IRSoft · PC-Software

Instruction manual

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Use

> Please read this documentation through carefully and familiarize yourself with the product before putting it to use. Pay particular attention to the safety instructions and warning advice in order to prevent injuries and damage to the products.

> Keep this document to hand so that you can refer to it when necessary.

> Hand this documentation on to any subsequent users of the product.

ⓘ Knowledge of Windows® operating systems is required when working with the software.

The description in this instruction manual relates to Windows® XP.

Symbols and writing standards

Representation	Explanation
ⓘ	Note: Basic or further information.
1. ... 2. ...	Action: more steps, the sequence must be followed.
> ...	Action: a step or an optional step.
- ...	Result of an action.
Menu	Elements of the program interface.
[OK]	Buttons of the program interface.
... | ...	Functions/paths within a menu.
"..."	Example entries

3 Specifications

3.1. Use

The IRSoft software is used for the analysis, processing and archiving of the images recorded by the testo 880 thermal imager (hereafter referred to as 'instrument'). It also has integrated reporting for the clear presentation of the data.

The settings can be performed on the connected thermal imager via the instrument control.

3.2. System requirements

Operating system

The software can be run on the following operating systems:

- Windows® XP ServicePack 2 (SP2)
- Windows Vista

With a limited scope of functions:

- Windows® 2000 SP4 (no instrument control)
- Windows® XP without SP2

Computer

For smooth work with the software, the following requirements should be met:

- Pentium processor of at least 1.2 GHz or equivalent
- 256 MB RAM
- 100 MB unused hard drive capacity
- CD-ROM drive
- USB 2.0 interface
- Internet Explorer 5.5 Service Pack 1 or higher

4 First steps

4.1. Installing the software/driver

ℹ Administrator rights are required for installation.

1. Insert the program CD in the CD-ROM drive of the computer.

If the installation program does not start automatically:

> Open My Computer, select the CD drive and start the **Setup.exe** file.

2. Follow the instructions of the installation wizard.

When installing under Vista, please note the following steps during the installation procedure:

- The **User Account Control** window opens.
  > Click on **[Continue]**.
- The **Windows Security** window opens.
  > Click on **Install this driver software anyway**.

3. To finish the software installation, click on **[Finish]**.

After completion of the software installation, the instrument must be connected to the PC to continue with the driver installation.

4. Switch on the instrument: **[⏻]**.

5. Connect the instrument to the PC using the USB cable.

- The connection is established.

- The driver installation is performed automatically.

In some cases, the instrument driver may not be automatically recognized. In this case, continue as follows:

Windows XP:

- The **Found New Hardware** window is opened.

1. Select **No, not this time** and click on **[Next]**.

2. Select **Install the software automatically** and click on **[Next]**.

If the driver is not automatically found:

> Enter the driver path in the CD directory: **Driver** folder:

3. Click on **[Finish]**.

Windows Vista:

- The **Found New Hardware** window is opened.

1. Click on **Locate and install driver software** and then on **[Continue]**.

If the driver is not automatically found:

> Click on **Browse my computer for driver software** and then click on **[Browse]**. Enter the driver path in the CD directory: **Driver** folder:

- The **Windows Security** window opens:

2. Click on **Install this driver software anyway**.

3. Click on **[Close]**.

4.2. Starting the software

Start IRSoft

ℹ The user interface of the software is opened in the language of the operating system if this is supported. If the operating system language is not supported, the user interface is in English.

> Click on **[Start]** | **Programs** (Windows XP) or **All Programs** (Windows Vista) | **Testo** | **IRSoft**.

ℹ Under Windows Vista, the **User Account Control** window is opened during the initial start of the software.

> Click on **Allow**.

Establishing a connection with the instrument

1. Press the **[⏻]** button to switch on the instrument.

2. Connect the instrument to the PC using the USB cable.

- The connection is established.

- The instrument switches into slave mode, where all control keys of the instrument are deactivated except the **[⏻]** button.

- The instrument is identified by the PC as a USB memory device. The operating system automatically assigns the memory of the instrument (SD card) a drive letter. This is displayed in Windows Explorer.

i Depending on the settings in the operating system, the **Devices with Removable Storage** (Windows XP) or **AutoPlay** (Windows Vista) window may be opened when the instrument is connected. This can be ignored or closed.

Using the Import Wizard

The Import Wizard supports you when transferring images from the thermal imager to the PC.

i The Import Wizard is only opened when the IRSoft software was started before connecting the thermal imager.

Only **.bmt** and **.bmp** files and folder structures are transferred.

1. Click on **[Continue]**.

2. In your folder list, mark the folders that are to be transferred.

When a folder is marked, all subfolders are automatically included. To import files that are saved on the top level (not in folders), the **Devices with Removable Storage** must be marked.

3. Click on **[Continue]**.

4. Enter the target directory and activate the optional functions **Set target directory as default** and **Delete data in the device after copying** as required.

5. Click on **[Continue]**.

- In the selected target directory, a folder is created with the date of the data transfer to prevent the overwriting of previous folders with the same designation. The folders and the images are saved in this directory.

