

Picture Instruments

MASK INTEGRATOR

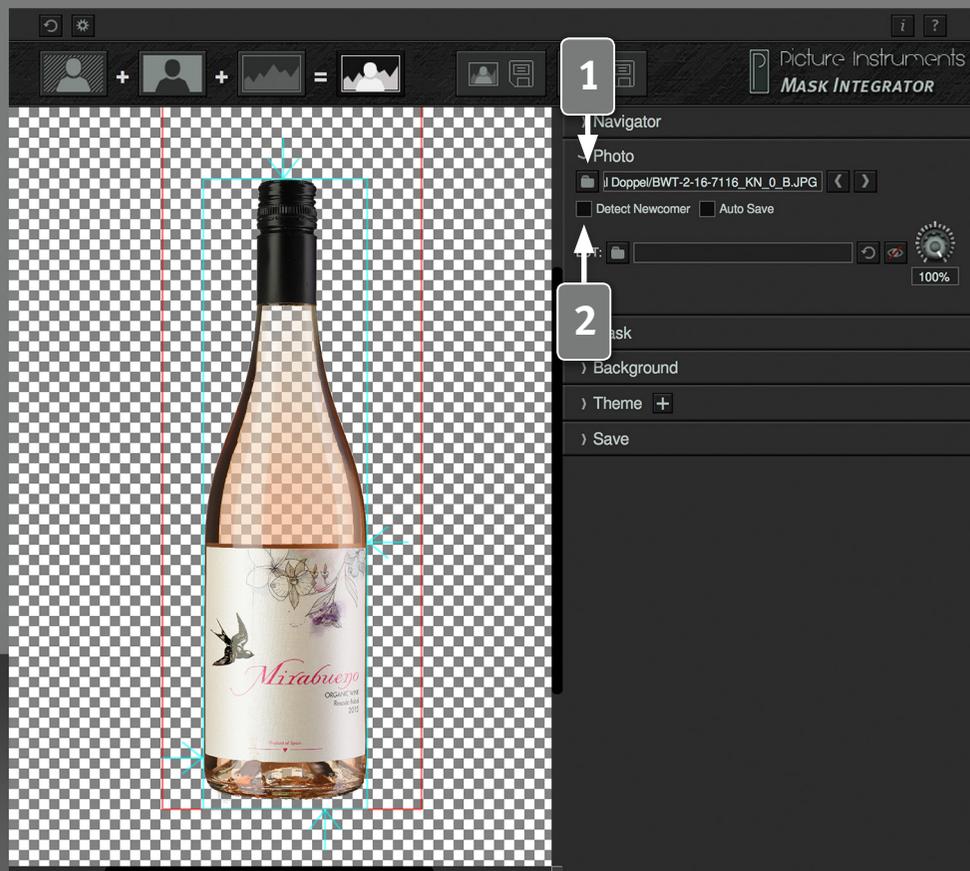


Manual



MASK INTEGRATOR

Manual



2

Tooltips



If you let your mouse hover above a specific feature in our software, a tooltip about this feature will appear.

Load Image

1 Load the image with the standard lighting from your hard drive here. If you have selected a mask in a second step you can use the arrows to navigate back and forth between images and their corresponding masks. If the images and masks are contained within the same folder, Mask Integrator will always skip two files to get to the next image and mask. If the images and masks are located in separate folders, the arrows will skip only one step to the respective next file.

