

**ZEISS**







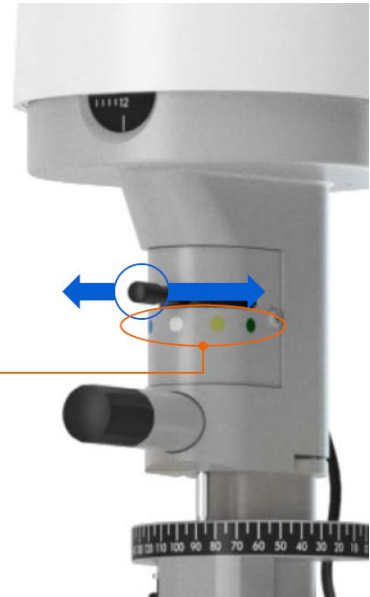
# SL800

Quick start user guide & Imaging

## Filter Options and uses

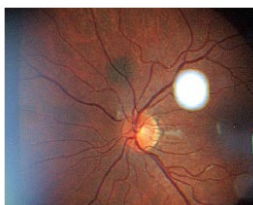
### Five options to illuminate patient's eye

- 
**VarioLight** *cold-white*  
*warm-white* → Use **preferred examination light** for anterior and posterior segment
- 
**Red** → For **differentiated observation** of the retinal layers
- 
**Blue** → **Contrast enhancement** during **fluorescence** analysis (in combination with optional yellow filter)
- 
**Green (red-free)** → Provides a red-free, high-contrast image to improve **visualization of blood vessels**



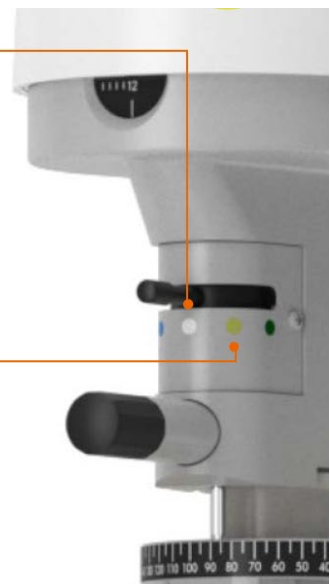
### **VarioLight cold-white (LED like)**

A slight bluish illumination benefits scattering and helps to identify irregularities within the **anterior segment**.



### **VarioLight warm-white (halogen like)**

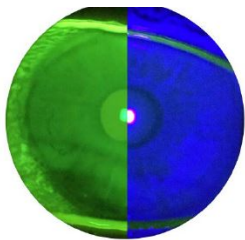
The warm halogen-like color temperature supports a **more natural fundus impression**.



## Yellow filter and Aperture

### Yellow filter

- Serves as barrier filter for fluorescein exams
- Filters the blue excitation light coming from the slit lamp and transmits only the yellow-green fluorescence radiation



with yellow filter | without yellow filter

#### *Ideal settings*

- ❖ *Gain- 28db*
- ❖ *Maximum slit height and width*
- ❖ *Blue filter*



### Aperture

- Enhances depth of focus
- Beneficial at magnifications  $\leq 16\times$



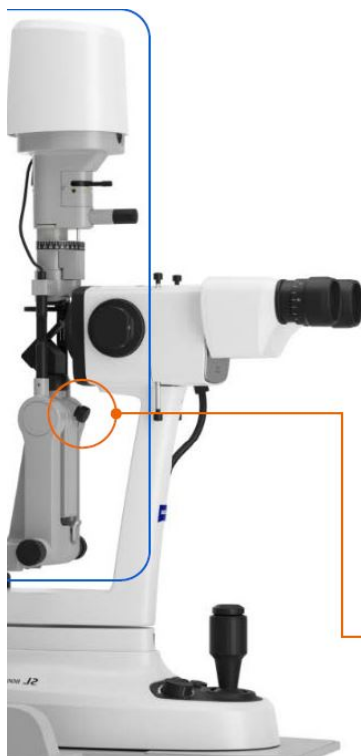
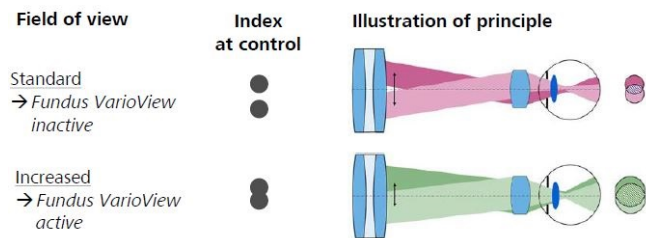
This combined functionality is also included in:

- *SL cam compact*
- *Beam splitter 50/50*

# Fundus VarioView and Decoupling

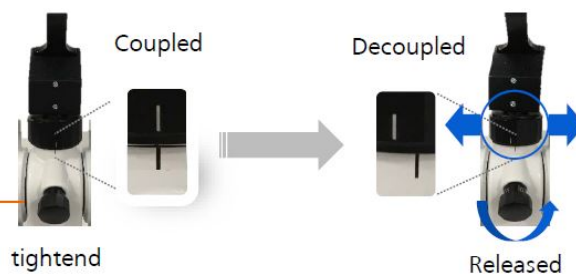
## Fundus VarioView

- To increase binocular field of view while examining, e.g.:
  - Fundus periphery
  - Patients with small pupils
- Effective at 10x magnification or higher



## Decentration for indirect illumination

- Untighten the screw**, to release the centration/ coupling of illumination and observation
- Rotating the mirror base**, will decenter the illumination
- Tightening the screw**, to center the illumination and observation



## Zoom and image adjustments



In the review screen click this icon for:

- Zoom
- Brightness
- Contrast
- Gamma

*(Found top left of screen under patients details)*

Gamma



To zoom use the slider

You also have brightness, contrast and gamma to edit the image if necessary.

- ❖ Gamma will change the difference between dark and light areas


Zoom

Contrast

Brightness

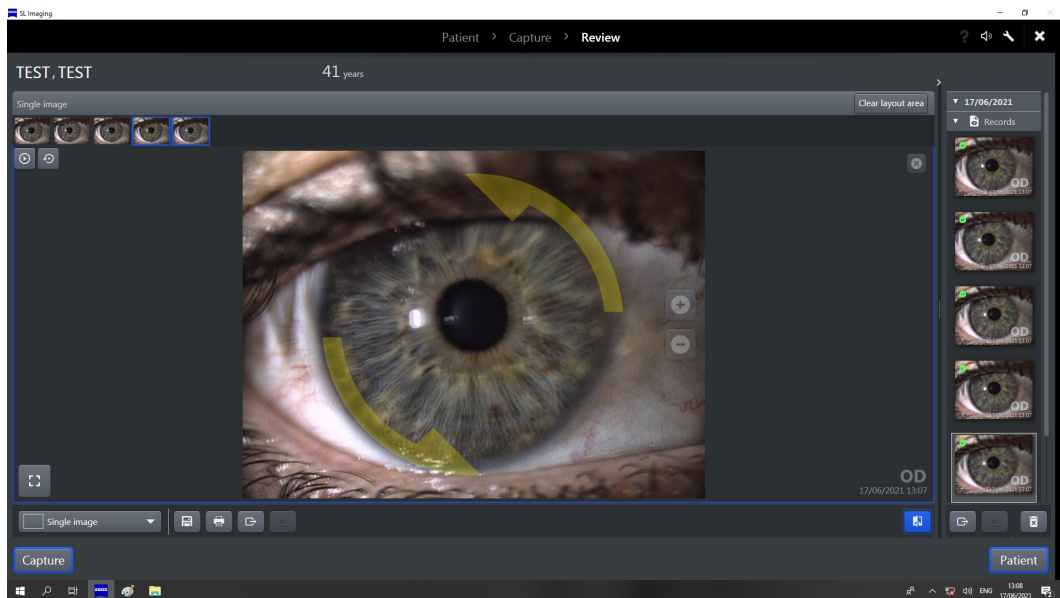
## Flicker

Flicker mode allows you to compare two or more images and flick between them to look for subtle differences or changes over time. This can be really useful in assessing for example corneal abrasions and ulcers

- ▶ Enable flicker mode by pressing the  button.
- ▶ In the thumbnail area, double-click on a record and drag it to the review area while keeping the left mouse button pressed.
- ▶ In the thumbnail area, select another record that you want to overlap with the first record by double-clicking on it.
- ▶ If necessary, repeat these steps if you want to overlap other records in flicker mode.