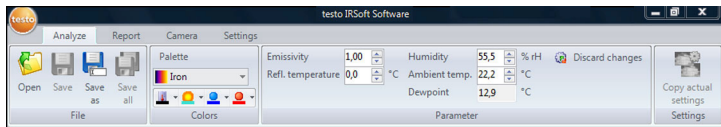6. Click on **[Finish]**.

- The Import Wizard is closed.

Activating/deactivating the Import Wizard

> In IRSoft click on the **Imager** tab and carry out the desired change in the **Import Wizard** group.

5 Product description

5.1. User interface

Ribbon

The ribbon helps you to carry out modifications and settings and to find the relevant functions and commands quickly.

The functions are divided into different groups on four tabs: **Analysis**, **Report**, **Imager** and **Settings.**

The functions/commands vary depending on the tab selected. Each tab contains its own functions/commands to perform actions.

The tab **Analysis** contains function/commands for:

• Opening and saving infrared images

• Setting and copying image properties

The tab **Report** contains function/commands for:

• Creating reports

• Editing reports

The tab **Imager** contains function/commands for:

• Configuring the thermal imager

• Activating/deactivating the Import Wizard

The tab **Settings** contains function/commands for:

• Setting the work space view

• Setting the infrared image presentation

• Setting the temperature unit

• Setting the user interface view (color scheme)

• Activating/deactivating the tips

• Activating/deactivating the automatic program updates

• Creating user-generated report templates

Work space
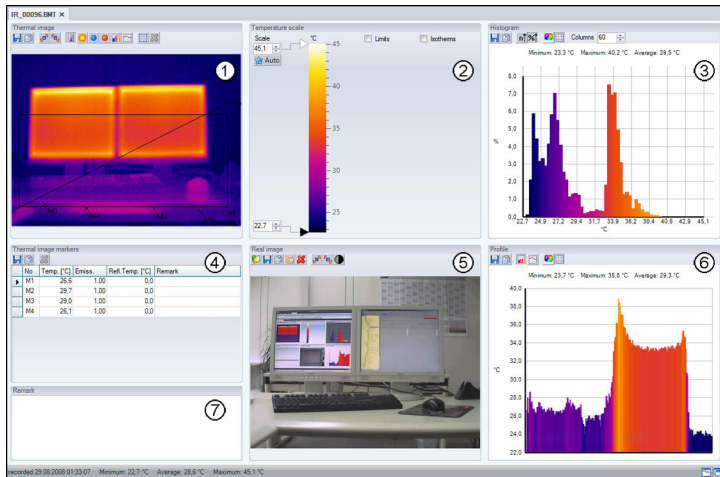
Information is shown and editing performed in the work space. The work space display varies depending on the page layout selected. The work space is divided into different document windows:

① Thermal image

② Temperature scale

③ Histogram

④ Thermal image markings

⑤ Real image

⑥ Profile

⑦ Comments

i   Depending on the work space view selected and the size of the screen, not all document windows are visible. If necessary, use the scroll bars.

5.2. Functions and commands

All of the functions and commands available in this software are described in more detail in tips (tool hints) in IRSoft.

> Move the mouse pointer over the functions/command in IRSoft.

- Tips (tool hints) are displayed.

Activate/deactivate tips (tool hints)

1. Click on the **Settings** tab.
2. In the group **Tips** select the option **Display**/**Hide**.

6 Using the product

6.1. Selecting images

ℹ️ During the image selection of IRSoft, the following images are shown:

- Infrared images without attached real image (**IR**).
- Infrared images with attached real image**IV**).

Real images alone (**VI**) are not displayed.

> Please use Windows Explorer for access to the real images.

Opening infrared images

1. To open infrared images:

   > In the ribbon, click on the testo logo 🔴 and select **Open** 📂
   or

   > Click on the **Analysis** tab and select **Open** 📂.

> If the Windows dialogue with the infrared images does not open: navigate to the directory with the infrared images.

> If you wish to display preview images: In the Windows dialogue **Menu View** ▦▾ | select **Thumb view**.

2. Highlight one or several infrared images.

   > If you wish to highlight several images: Hold down the Ctrl-key and click on the images.

3. Click on **[Open]**.

- The selected infrared image will be displayed in the **Thermal image** document window.

- If you have opened an infrared image with an attached real image: the real image will be displayed in the **Real image** document window.

- If several images were highlighted: Depending on the work space view selected, the rest of the infrared images will be displayed in individual tabs or in individual windows.

i Alternatively, you can also select an infrared image when IRSoft is not open. In this case, multiple infrared images cannot be selected.

Importing real images

See Real image document window page 26.

6.2. Modifying the work space view

The work space view can be modified in the **Settings** tab.

1. In the ribbon, click on the **Settings** tab.

2. Modify the work space view in the **Work space view** group.

> For quick changes to the work space view: On the right bottom edge of the screen, click on **Layout as windows with tabs** or **Layout as free floating and cascading windows**.

Comparing infrared images

Requirement: at least 2 infrared images must be open.