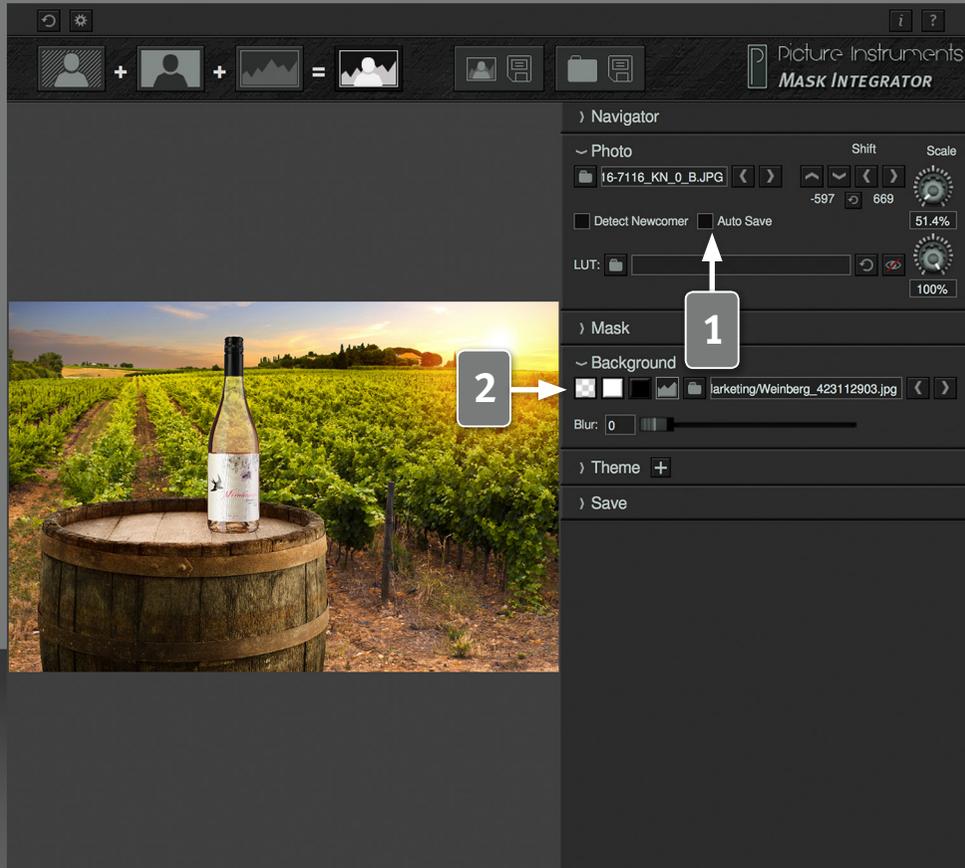
Detect Newcomer

2 If the option “**detect newcomer**” is active, the folder containing the image and the mask will be monitored. If image and mask are saved to the computer while shooting (Tethered Shooting*), Mask Integrator recognizes if an image and a mask have been added, applies the mask automatically and displays the masked image in front of a background of your choice.

***Tethered Shooting:** Camera and computer are connected. The pictures taken will usually be saved directly to the computer instead of the memory card in the camera.

MASK INTEGRATOR

Manual



3

Auto Save (only in the PRO-version)

1 If the "Auto Save" feature is activated the respective target image will automatically be saved under the specified folder path. Whether the image is saved immediately after it is loaded or just before loading the next image can be specified in the settings. If "immediately after loading an image" is selected, certain adjustments to the image will not be saved automatically to the target image. In this case the image would have to be saved manually by clicking on the "save" button. If this option is not selected you will be asked to save the resulting image when quitting the application.



Saving just before loading a new image is recommended for workflows in which images normally require manual adjustments.

Saving immediately after loading an image is recommended for automated processes and use in photo booth applications.

Adjust Foreground Image to the Background Image

2 This feature changes the size of the masked image (image and mask) in relation to a possibly loaded background image. This feature is only available if a background image has been selected. As soon as you have selected a background image, the size of the output image will be fitted to the size of the background image. Since it can be rather tedious to align both the foreground and background images via the buttons it is possible to move the foreground image by dragging it with the mouse while either pressing the right mouse button or pressing the ctrl-key and the left mouse button.

