VISUCAM 224 - Quick Instructions

<table>
<tr><td>⚠️</td><td>WARNING – GENERAL HAZARDS
This information is intended as an overview. Instructions for the safe operation of the device are to be found in the user manual.</td></tr>
</table>

Switch the instrument on:

Switch on external devices and VISUCAM 224 at the power switch of the power supply unit.
The **Patient manager** will be displayed on the monitor screen.

Patient manager

New — Create a new patient → click on **New**. The **Patient** dialog box will be displayed. Enter at least the last name, first name and date of birth.
To switch from date to month and from month to year in the date of birth field, use the cursor keys or mouse. → Confirm the data by clicking on **OK**. → The patient will be displayed in the patient list and selected automatically (**Patients/Visits**).

Image capture

The complete image capture process should be performed in a darkened room.

Patient selection
- In the **Patients/Visits** display field in the **Patient manager**, click on the patient to be examined (a newly created patient will be selected automatically). Patients with previous visits are marked with a **+**.
- After selecting a patient, click on [icon]. → The device will switch to **Image capture**.

Image capture conditions
- Check the default settings for the required capture mode and change if necessary.
- Ask the patient to take a seat and check that the patient's eyes are at the height of the markings on the head rest. The patient should be seated as comfortably as possible.
- Select the required **Positioning** mode for the internal fixation target.

👉 During configuration, if required use attention mode [icon] to enable the patient to register the internal fixation mark more easily. To use attention mode, the device must be in the **PS** position, as shown in Fig. 2. Alternatively an external fixation lamp can be used.

Fig. 1

Fig. 2

Device configuration
- Remove the lens cap from the front lens. Pull the instrument base towards the operator and move it in front of the eye to be examined.
- Using the relevant knob on the instrument base, increase the brightness of the infrared observation light until the anterior eye segment is clearly visible.
- Using the joystick, position the device so that the pupil is in the center of the alignment image. (Adjust the height by rotating the joystick). The pupil should be larger than the inner centering ring in the alignment image (Fig. 1). If this is not the case, activate **30° SP**.
- Use the joystick to move the device towards the patient until the position indicator switches from **AS** to **PS** and
  1. stop moving when the positioning points become visible.
  2. Using the knurled focusing knob, focus on the fundus until the pair of coincident lines merge (Fig 2). This is not required when using the autofocus function or for emmetropic eyes.
  3. Move the joystick to align the positioning dots such that they are lined up on a horizontal pair of lines symmetrical to the center (Fig. 2). The positioning points should appear as small and sharp as possible.
- Press the button on the joystick to trigger image capture.
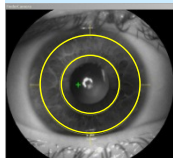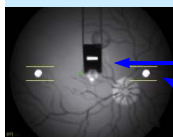- The image will be displayed immediately and automatically saved to the selected patient.

👉 Double click on the thumbnails in the image bar to start the **Image viewer** for the selected image.

All images can be captured in the **Color**, Green (**G**), Red (**R**), Blue (**B**) and Autofluorescence (**AutoFluo**) modes.

Clicking the [icon] button takes you back to the **Patient manager**.

Zeiss Automap

- This function is only available in **Patient manager**.
- A panorama image can be created from a series of single images.

👉 Only use images from one eye, captured using the same capture mode.

- Press **<Ctrl>** and select 2 to 10 images. Click on [icon].
- The image montage is displayed as a new thumbnail.

ZEISS

VISUCAM 224 - Quick Instructions

View image

- Select the required patient and visits from the **Patient manager** using the mouse. (To select a number of visits hold down the <**Ctrl**> or <**Shift**> keys.)
  → Images from all the selected visits will be displayed in the overview.
- In order to view these images in the **Image viewer**, select the required images using the mouse. (To select a number of images hold down the **<Ctrl>** or **<Shift>** keys.)
- Click on ▣ to display the selected images in the **Image viewer**.
- For single images, the **Image viewer** can also be opened by double clicking on the required thumbnail.
- The image viewer can be used to view, edit and compare images or to prepare images for printing.

Functions available in the Image viewer mode (activated by a single mouse click)

Icon	Function	Icon	Function
	Select or move images		Smooth images consisting of two half frames
	Enlarge/reduce the image size by pressing the left/right mouse buttons		Move the image backwards or forwards; (image layout can also be changed by drag & drop)
	Using the magnifier function in all images of the image viewer.		
1:1	Display image in original size or window size		Copy image, all changes made are stored
	Change contrast/brightness by clicking on the left or right mouse button, continuous change by moving the mouse up and down while holding down the left mouse button.		Change the image format (only if **2 Images** tab is activated)
	Generate three images in the color channels Red, Green and Blue from one color image and mark them as copies.		Reset image to original state; all image processing actions are undone.
	Automatic image contrast optimization or adaptive automatic image contrast optimization		Delete selected images or remove them from Image viewer

Print

- Select the required images from the visits or in the **Image viewer**. (To select multiple images, proceed as described above.)
- Click on ▣ (print preview) or ▣ (print preview from the image viewer). Check the image and text layout and adjust the page layout if required.
- To start printing click on **Print** (in the print preview menu) or click on ▣.

☞ It is possible to print directly from Patient Manager without the print preview screen.

Export

- Select the required images from the visits. (To select multiple images, proceed as described above).
- Click on ▣ and continue in the normal Windows manner. It is possible to export to a network drive or a USB drive.

☞ The export of images in DICOM format can be used for data storage.

Switching off the instrument

- Select the **Exit** option in the **File** menu.
- In the following dialog box automatic data storage can be activated by exporting new images. Using the Delete function images can be deleted automatically (if no selection is made, no images will be deleted). Click on **Continue**. → Opens **Exit** dialog box. Select the required option and click on **OK**.
- Now switch off the device at the power switch of the power supply unit.

☞ Switching off the device at the power switch while it is running may lead to loss of data.