1. In the ribbon, click on the **Settings** tab.

2. In the group **Work space view** select the option **Tabbed windows**.

3. Right-click on the tab of an infrared image that you wish to compare with another infrared image.

- A context menu is opened.

4. From the context menu, select the option **New Horizontal / New Vertical Tab Group**.

- The infrared image can be compared with the other infrared image.

> If you wish to compare more than 2 images: Repeat the procedure starting with step 3.

6.3. Edit image properties

Image properties can be edited in the **Analysis** tab.

ℹ️ • Changes to the image properties will only be accepted for the currently selected infrared image in the **Thermal image** document window. To transfer image properties to other open infrared images, see page 15.

• Changes in the **Parameter** group can affect the measurement result.

• The functions in the **Colors** group are for editing the visual presentation of the thermal image and have no influence on the measurement results.

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1. In the ribbon, click on the **Analysis** tab.
2. Edit the infrared image properties with the functions and commands in the ribbon.

6.3.1. Colors

Selecting a palette

You can choose between 8 existing color palettes for the infrared image.

> Click on ▼ and select a color palette from the drop-down list.

Selecting color temperature markers, profiles and histograms

> Click on **Color temperature markers, profile and histogram** 📊▾ and select a color.

Selecting color for temperature correction

Changes the marker color with the temperature correction in the **Thermal image** document window.

> Click on **Color region markers** 🔴▾ and select a color for infrared image area markers.

Select color for coldspots/hotspots

> Click on **Color coldspot** 🔵▾ / **Color hotspot** 🔴▾ and select a color.

6.3.2.   Parameter

The settings from the recording of the thermal image can be corrected.

ℹ   Changes to the settings influence the measurement result. The settings should therefore only be changed with the utmost caution.

Function	Procedure
Set **Emissivity**, **Reflected temperature**, **Humidity**, **Ambient temperature**[1]	> Click on the number and change it by means of input via the keyboard or via ⬆⬇. You can find more information on the individual properties in the instruction manual of the thermal imager.
Dewpoint	Dewpoint temperature: The value is calculated from the humidity and the ambient temperature and cannot be changed manually.
Discarding changes	> If you wish to reset the changes back to the most recently saved parameters: Click on **Discard changes** 🔄.

6.3.3.   Accepting settings for multiple images

Copies the image settings of the currently selected thermal image into all open thermal images.

1. Click on **Thermal image settings** 🖼️.

- A dialogue box with the parameters is opened.

2. Select the parameters that you wish to accept for the other infrared images and click on **[OK]**.

- The settings are accepted for all open infrared images.

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[1] The humidity and ambient temperature are transmitted by the thermal imager and can be changed in the IRSoft. The values have no effect on the measurement result, they are only there for information.

6.4. Evaluating images

IR images can be edited and evaluated in the individual document windows below the work space.

6.4.1. Thermal image document window

The following functions are available in the **Thermal image** document window:

- Saving/exporting the infrared image
- Copying the infrared image to the clipboard
- Rotating the infrared image
- Specifying the readings for one pixel in an infrared image
- Temperature correction in an infrared image area (adjust emissivity and reflected temperature for the area)
- Specifying a hotspot/coldspot for an infrared image area
- Creating a histogram of an infrared image area
- Creating a temperature profile for a line
- Moving/deleting measuring points/range

Saving/exporting the infrared image

> **i** When exporting infrared images in BMP, JPG and PNG format only the image data is exported, no readings.
>
> If you wish to create a temperature table for the infrared image, the infrared image must be saved in XLS format (Excel). In this case the temperature values contained are organized in an Excel spreadsheet in 120 lines with 160 values each.

1. Click on **Save thermal image** 🖫.
- The Windows dialogue for saving files is opened.
2. Enter a file name.
> If you wish to export the temperature values of the infrared image: Select the XLS file format.
> If you wish to export the image data of the infrared image: Select file format BMP, JPG or PNG.
3. Select a storage location and click on **[Save]**.

Copying an infrared image to the clipboard

If you copy the infrared image to the clipboard, both an infrared image file and the temperature value of each individual pixel in the thermal image can be inserted into other programs.

1. Click on **Copy to clipboard** 📄.

2. To insert an image file/text file into Excel, Powerpoint or Word:

    1‡ Open the desired program.

    2. In the program toolbar, click on the **Edit** tab.

    3. From the context menu, select the option **Paste content**.

    > If you wish to insert an infrared image file: Select the option **Bitmap** and click on **[OK]**.

    > If you wish to insert the temperature of each individual pixel in the infrared image: Select the option **Text** and click on **[OK]**.

Rotating the infrared image

> Click on **Rotate left** 🔄 or **Rotate right** 🔄.

Specifying the readings for one pixel in an infrared image

For specifying the temperature, the emissivity and the reflected temperature for one pixel in an infrared image.

> **ℹ** If you wish to specify the temperature within one infrared image area (temperature correction), you should first highlight the infrared image area and then position the measuring points on it. Otherwise, the correctness of the temperature displayed for the measuring point cannot be guaranteed.