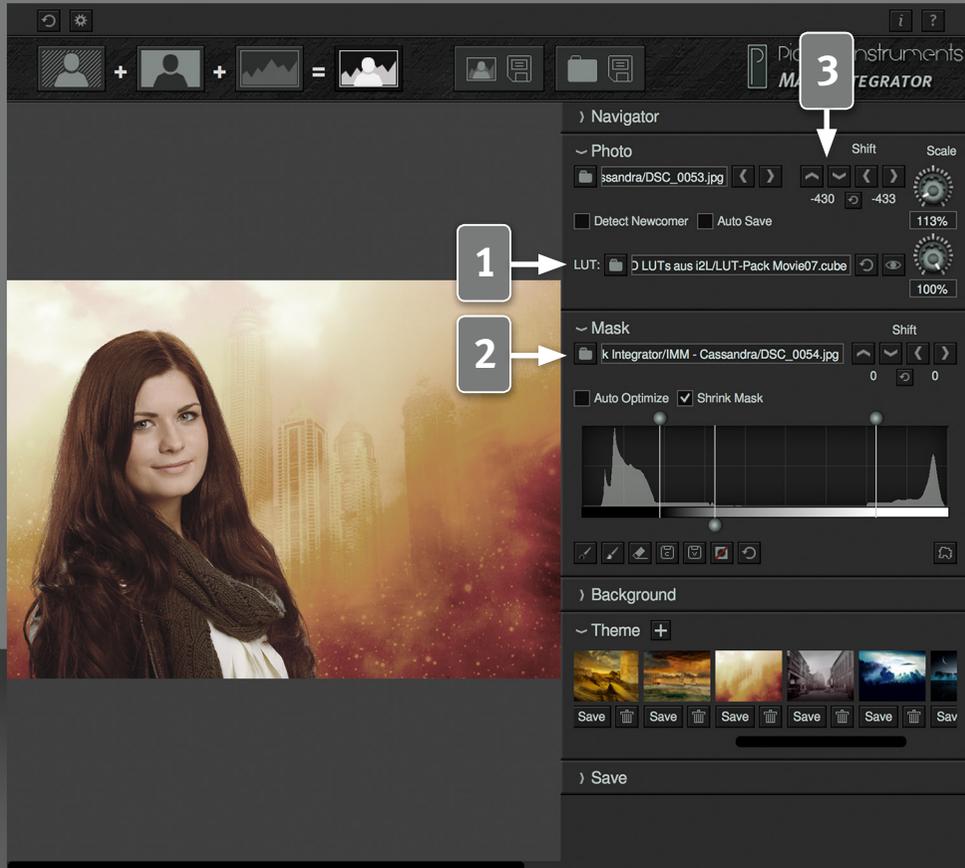


Move image: Right mouse click + move the mouse OR "ctrl" + left mouse click + move mouse

Zoom: Right mouse click + clickwheel OR "ctrl" + click wheel

MASK INTEGRATOR

Manual



4

! Mask Integrator keeps this setting until the program is shut down, the settings are reset via the reset-key or until another image with different settings in its own .brush file is loaded. This makes sense when several images have been shot for the same background. In this case, the subject only has to be fitted once and the shoot can continue until the setting changes fundamentally.

Foreground LUT

1 Here you can load a lookup table (LUT) which will be applied to the foreground image. With a LUT you can correct colors or apply a look to the image. In product photography LUTs can, for example, be used for color correction when working with LED lights and in live compositing with models and creative backgrounds LUTs are great for automatically applying the color look of the background to the foreground. With the adjacent buttons you can reset or deactivate/activate the selected LUT. To change the LUTs intensity you can use the rotary control adjacent to the function buttons. If the LUT is active, it will be automatically applied to new photos. The lookup table formats .3dl and .cube are supported. You can find more information about LUTs and how to create them with our applications on our website in the categories "Color Grading" and "Color Correction".

