



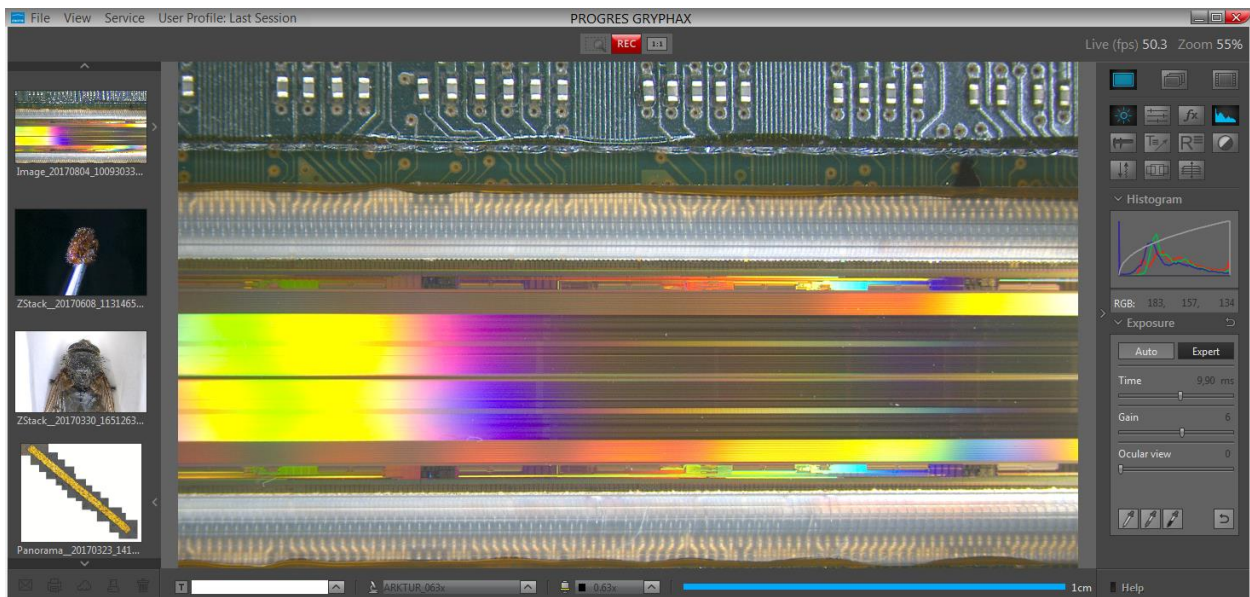
Stability –
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General description:


The “Exposure tool” of PROGRES GRYPHAX® software enables user to control camera image brightness manually or automatically to reach optimal exposed images. By using the “Histogram” user can observe optimal image brightness conditions at a glance.

Overview GRYPHAX software with activated Exposure tool and Histogram:





Open Tool bar:

All GRYPHAX camera control and image processing tools are located at the “Toolbar”.

To activate the “Exposure tool” or “Histogram” open the GRYPHAX “Toolbar” by pressing the arrow  on right-hand software site or use keyboard short cut (ctrl / cmd + T)

Open Exposure:

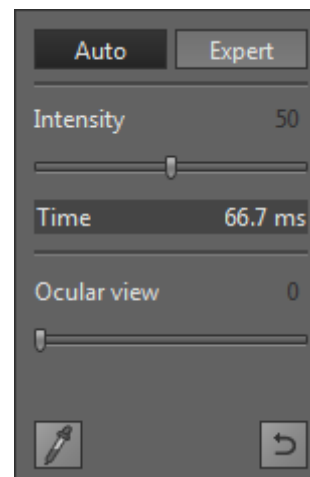
To open **Exposure** tool click to the Exposure icon  at the "Toolbar", the Exposure widget will be opened and contains two separate mode Tabs for: 

"Auto" – for **automatically brightness control** for optimal tracking of brightness by e.g. objective change


"Expert" – for **manually brightness control** by using Exposure time and Gain value to reach max. exp. time

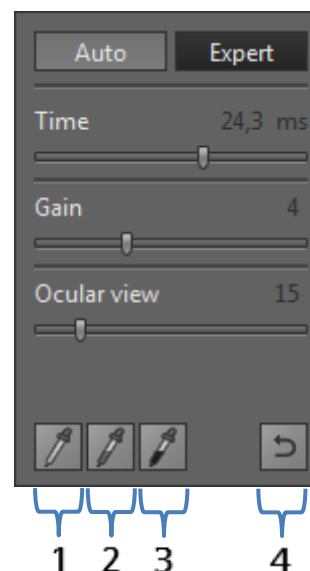
Auto tab is activated as default and contains the following functions:

- **Intensity** – to adjust image desired target brightness of image preview from active camera displayed on screen by slider or value
- **Current exposure time** – display current exposure time of live preview (changing according automatic exposure control)
- **Ocular view** – optional to adapt the color impression from microscope eyepieces to the image at screen (Color cameras only)
- **Grey balance pipette** – set manually grey balance at live preview
- **Reset Grey balance** – reset grey balance back to factory settings





Expert tab contains the following expert functions:

- **Time** – set exposure time manually by slider or enter value
- **Gain** – set gain value manually by slider or enter value
- **Ocular view** – optional to adapt the color impression from microscope eyepieces to the image at screen (Color cameras only)
- **White Point pipette (1)** – set manually white point at live preview
- **Grey balance pipette (2)** – set manually grey balance at live preview
- **Black Point pipette (3)** – set manually black point at live preview
-  **Reset balances (4)** – reset back to factory settings




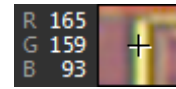
Maximum exposure time

Maximum exposure time for captured images can be reached by using max. exposure time in combination with max. gain value at "Expert tab". For e.g. NAOS camera max. live exposure is 1000 ms + max. gain value of 10 = **10 seconds exp. time** for captured images in case that preferences option "**Minimize Gain**" is activated.

Note: To **reset** grey balance or black / white point separately, select according option  **before** press  reset button! Otherwise all balance and points will be reset together.

Set Grey Balance:


Activate grey balance  icon from Exposure widget. Mouse pointer immediately change to pipette pointer and display small magnifier window and pixel values of according image position at image window.

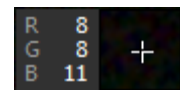


Click into **“grey”** region of preview image to set new grey values and the image will automatically change the grey balance of RGB preview image.

Note: Only available for color cameras.

Set Black Point:


Activate black point  icon from Exposure widget. Mouse pointer immediately change to pipette pointer and display small magnifier window and pixel values of according image position at image window.

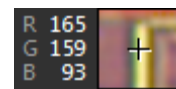


Click into **“black”** region of preview image to set manually new black offset and the image will automatically change the black offset at preview image and the **noise level will be reduced** instantly.

Important Note: Black point is a very powerful function and will **reduce** the image bit depth of preview and captured images! Image can be destroyed or show pixel artefacts. Do not set “Black Point” into bright image areas to avoid corrupted images!


Set White Point:

Activate white point  icon from Exposure widget. Mouse pointer immediately change to pipette pointer and display small magnifier window and pixel values of according image position at image window.



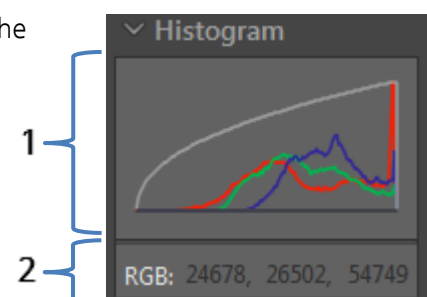
Click into **any region** of preview image to set new brightest area at preview image. The software will automatically set RGB values to max value (255) at related region and the “Expert” Exposure tool change the exposure time accordingly.

Open Histogram:

To open **Histogram** click to the Histogram icon  at the tool bar, the Histogram widget will be opened and is separated into two different sections: **Histogram section (1)** and **Pixel value section* (2)**.

Histogram widget is displaying the following information:


- Histogram curve (RGB or Monochrome) according image data
- Gamma curve according select Gamma value
- Pixel value* of current mouse position (*valid as of version 1.1.12)




Note: “Pixel values” are displayed while mouse pointer is inside of image window only.

Tool status:

- Activated tools are highlighted in **blue**. Click on tool icon again to deactivate appropriate tool.
- Tools which are not access able are “greyed out” by software automatically and cannot be reached.

Collapse / expand  button on each tool to hide separate widgets on active tool section.

Reset button  on a tool sets all properties to their initial values. Initial values are fixed.

Video tutorial:

[Press the link](#) to watch the video tutorial for Exposure tool & Histogram of GRYPHAX software.

Limitations:

- a) Exposure tool is not reachable during Multi-Fluorescence mode.
- b) Exposure tool widget is blocked while video record or time-lapse, Z-stack or Panorama is running.
- c) Exposure mode “Auto” is disabled and cannot be reached during Panorama and Z-Stack mode.
- d) Exposure tool can be activated while image live preview from camera is active only.

Learn more about PROGRES GRYPHAX® software and the easy workflows and tools.

Watch our video tutorials.

[VIDEO TUTORIALS](#)

HELPFUL? We appreciate your feedback.

[FEEDBACK](#)

We looking forward to hearing from you and remain sincerely,

Your PROGRES GRYPHAX® Team