1. Click on **Temperature** 🔳.

2. Click on one point in the infrared image.

- Temperature, emissivity and reflected temperature of the measured point set here will be displayed in the **Thermal image markers** document window.

For further information about editing measurement results (e.g. changing emissivity), see Thermal image markers document window page 24.

Correcting temperature in an infrared image area

For specifying emissivity and a reflected temperature within an infrared image area.

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i Infrared images areas with temperature corrections should not overlap each other because only one emissivity and one reflected temperature is correct per pixel.

However, if two infrared image areas do overlap, the parameters (emissivity and reflected temperature) of the most recently entered infrared image area will be used to specify the temperature.

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1. Click on **Temperature correction** 🔴.
2. Select a marking form from the drop-down menu (rectangle, circle, ellipse, free form shape)
3. Drag the mouse with the mouse button pressed to highlight an infrared image area in the thermal image.
-   The measurement results of the selected infrared image area will be displayed in the **Thermal image markers** document window.

For further information about editing measurement results see Thermal image markers document window page 24.

Specifying a hotspot/coldspot

For specifying the hottest/coldest point within an infrared image area.

1. Click on **Coldspot** 🔵 / **Hotspot** 🔴.
2. Select a marking form from the drop-down menu (rectangle, circle, ellipse, free form shape)
3. Drag the mouse with the mouse button pressed to highlight an infrared image area in the thermal image.
-   The hotspot/coldspot of the selected infrared image area will be displayed in the **Thermal image markers** document window.

Creating a histogram

For displaying the frequency of a temperature within an infrared image area.

1. Click on **Histogram** 📊.
2. Select a marking form from the drop-down menu (rectangle, circle, ellipse, free form shape)

3. Drag the mouse with the mouse button pressed to highlight an infrared image area in the thermal image.

- The temperature distribution in the selected infrared image area will be displayed in the **Histogram** document window.

Creating a new histogram deletes the existing one.

For further information about editing the histogram see Histogram document window page 23.

Creating a temperature profile

For displaying a temperature progression over a line.

1. Click on **Temperature profile** 🖾.

2. Select the characteristics of the line from the drop-down menu (horizontal, vertical, diagonal)

3. Drag the mouse with the mouse button pressed to draw a line in the the infrared image.

- The temperature profile will be displayed in the **Profile** document window.

Creating a new profile line deletes the existing one.

For further information about editing the temperature profile see Profile document window page 27.

Moving/deleting image markers in the infrared image

ⅰ   If infrared image areas are moved, the set measurement markers should be moved along with them.

If the measurement point remains in the same position or if infrared image areas are deleted, the parameters (emissivity and reflected temperature) of the measurement points must be checked.

> Click on the measurement markers in the infrared image (not possible if the **Temperature** 🖾 tool is activated) **or**

> Click on the Edit mode 🖾 and drag the mouse with the mouse button pressed to create a frame around the measurement points/range that you wish to delete/move.

> If you wish to delete measurement points/ranges: Click on **Delete** ❌.

- The measurement markers in the infrared image are deleted.

- The measurement results will be removed from the **Thermal image markers**, **Histogram** and **Profile** document windows.

> If you wish to move measurement markers: Hold down the mouse button and move the measuring points/range.

- The measurement results will be adjusted according to the movement in the **Thermal image markers**, **Histogram** and **Profile** document windows.

6.4.2.   Temperature scale document window

The following functions are available in the **Temperature scale** document window:

• Setting the scale

• Setting the limits

• Setting the isotherm area

Setting the scale

You can choose between automatic scaling (adjustment to the min./max. values) and manual scaling. The scale limits can be set within the measuring range that is valid for the image. All temperatures that are greater or less than the min./max. value are shown in the min./max. value color (depending on the color palette set). Temperature ranges that are not relevant can thus be hidden.

Function	Procedure
Setting **min./max. values**	> Click on the number and change it by means of input via the keyboard or via 🔁
	or
	> Click on the arrowhead of the min./max. value on the scale. Hold the mouse button down and move the arrow.
Carrying out **Automatic scaling**	> To carry out automatic scaling: Click on **[⭐ Auto]**.
	- The scaling limits are adjusted to the min./max. values.

Setting the limits

A lower and an upper limit value can be defined. Temperatures below the lower limit value or above the upper limit value can be marked with one color. The transparency of the limit value colors can be set.

Function	Procedure
Activating the **limits**	> Activate the limits ☑.
Setting the upper/lower limit (only available with activated limit values)	> Click on the number and change it by means of input via the keyboard or via 🔼. **or** > Click on the arrowhead of the lower/upper limit on the scale. Hold the mouse button down and move the arrow.
Selecting **the upper/lower limit color** (only available with activated limit values)	> Click on **Color upper/lower limit** 🌈 and select a color.
Setting **Transparency** (only available with activated limit values)	1. Click on **Color upper/lower limit** 🌈. 2 Click on the number next to **Transparency** and change it by means of input via the keyboard or via 🔼.

Setting isotherms (temperature range)

A lower and an upper area limit can be defined. Temperatures between the lower and upper area limits are marked with one color.