Load Mask

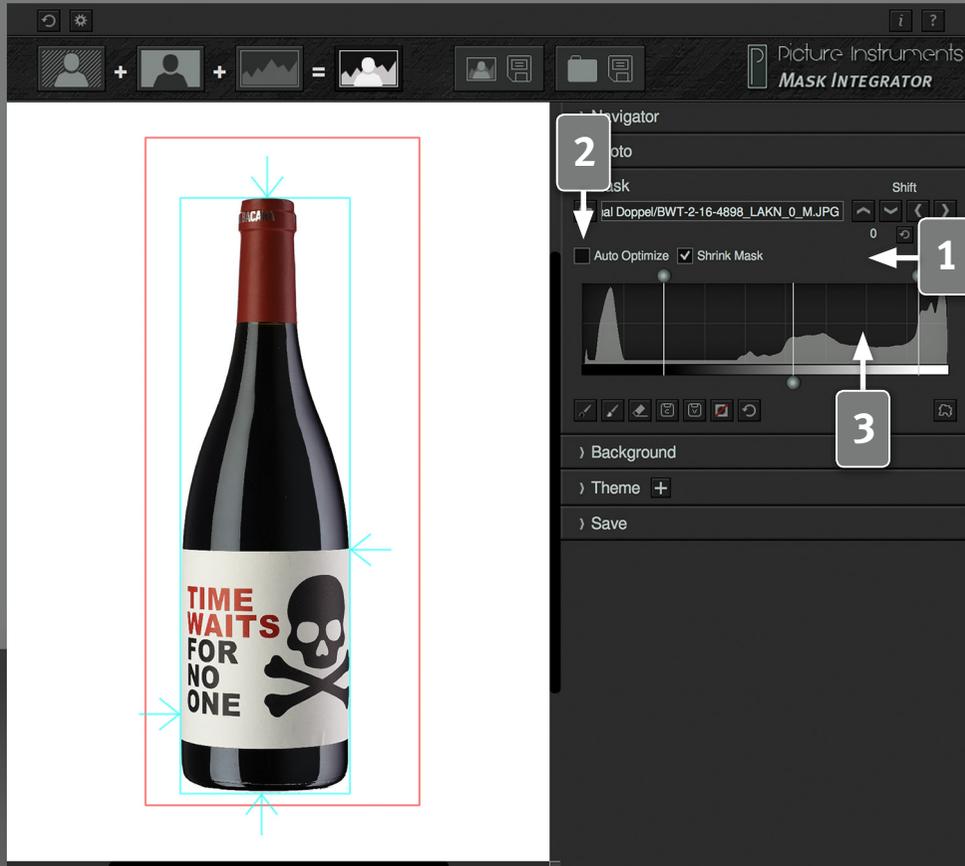
2 Load the backlight image that corresponds to the normal image in the mask area. Mask Integrator automatically inverts this image and uses it as a mask. After loading both the image and the backlit image, Mask Integrator will automatically display the masked output image.

(Masks) Shift

3 In the mask area you can use the shift keys to move the mask in relation to the image. This helps you to correct small discrepancies that

MASK INTEGRATOR

Manual



5

can occur between the two exposures of the image and the mask. The circular reset-arrow resets all values to "0".

Shrink Mask

1 Everything located outside of the Shrink Mask area (red border) will become 100% transparent. The boundary can be adjusted with the mouse directly in the image. This makes it easy to delete any elements along the edges of the image (for example light formers). The boundary is only visible with a black, white or transparent background yet is still applied with a background image.



If you load a new image, which has not been opened with Mask Integrator yet, the shrink mask setting will be transferred to the following image. This makes it possible for the "detect newcomer" feature to automatically and dependably mask any new images during a live shoot.

Auto Optimize

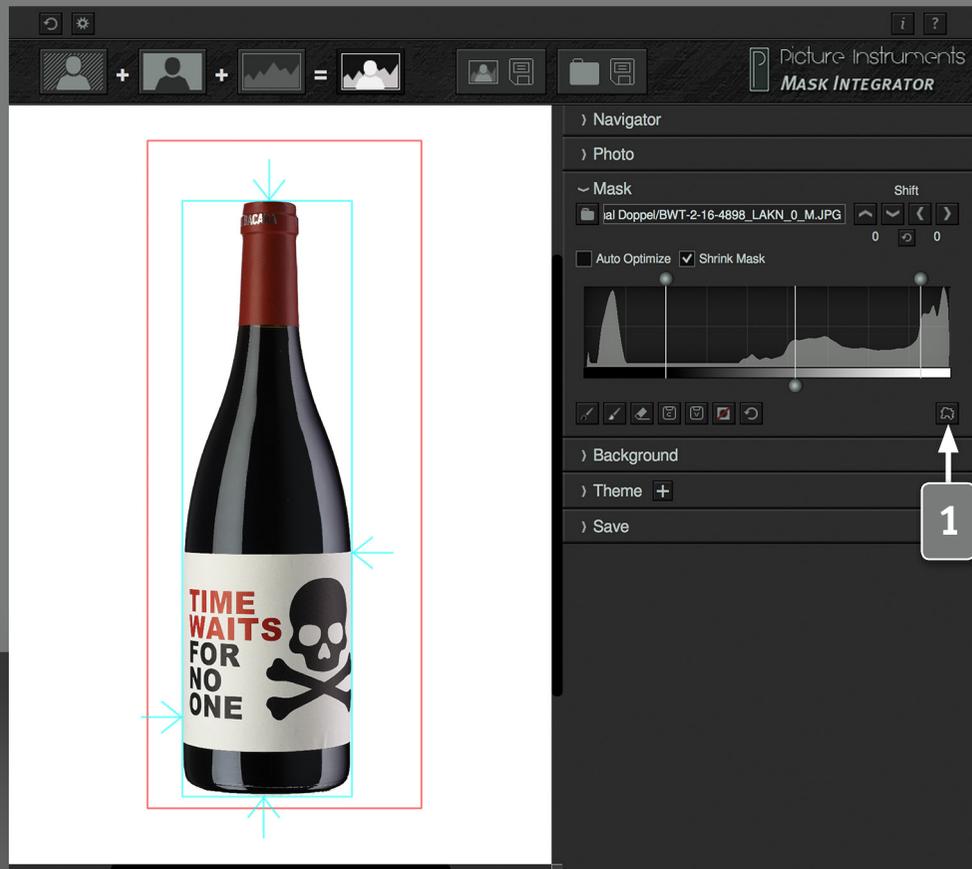
2 If the "Auto Optimize" feature is activated the masks optimal black and white points are calculated and set from the histogram. You can find more useful information on how to set the black and white points in the chapter "Edge Mode".

