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Time-lapse mode of JENOPTIK GRYPHAX[®] software

The "Time-lapse mode" of JENOPTIK GRYPHAX software enables user to capture time controlled image sequences by a specified time duration or within a given time interval.

General description:

Some applications require the time controlled capture of image sequences. The necessary settings for these applications can be set with the functions at "Time-lapse mode". Time interval and number of images can be selected. All time settings in this record mode are set in seconds. When the software is closed, the current settings are always saved and will be automatically loaded when the software is restarted.

Overview:

Time-lapse replay mode activated:





25.1 Start Time-lapse mode:

To activate the *Time-lapse mode* open the toolbar by pressing the arrow on right-hand software site or use keyboard short cut (**ctrl / cmd + T**)

Click to the Time-lapse icon at the toolbar, the *Time-lapse* widget will be displayed and contains the following information and options:

- "Image count" total image number you want to record
- "Duration time" specifies the intended time for complete record
- "Interval time" specified the intended time between image record
- Optionally, a start "Delay" time can be defined

The <u>first three</u> options depending on each other! The selected values of option which has the <u>active point "dot"</u> is fixed and can't be changed unless the "dot" will be moved to other option.

 Image Count
 ●
 4

 ●
 0
 4

 Duration m s ms
 ●
 00 : 12 : 000

 Interval m s ms
 ●
 00 : 03 : 000

 Delay m s ms
 00 : 03 : 000

 Time Left 00:00:00:000
 Image Left 0

 Resolution 3840 x 2160
 0

As example: User can set the "Image count" to a value of total images e.g. 100 and change afterwards the "dot" to: "Image count".

So the value of 100 images is fixed and all other changes of values depending on the fixed "Image count" value! If another value is changed, the respective value will be adjusted automatically to the settings.

At the bottom of Time-lapse widget the information about running image sequence will be displayed for leftover: **time** and **image number** for sequence. And the currently used **image resolution**.

Image resolution for sequence image record is connected to the capture resolution from preferences. To change the resolution open preferences under *Device Configuration*. Additionally, we recommend to activate option: "fast capture"* for time-lapse image sequence record. *(valid as of version 1.1.10 and newer)

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

<u>Important note:</u> "Time-lapse" mode is enabled only if record mode "Multi-Fluorescence", "Z-Stacking" or "Panorama" are deactivated <u>and</u> live image is activated before.

25.2 Change storage format:

To change the storage file format for time-lapse image files, please enter the software Preferences at title bar under "Storage Options" or use keyboard short cut (ctrl / cmd + O).

<u>Note:</u> The saving time for each time-lapse image depends on the used storage format of the cameras.



25.3 Start Recording:

To start the image sequence record by pressing the "REC"-Button REC, which instantly changes to "STOP" to signal the user, that the recording mode is active.

During image sequence record, the live preview will be deactivated and each single image will be displayed on image window.

Additionally, the leftover amount of recording time and image number will be displayed on the time-lapse widget.

After save of image sequence files a new time-lapse sequence thumbnail will be created at Gallery. On hard drive a **separate** folder with date- and timestamp will be created automatically which contains all images from time-lapse sequence record.

The software returns back to *Time-lapse* record mode and showing live preview to start a new sequence record in case that the function "Show image after capture" is deactivated under Preferences / Storage Options. Keyboard short cut (**ctrl / cmd + O**).

Time-lapse is using storage option *"Auto save"* under Preferences / Storage Options. All recorded image files will be saved with an automatic given naming structure to the selected destination folder. The file name contains the: **image number** (beginning with "0") **date**, **time** and the **file extension** separated by an underline "_". This structure can't be changed by user.

<u>Note:</u> During time-lapse recording mode only a few additional tools can be activated. Option "manual save" will be ignored for image sequence record if selected.

Abort time-lapse record:

Press the "STOP" **STOP** button to abort image sequence record to the Gallery. Already recorded time-lapse images will be still saved anyhow.

Leave time-lapse mode:

To leave the *Time-lapse* mode use the alternative record modes "Single shot" or "Video" icons from the tool bar.

<u>Note:</u> Last set software settings will be still used and saved at software settings.



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Resolution 3840 x 2160

Image Left



25.4 Replay Time-lapse sequences:

To replay / playback image sequence files from gallery, double-click on the according time-lapse thumbnail. The image sequence files will be displayed on the image main window together with an overlaid function bar.



The time-lapse replay function bar contains the following options:

- a) Image controls for Back / Play / Pause / Forward 💉 🕨
- b) **Progress bar** to display position of image files or to seek the whole image files by mouse operation.
- c) Display of current **image number** of total image sequence. 4/10

Video tutorial:

<u>Press the link</u> to watch the video tutorial for Graphical User Interface of JENOPTIK GRYPHAX software.

Limitations:

- Measurement and Annotation are not available during Time-lapse image record.
- The max sequence frame rate is limited due to used resolution and capture mode and on used hardware environment (hard drive).
- No afterwards measurement available for images captured <u>without</u> measurement calibration data.