Function	Procedure
Activating the **isotherms**	> Activate the isotherms ☑.
Setting the **upper/lower area limit** (only available with activated isotherms)	> Click on the number and change it by means of input via the keyboard or via 🔼. **or** > Click on the arrowhead of the lower/upper area limit on the scale. Hold the mouse button down and move the arrow.

Function	Procedure
Selecting **the isotherm color** (only available with activated isotherms)	> Click on **Color isotherms** 🖼 and select a color.
Setting **Transparency** (only available with activated limit values)	1. Click on **Color isotherms** 🖼. 2 Click on the number next to **Transparency** and change it by means of input via the keyboard or via 🖼.

6.4.3. Histogram document window

The following functions are available in the **Histogram** document window:

• Saving a histogram as an image file

• Copying a histogram to the clipboard

• Choosing between absolute (number of the measurement points) and relative (percent of the measurement points) scaling:

• Setting the background color for the histogram

• Switching grid lines in the histogram on/off

• Setting the number of columns over the temperature range being assessed

> **i** Changes can only be seen if a histogram had already been created in the **Thermal image** document window for the infrared image currently open, see Creating a histogram page 19.

Function	Procedure
Saving a histogram as an image file	1. Click on **Save file** 🖼. - The Windows dialogue for saving files is opened. 2. Enter a file name. 3. Select a file format (BMP, JPG, PNG). 4. Select a storage location and click on **[Save]**.

Function	Procedure
Copying a histogram to the clipboard	1. Click on **Clipboard** 🖺. - Image files from the histogram can be inserted in other programs (e.g. Microsoft Word).
Selecting scaling	Choosing between absolute (number of the measurement points) and relative (percent of the measurement points) scaling. > Click on absolute scaling 🔲 or relative scaling 🔲.
Selecting background color	> Click on **Background color** 🎨 and select a color.
Switching grid lines on/off	> Click on **Grid lines** ⊞.
Specifying number of columns	Set the number of columns over the temperature range being assessed (settings between 10 and 100 columns are possible): > Click on the number and change it by means of input via the keyboard or via ⬍.

6.4.4.   Thermal image markers document window

Shows the measurement results of the image markers performed in the **Thermal image** document window. The emissivity and the reflected temperature of the inserted image marker can be changed at the same time here as well. Additional comments can be entered for each individual image marker.

The following functions are available in the **Thermal image markers** document window:

• Saving/exporting measurement results for the image markers in Excel

• Copying measurement results to the clipboard

• Deleting measurement results for the image markers

• Modifying emissivity and reflected temperature for image markers at specific points/ranges

• Entering comments

Function	Procedure
Saving/exporting measurement results in Excel	The measurement results for the image markers are saved in an Excel table. 1. Click on **Save file** 💾. - The Windows dialogue for saving files is opened. 2. Enter a file name. 3. Select the file format XLS. 4. Select a storage location and click on **[Save]**.
Copying measurement results to the clipboard	ⓘ The data cannot be inserted into other programs as an image file. > Click on **Clipboard** 📋. - Measurement results can be inserted in other programs (e.g. Microsoft Word, Powerpoint).
Deleting image markers	1. Highlight the line to be deleted. 2. Click on **Delete** ❌.
Modifying emissivity and reflected temperature for image markers at specific points/ranges	ⓘ Changes to the settings influence the measurement result. The settings should only be changed with the utmost caution! > In the table, click on the value (emissivity or reflected temperature) and modify it via the keyboard or ⬍. - The temperature of the measurement point adjusts to the set emissivity/reflected temperature. - Changes can be seen in the **Thermal image** document window.
Entering comments	> Click in the comment field and use the keyboard to enter the text.

6.4.5.   Real image document window

The following functions are available in the **Real image** document window:

- Importing real images
- Exporting real images
- Copying a real image to the clipboard
- Inserting a real image from the clipboard
- Deleting a real image
- Rotating a real image
- Modifying the brightness of a real image

Function	Procedure
Importing real images	1. Click on **Open** 📁.
	- The folder containing the real images opens.
	2. Highlight a real image and click on **[Open]**.
	- The real image selected will be displayed in the **Real image** document window.
Exporting real images	1. Click on **Save file** 💾.
	- The Windows dialogue for saving files is opened.
	2. Enter a file name.
	3. Select a file format (BMP, JPG, PNG).
	4. Select a storage location and click on **[Save]**.
Copying a real image to the clipboard	> Click on **Clipboard** 📋.
	- The real image can be inserted in other programs (e.g. Microsoft Word, Powerpoint).

Function	Procedure
Inserting a real image from the clipboard	> Click on **Clipboard Insert** 📋.
	- The confirmation request is opened.
	> If you wish to insert the real image from the clipboard: Click on **[Yes]**.
	- The real image is inserted from the clipboard.
	> If you wish to cancel the process: Click on **[No]**.
Deleting a real image	1. Click on **Delete** ❌.
	- The confirmation request is opened.
	2. Click on **[OK]**.
	- The real image is deleted.
Rotating a real image	> Click on **Rotate left** or **Rotate right**.
Modifying the brightness of a real image	1. Click on **Brightness** ◑.
	- The dialogue box is opened.
	2. Use the scroll bar to modify the brightness of the real image.
	3. Click on **[OK]**.