Manual Mask Enhancement

3 Using the two outer drag points in the histogram you can manually enhance the masks black and white point. This can be useful to better carve out any transparencies or very fine structures like fur or hair. In most cases some areas which have not remained 100% opaque or transparent after the manual adjustment have to be corrected with the brush feature. More information on this is available in the chapter "Edge Mode". The reversed

MASK INTEGRATOR

Manual



6

middle control in the histogram shifts the middle gray value between the black and the white point. This changes the opacity of the semi-transparent areas.

If you load a new image, which has not been opened with Mask Integrator yet, the shrink mask setting will be transferred to the following image. This makes it possible for the “detect newcomer” feature to automatically and dependably mask any new images during a live shoot.

Interesting facts on the .brush files



Mask Integrator saves the following information to a file with the extension .brush in the folder containing the mask:

1. Auto optimize
2. Shrink mask
3. Mask offset
4. Manual enhancements of the white and black point and the mid-control for the semi-transparencies
5. Corrections painted into the mask using the brush tool
6. The path to a possibly loaded background image
7. Blur settings for the background image
8. Path to the loaded LUT
9. Position and scaling of the foreground in relation to the background

On the one hand this avoids that individually made adjustments are lost and on the other hand this facilitates batch processing. All adjustments made can subsequently be reset by deleting this .brush file.

