoustic imaging camera as a professional acoustic localization product can easily locate gas leakage and partial discharge in the industrial environment. The client helps to analyze images, locate problems, detect potential risks, debug to a large extent, as well as reduce device faults and extra cost from breakdowns.

Chapter 2 Settings

2.1 Switch Language

Steps

1. On the top left corner, click **Settings** \rightarrow **Language** to select a language.

iNote

The new language will take effect after you restart the client.

2.2 Switch Distance Unit

Steps

1. On the top left corner, click **Settings** \rightarrow **Distance Unit** .

- 2. Select a unit as needed.
- 3. Click OK.

2.3 Leak Cost Calculation

Steps

- **1.** On the top left corner, click **Settings** \rightarrow **Leak Cost Calculation Settings** .
- 2. Select a Currency, enter a Unit Price, and select a Cycle for calculation.
- 3. Click OK.

Chapter 3 Help

You can view the client version information and get the contact of technical support.

3.1 Feedback

On the top left corner, click $Help \rightarrow Feedback$ to get the contact of technical support for any problems.

3.2 About

On the top left corner, click **Help** \rightarrow **About** to view the client version No., open source license, etc.

Chapter 4 Image Analysis



4.1 Navigation for Image Analysis Page (Gas Leakage)

Figure 4-1 Image Analysis Page

1-Import acoustic images to the software to analyze the gas leakage severity. Supports saving analyzed images to the local PC.

2-Displays the enlarged image to be analyzed.

3-Enable/disable the grayscale image function.

4-Adjust the palettes opacity.

5-After analysis, supports exporting the report to the local PC.

6-View detection details. Supports adding text annotation for the image.

7-View the leak level, estimated leak size, and the leak cost. For details about setting the leak cost calculation, refer to <u>Leak Cost Calculation</u>.

8-View image information, such as capture time and image size.

9-Supports adjusting the sound level.

10-View the diagrams generated by the software.

11-List of imported images.



4.2 Navigation for Image Analysis Page (Partial Discharge)

Figure 4-2 Image Analysis Page

1-Import acoustic images to the software to analyze the partial discharge severity. Supports saving analyzed images to the local PC.

- 2-Displays the enlarged image to be analyzed.
- 3-Enable/disable the grayscale image function.
- 4-Adjust the palettes opacity.
- 5-After analysis, supports exporting the report to the local PC.
- 6-View detection details. Supports adding text annotation for the image.
- 7-View the details of discharge types.
- 8-View image information, such as capture time and image size.
- 9-Supports adjusting the sound level.
- 10-View the diagrams generated by the software.
- 11-List of imported images.

4.3 Import Image

You can import acoustic images to the software to analyze them.

Steps

- 1. In the top-left corner, click Import.
- 2. Select one or more acoustic images to be imported.

The imported acoustic images will be displayed on the left.

4.4 Palettes

Palette is a method to transform the display of images from black and white into colorful ones. Since human eyes are not sensitive to the resolution of black and white images, palette processing can transform different grey-scales in the black and white images into different colors according to linear or nonlinear mapping function, thereby enhancing the recognizability of the image boundary, improving the capability of human eyes to identify details of the image and allowing users to obtain information hidden in the grey-scale image that cannot be directly observed by naked eyes. Palettes mode is the color displaying mode of the transformed image, which can be manually set on the client.

Set Palettes

In the top-right corner, select a palette type in the drop-down list.

Palettes

Palettes	Image Example
Blue Red	
Black White	
White Black	

6

Palettes	Image Example
Rainbow	
Ironbow	
Black Red	
Fusion	
Rain	

4.5 Adjust Acoustic Palette Opacity

You can adjust acoustic palette opacity to see more details of a target.

In the top-right corner, click the percentage and drag the slider to adjust the opacity.

4.6 Adjust Sound Level Range

Drag the slider to adjust the sound level range as needed. The acoustic palettes will change with adjustment.

Chapter 5 Save Image

On the top left corner, click
or
 or
 or
 to save or save as the image.

Chapter 6 Export Report

On the top right corner, click **Report** and select a method to export a report as needed.

Export Current Page

Select **Export Current Page**: Export a report of the current image.

Batch Export

Select **Batch Export**: Select one or multiple images to export a report.