6.4.6. Profile document window

Displays the temperature profile created in the **Thermal image** document window.

The following functions are available in the **Profile** document window:

• Saving a temperature profile as an image file
• Copying a temperature profile to the clipboard
• Selecting the presentation of the temperature profile
• Changing the background color of the temperature profile
• Switching grid lines on/off

Function	Procedure
Saving a temperature profile as an image file	1. Click on **Save file** 🖫.
	- The Windows dialogue for saving files is opened.
	2. Enter a file name.
	3. Select a file format (BMP, JPG, PNG).
	4. Select a storage location and click on **[Save]**.
Copying a temperature profile to the clipboard	> Click on **Clipboard** 🖹.
	- Data can be inserted in other programs (e.g. Microsoft Word, Powerpoint).
Selecting the presentation of the temperature profile	> To select filled out profile: Click on 🖿.
	> To select a line profile: Click on 🖾.
Changing the background color of the temperature profile	> Click on **Background color** 🌐 and select a color.
Switching grid lines on/off	> Click on **Grid lines** ▦.

6.4.7. Comments document window

> Use the keyboard to enter the comments about the currently selected infrared image in the text field.

6.5. Creating a report

You can create a report with one or more infrared image(s). A Report Wizard will guide you through the process. Several report templates are available for creating simple reports:

- Thermal bridges in buildings in accordance with EN 13187 (comprehensive)
- Thermal bridges in buildings in accordance with EN 13187 (simplified test)
- Industrial thermography
- Short report
- Standard

1. In the ribbon, click on the **Report** tab.
2. Click on **Report Wizard** 📑.
- The Report Wizard is opened.

Report tab

Depending on the report template selected, the Report Wizard is divided into the following tabs:

- Template
- Image selection
- Company address / Logo
- Address / Location
- Job description
- Ambient conditions
- Conclusion
- Preview

> Work through the individual tabs from left to right and note the respective tips 🛈 at the bottom of the window.
- The data entered appear automatically in the report.

Saving a report

1. Click on the **Preview** tab.
- A preview of the report is opened.
2. Click on **Save report** 📑.
- The Windows dialogue for saving files is opened.
3. Enter the file name and select a file format.
4. Select a storage location and click on **[Save]**.
- The report will be saved in TIR file format. This will create a file with the images and the report data entered.

Saving a report as a PDF

1. Click on the **Preview** tab.
- A preview of the report is opened.
2. Click on **PDF** 📄.
- The Windows dialogue for saving files is opened.
3. Enter a file name, select a storage location and click on **[Save]**.
- The report will be saved as a PDF.

Print report

1. Click on **Print** .

- The Windows dialogue for printing a report is opened.

2. Complete the print settings if necessary and click on **[Print].**

- The report is printed.

6.6. Modifying the report

Data in a saved report can be modified.

1. In the **Report** tab, click on **Restore saved report** .

- The Windows dialogue is opened.

2. Navigate to the directory where the report is stored.

3. Select a report and click on **[Open]**.

- The Report Wizard is opened.

- Report texts can be modified in the Report Wizard.

> To edit images afterward:

  1. Click on the Report Wizard.

  - The report data are displayed in the work space in individual document windows.

  - Report texts remain in the Report Wizard.

  2. Carry out the desired image edits.

  3. In the Report tab, click on **Report Wizard**.

  - The edited image is inserted in the Report Wizard.

  - The existing texts are displayed.

4. Saved the report with the changes.

6.7. Report Designer

With the Report Designer you can create your own report template by changing an existing template to meet your needs. There are tools available to help you design and edit the report template to your liking.

ℹ️ The Report Designer is used exclusively for creating individualised report templates. The reports themselves are created by selecting the report template in the Report Wizard.
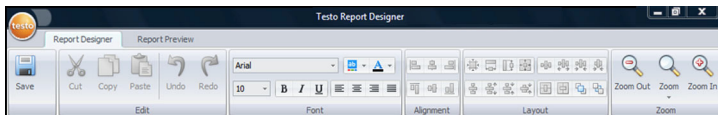
Opening the Report Designer

Requirement: at least one infrared image must be open.

1. Select the **Settings** tab and click on **Report Designer** 📝.
- The dialogue box is opened.
2. Select the report template that you would like to edit and click on **[OK]**.
- The Report Designer is opened.

6.7.1. User interface

Ribbon

The ribbon helps you to carry out modifications and settings in the Report Designer and to find the relevant functions and commands quickly.

The functions and commands are divided into different groups on two tabs: **Report Designer** and **Preview**.