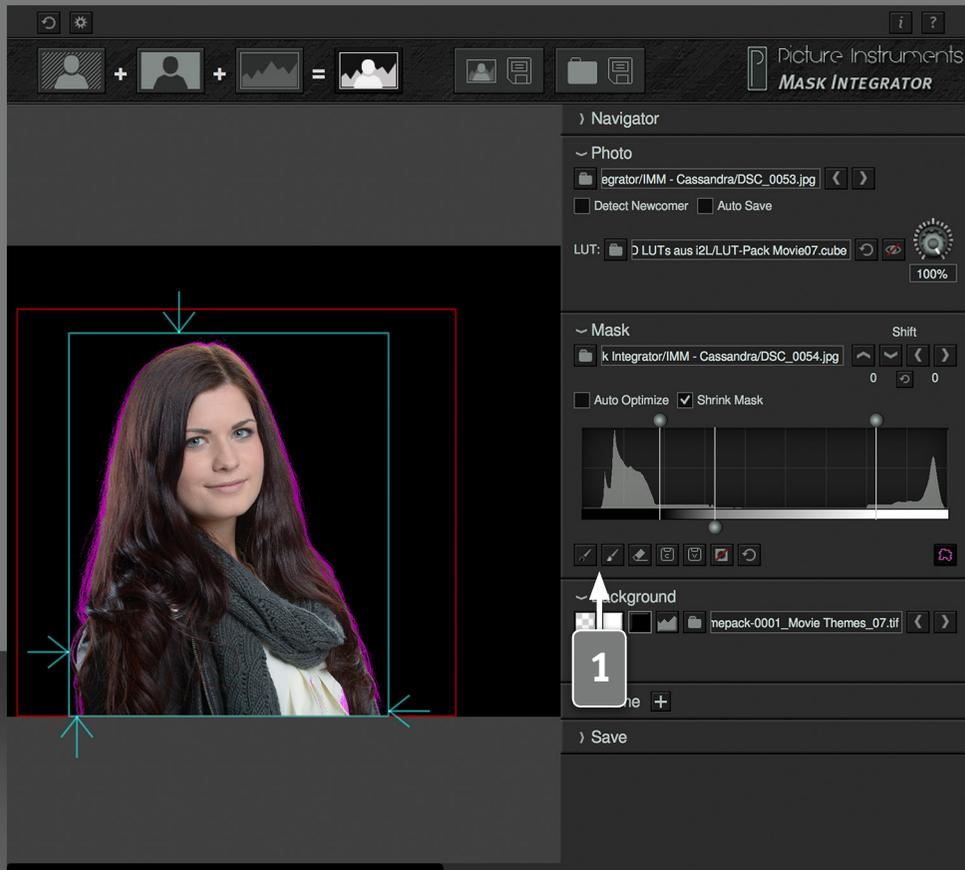
Edge Mode

1

Activation of the edge mode highlights all pixels which are not 100% black or 100% white in the mask (i.e. opaque or transparent in the

MASK INTEGRATOR

Manual



7

target image) in pink. With the exception of semitransparent objects, the edge mode should only highlight the edges of the masked object, i.e. the transitions between the fore- and background, in pink. If you have to identify very thin edges it may be advisable to set the black and white points so that the area tightly around the object to be masked is 100% transparent. In this case, in the edge mode you can see the areas that are not yet 100% transparent tinted in pink and you are then able to remove them with the brush.

Brushes

1 Use the black brush to paint in black over areas of the mask. These areas will become transparent in the final image. Use the white brush to paint over those areas that you want to become 100% opaque. Use the eraser tool to delete areas you have painted over with the brush. Use the "C" and "V" keys (copy and paste) to transfer painted areas from one mask to the mask of another image. This can save you a lot of work if the same elements have to be removed from a great number of pictures manually.

The PRO-version settings additionally offer the option to apply these brush masks to new images automatically.

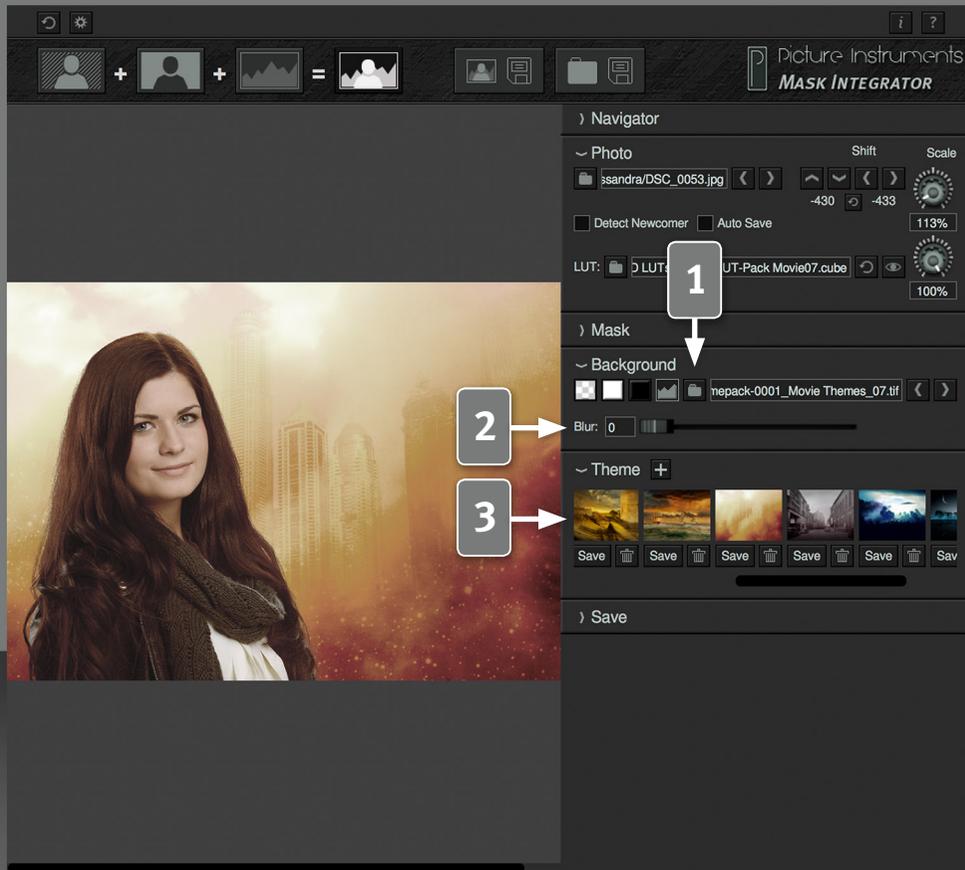
The button depicting the mask symbol lets you display all areas you have painted over with the brush. The reset button lets you undo all of the edits you did with the brush.