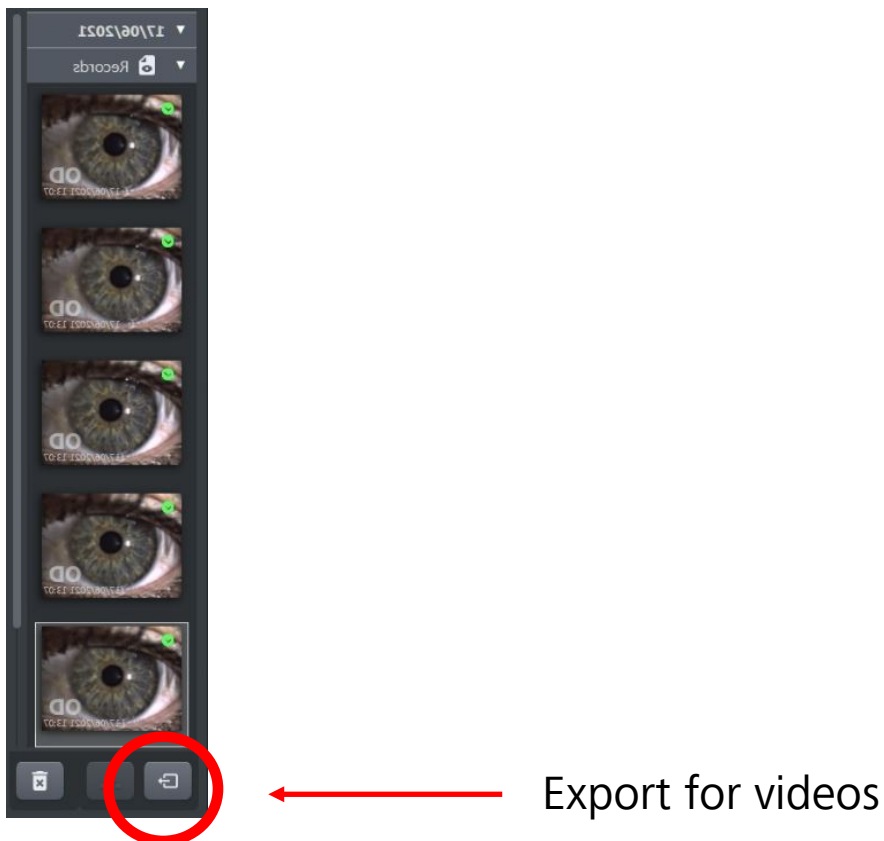
You must have two or more images, press the play button to start the flicker tool



- ❖ Rotate any images as necessary using the yellow arrows

## To export videos

1. Put USB in
2. Open the patient record
3. Under reports on the right hand side of the screen highlight the video and/or images you wish to download using 'ctrl'
4. Then select the export button (There is another export button on the left hand side of the screen, but this will not export videos)
5. Select your USB and save