The functions/commands and the work space vary depending on the tab selected. Each tab contains its own functions/commands to perform actions.
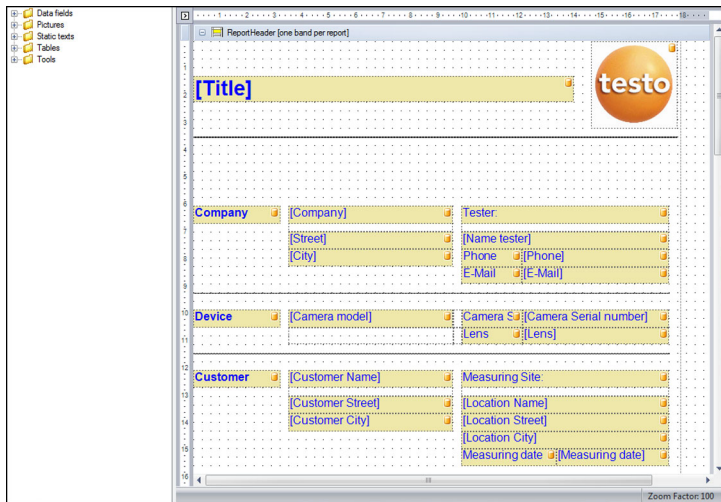
The tab **Report Designer** contains function/commands for:

• Saving the report template

• Editing the report template

• Changing the report template view

The tab **Preview** contains function/commands for:

- Printing a report
- Editing and aligning the page layout
- Changing the report template view

Work space

Modifications are carried out in the work space in the **Report Designer** tab. It consists of the file directory tree and the open report template. The file directory tree contains prescribed fields that you can pull into the report template.

When the **Preview** tab is selected, the work space view changes.

6.7.2. Functions and commands

All of the functions/commands in the ribbon are described in more detail in tips (tool hints).

> Move the mouse pointer over the functions/command in the ribbon.

- Tips (tool hints) are displayed.

6.7.3. Editing a report template

Report template areas

The open report template consists of various areas. Fields can be inserted into or removed from each area.

- Report Header: contains fields with general information that appear once in the report template (e.g. company, instrument, client, etc.). When the report is created later, this information appears at the beginning of the report.

- Page Header: contains fields with information that appears on each page in the header.

- Bottom Margin: contains fields with information that appears on each page in the footer.

- Detail: contains fields with information about the corresponding measurements (e.g. location, ambient conditions, etc.)

- Detail Report "Picture": contains placeholders for image and text fields with information about the infrared images (emissivity and reflected temperature, comments about the individual infrared images, histogram, temperature profile, etc.). The Detail Report "Picture" area is repeated in the report depending on the number of infrared images.

- Report Footer: contains fields with information that appears at the end of the report template (e.g. general comments, conclusion, date and signature, etc.)

Dragging prescribed fields into the report template

You can integrate data, images, tables and tools from the file directory tree into the report template to modify it to meet your needs.

> **ℹ** Note the report template areas into which you drag the fields. For example, image fields should only be integrated into the **Detail Report "Picture"** area. Because the image fields serve as placeholders, each may only be dragged once into the **Detail Report "Picture"** area.

1. Click on the **Report Designer** tab.

2. In the file directory tree, click on the desired option.

3. Hold down the mouse buttons and drag the field into the desired position in the report template.

- The field is aligned to the grid.

Modifying fields

Font, font size and text alignment can be changed for the fields.

1. Click on the **Report Designer** tab.
2. In the report template, click on the field that you wish to adjust.
3. To highlight several fields:
    > Hold down the Ctrl-key and click on the fields **or**
    > Drag the mouse to create a marker frame around the fields.
4. Use the editing functions in the ribbon to modify the fields.
- The changes will be applied to all highlighted fields.

Aligning fields

Requirement: at least two fields must be highlighted.

1. Click on the **Report Designer** tab.
2. To highlight several fields:
    > Hold down the Ctrl-key and click on the fields **or**
    > Drag the mouse to create a marker frame around the fields.
3. Use the editing functions in the ribbon to align the fields.
- The changes will be applied to all highlighted fields.

Moving field(s)

1. Click on the **Report Designer** tab.
2. In the report template, click on the field(s) that you wish to move.
3. Hold down the mouse button and drag the field(s) to the desired position.
- The field(s) align to the grid.

Modifying field size(s)

1. Click on the **Report Designer** tab.
2. In the report template, click on the field(s) where you wish to adjust the size.
3. Click on one of the black contact points of the field(s) and change the size of the field(s) by dragging with the mouse button pressed.

Deleting field(s)

1. Click on the **Report Designer** tab.

2. In the report template, click on the field(s) that you wish to delete.

3. To delete fields:

    > On the keyboard, press the **[Del]** key **or**

    > Right-click with the mouse and select **Delete**.

Deleting a field has no effect on the size and position of other fields. Empty spaces between fields can be prevented by moving fields or changing their size.

Entering text in the text field

1. Click on the **Report Designer** tab.

2. Double-click on a text field in the report template and enter the text via the keyboard.

- Text appears as a fixed block if the report template is selected in the **Report Wizard**.

Saving a report template

1. Click on the **Report Designer** tab.

2. Click on **Save** 🖫.

- The Windows dialogue for saving files is opened.