The size of the brush on the screen always remains the same. Zoom in and out of the picture to work more accurately or faster with the brush.

MASK INTEGRATOR

Manual



Select Background

1 Here you can select a background for your masked object. You can choose between transparent, black, white and a custom image of your choice. When choosing one of the first three options the size of the output image will be the size of the original image. If you select a background image from your computer, the size of the output image will automatically adjust to the size of the background image. Use the arrow keys to skip through the images that are located in the same folder as your background image. If you choose a transparent background it will only remain transparent if the format you select to save your images supports transparency (i.e. PNG or TIFF). You can select the output format in the settings.

Background Blur

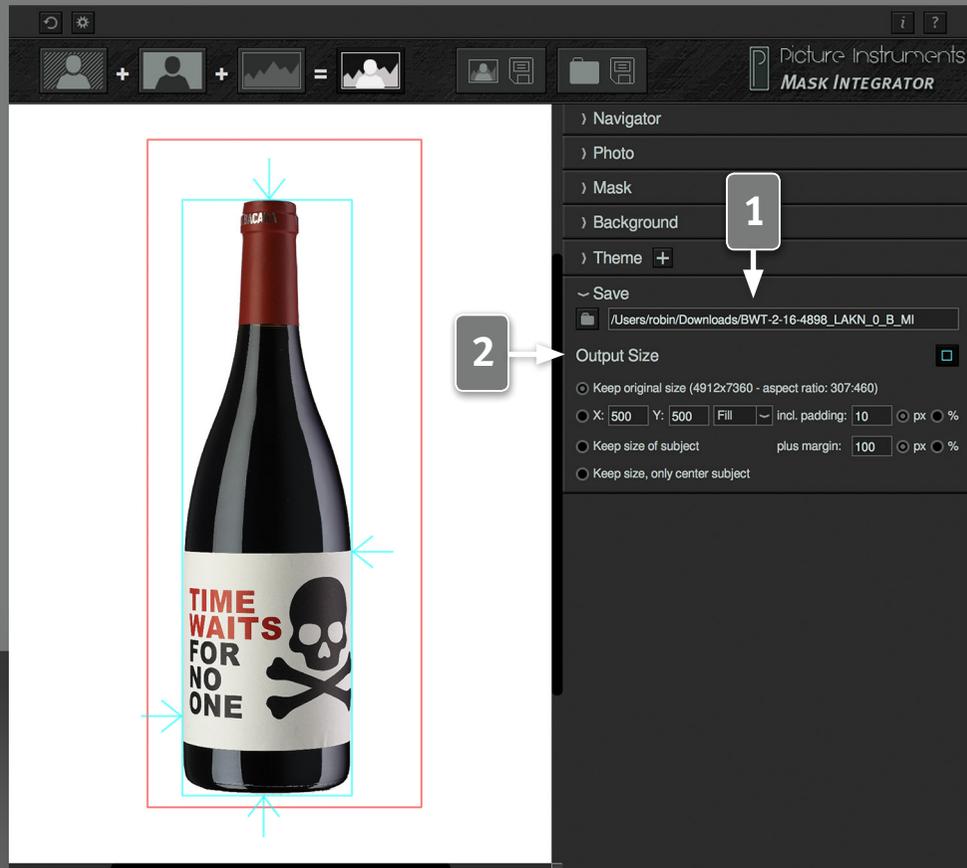
2 Use this slider to separate the foreground from the background by blurring the background.