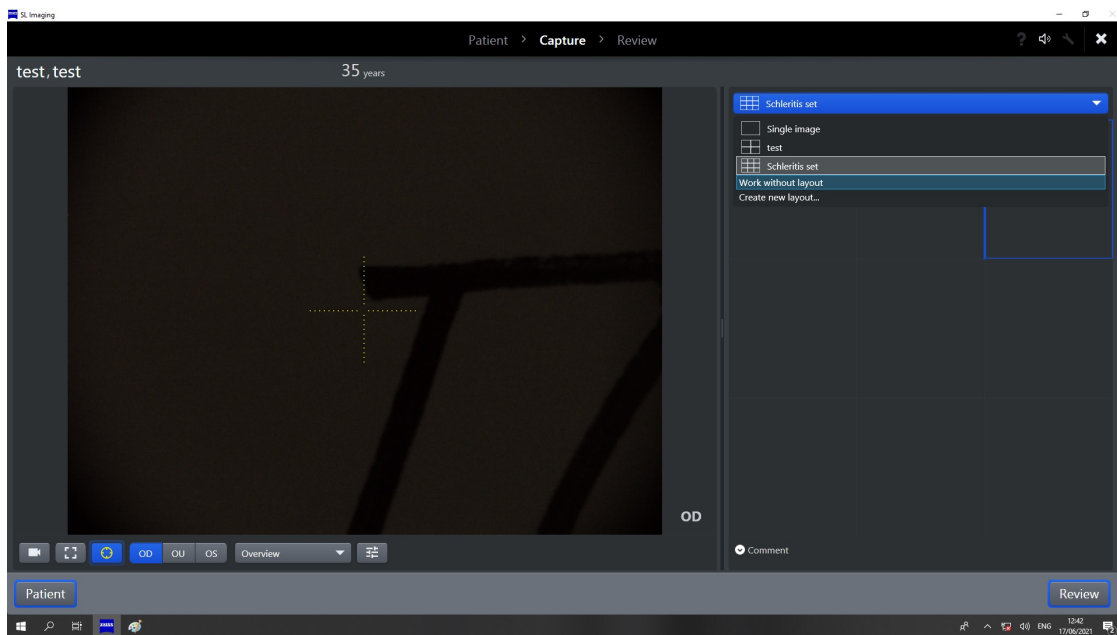


### *If a video will not export*

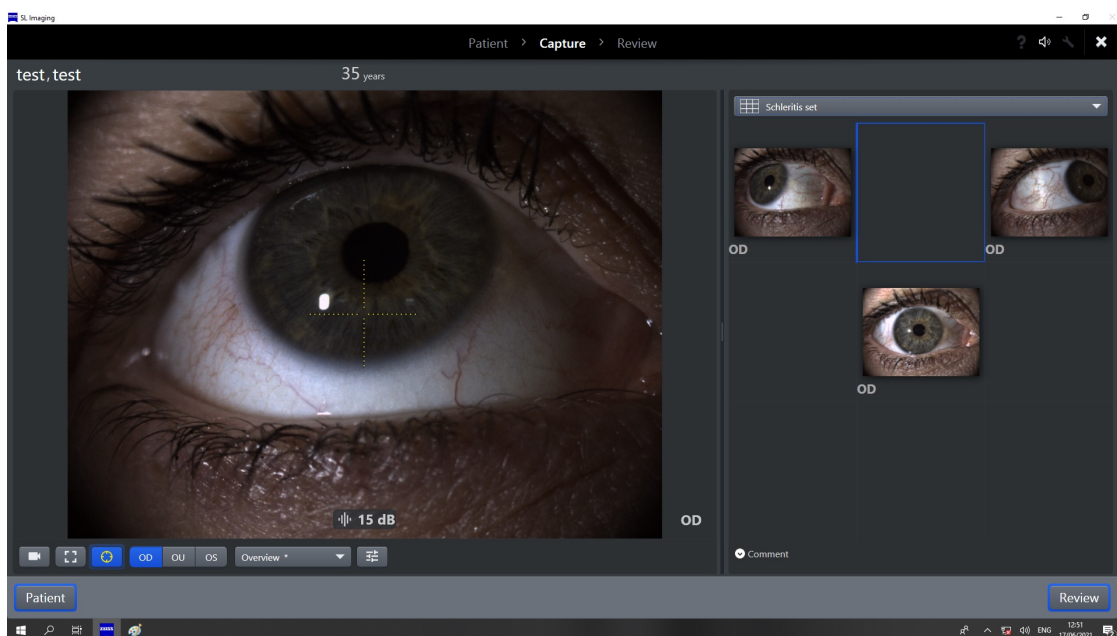
- *Check the length of the video, the longer the video the larger the file size*
- *Ensure there is enough space on the USB*
- *All memory sticks need to be FAM formatted*
- *Try another USB*

## Custom Layouts

Create a custom layout by clicking 'create new layout' in the capture screen



Custom layout can be created and images can be selected as to which to capture next