3. Enter a file name and click on **[Save]**.

- The report templates are saved in a folder based on the operating system and operating system language.

> To find the report templates: Select the search function in Explorer and search for the ***.repx** file.

- Report templates (file format .repx) will be displayed.

Deleting a report template

> • Note that report templates are deleted permanently. After they are deleted, report templates **cannot** be restored.

> • Only "User" type report templates can be deleted.

Requirement: the Report Designer must be closed.

1. In IRSoft, in the ribbon, click on the **Settings** tab.

2. In the ribbon, click on the **Report Designer**.

- The dialogue box is opened.

3. Select the report template that you wish to delete.

4. Click on **[Delete]**.

- The confirmation request is opened.

> If you wish to permanently delete the report template: Click on **[Yes]**.

> If you wish to cancel the process: Click on **[No]**.

Modifying page layout

1. Click on the **Preview** tab.

2. Use the editing functions in the ribbon to adjust the page layout.

6.8. Configuring the instrument

The configuration makes it possible to perform settings on the testo 880 thermal imager using IRSoft.

In both tabs **Picture settings** and **Instrument settings**, all settings can be performed that can also be performed using the instrument menu of the thermal imager. For this, please also observe the instruction manual for the thermal imager.

In addition, you have the option of applying a user-defined set of existing materials (including the corresponding emissivity) to the thermal imager.

Requirement:

• Thermal imager is connected to the PC

• Thermal imager is switched on and recognised by the PC

1. In the ribbon, click on the **Imager** tab.

2. Click on **Configuration Testo 880**.

- The **Characteristics of t880** dialogue window is opened.

3. Choose between image and instrument settings.

4. Complete the settings (see Picture settings page 37 and Instrument settings page 38).

> If you wish to transfer the settings to the thermal imager: Click on **[Apply]**.

> If you wish to discard the settings: Click on **[Cancel]**.

5. Click on **[OK]**.

- The dialogue window is closed.

Picture settings

Function	Settings
Selecting the temperature scale	Choose between automatic and manual scaling:
	> Select the desired option.
	> With the selection of **manual**: Enter the min. and max. value.
Setting the palette, temperature unit, LCD brightness, measuring range	Select required settings:
	> Click on ▾ and select the desired value from the drop-down list.
Transferring materials	Transfer the desired materials with the corresponding emissivity to the thermal imager or IRSoft:
	ⓘ The language of the materials to be chosen from depends on the language of the operating system. The language of the materials present in the thermal imager depends on the setting of the instrument language during commissioning. It is therefore possible that materials are displayed in different languages.
	1. Click on the materials in the **Materials in thermal imager** list that are not required and remove these by clicking on ⟨.
	2. Click on the required materials in the **For selection of stationary materials** list and copy these by clicking on ⟩ in the thermal imager.
	A maximum of 8 materials can be saved in the thermal imager.
Activating Active, **User-defined emissivity**	Activate desired material:
	> Click on ▾ and select the desired material from the drop-down list.
	> With the selection of **User-defined**: Enter the value of the emissivity.

Instrument settings

Function	Settings
Setting **Language**	Activate the desired language: > Click on ▾ and select the desired language from the drop-down list.
Switching the **Power save function** on/off	Select the desired setting (**Switch off imager** or **Switch off LCD**): > Click on ▾ and select the desired function from the drop-down list.
Automatically hide (function keys, cursor, scale)	Activate the desired function: > Click on the desired functions to activate them (☑).
Carrying out **factory reset**	Carry out a factory reset: 1. Click on **[Factory reset]**. - A confirmation request will follow. 2. Click on **[Yes]**.
Synchronizing with PC clock	Synchronize the date and time of the instrument with the PC: > Click on **[Synchronize with PC clock]**.

7 Tips and assistance

7.1. Questions and answers

Question/problem	Possible causes/solution
How can the software be uninstalled?	> To uninstall the software, insert the program CD and follow the instructions of the Uninstall Wizard. If the process does not begin automatically, start the **Setup.exe** file.
How can I get information about software updates?	> Make sure that in the **Settings** tab in the **Program updates** group, the **Automatic check** function is activated. If this function is activated, you will regularly receive information as soon as a new update is available.
How can a software update be performed?	When performing a software update, the existing version does not have to be uninstalled. 1. Download the software update from the Internet to your PC. 2. Perform the installation of the new version, see **Installing the software/driver** page 7.
Then imager cannot be configured.	> Check if the instrument is recognised by the PC. > Check the connection between the instrument and the PC.
The Import Wizard does not start up.	> Start up IRSoft before connecting the thermal imager. > Check whether the Import Wizard is active: **Imager** tab | **Import Wizard**.

Question/problem	Possible causes/solution
--- or **+++** is shown instead of the reading.	The reading was outside of the measurement range when the infrared image was recorded. No reading is available for the selected measurement point.
xxx is shown instead of the reading.	Reading cannot be calculated. > Check parameter settings for plausibility.

If we could not answer your question, please contact your dealer or Testo Customer Service. For contact details see the rear side of this document or the web page www.testo.com/service-contact.

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