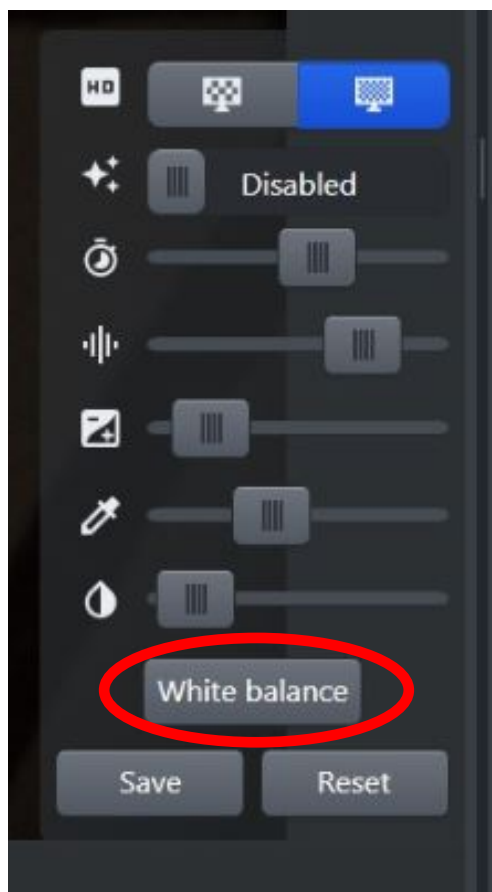




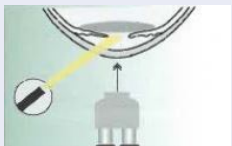
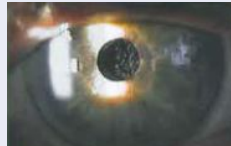









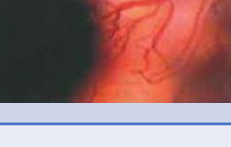




## Adjusting the white balance

The default white balance value can be overwritten. Please note: images will appear green if the white balance has been incorrectly set

To change the white balance

- Hold a sheet of white paper (e.g. a business card) in front of the slit lamp
  - Swivel the diffusor into position
  - Illuminate the sheet of paper with minimum illumination (e.g. 0.1 scale point with ZEISS SL 800) so that a grey image is visible on the monitor
  - Ensure that no glare is caused. (Do not use anything laminated or shiny)
  - Click on the 'White balance' button
- ❖ Note that the monitor settings can also influence the result.



<i>Technique</i>	<i>Application</i>	<i>Settings</i>	<i>Beam</i>	<i>Example</i>
Direct diffuse Illumination	External eye-eyelids, lashes, conjunctiva, sclera. For example Pterygium	Wide slit Diffuser Low Magnification		
Direct Illumination	Contact lens fitting, cornea scars, lens opacification	Slit width 2-3mm Medium Magnification		
Direct Illumination optical section	Foreign bodies, structural alteration	Higher light intensity Slit width 0.1mm-0.3mm		
Direct Illumination specular reflection	Tear film, corneal endothelium, lens surface	Slit width 1-2mm, medium to high magnification		
Indirect Illumination	Pigmented tissue or vascularised tissue	Higher light intensity Slit width 2-3mm Medium magnification		
Indirect Illumination (Sclerotic scatter)	Foreign bodies, oedema	High light intensity Slit width 2-3mm low magnification,		
Indirect Illumination (Retroillumination iris)	Vascularisation, oedema, vacuole	Slit width 2-3mm Reduced slit height		
Indirect Illumination (Retroillumination fundus)	Corneal scars, dystrophies, cataract, IOL, PCO	High light intensity, reduced slit height, slit with 1-2mm,		
Indirect Illumination (Trans-illumination iris)	Pigment dispersion syndrome, iris defects such as Naevi	High light intensity, reduced slit height, low magnification		
Fluorescence staining	Cornea scars, tear film assessment, post graft or LASIK	<b>Yellow filter +Diffuser</b> Maximum slit width Cobalt blue filter GAIN- 16db GAMMA-100% Slit beam where appropriate	