Themes

3 Mask Integrator has now the option to save the combination of the selected background photo and the selected lookup table (for the foreground) as a theme. The "+" icon adds the current combination of both as a theme and the "Save" button below each preview thumb overwrites the respective theme. You can delete a theme via the respective trash icon. Themes are really helpful for portrait and people photographers to perform themed shootings. Depositing a LUT for matching the colors of the foreground to the background results in a harmonic composition of foreground and background automatically while shooting. This means that your customers can see the finished composition immediately after choosing a theme. New photos which are loaded with the "detect newcomer" function (chapter 1) will automatically be adjusted with the loaded LUT.

MASK INTEGRATOR

Manual



Storage Path and Size

1 Mask Integrator saves the target images into the folder specified here if the "save single image" or the "save all" button are clicked. The "Auto Save" feature (PRO-version) also saves the images into this folder. If this output path is the same as the location where the original images come from a new folder named "output" will be created. The target images will saved to this "output" folder. Otherwise the order in which images are loaded or detected automatically could get mixed up or the software could end up in a continuous loop.

Output Size

2 "Keep original size": Saves the masked images in it's original size. For the following options the boundary of the cropped image is significant.

"X_Y_Fit/Fill": Fits the cropped image into the specified size (independent of size or aspect ratio of the original image). The subject will be scaled down by the size of the selected border.

"Fit" produces an image with the aspect ratio of the cropped subject with the same size border around.

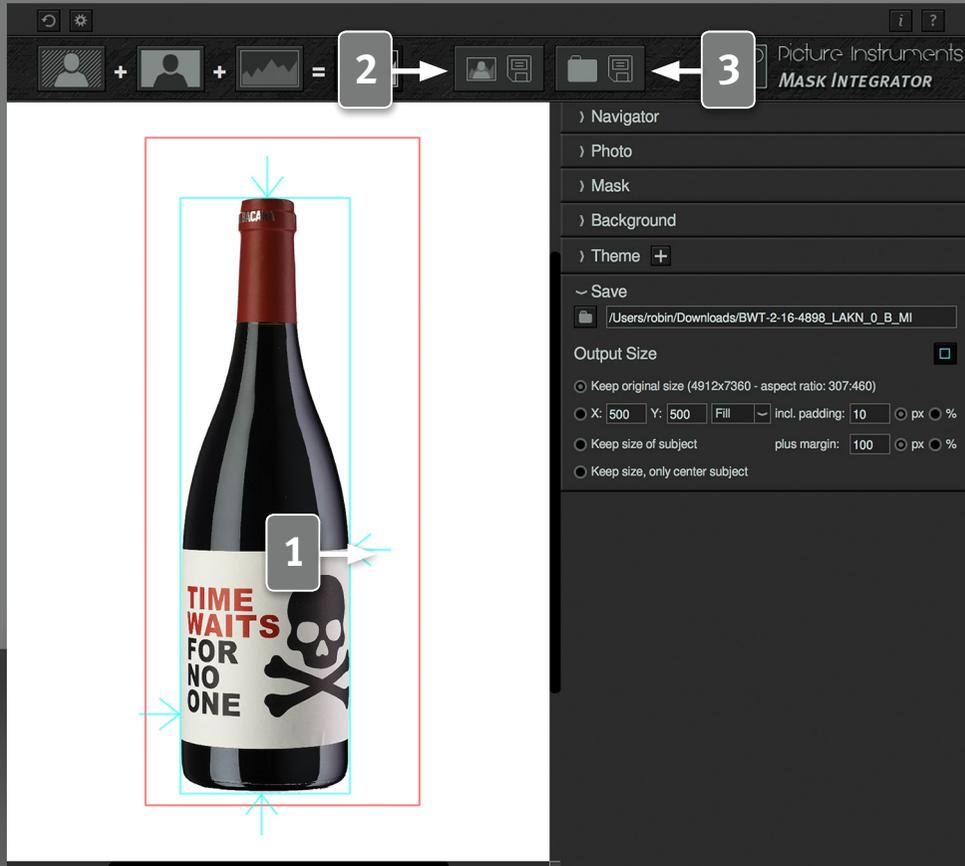
"Fill" adds background to have all images in the same specified size.

"Keep size of subject": Crops the subject without scaling it. If you set a border it will be added around the subject.

"Keep size, only center subject": Centers the cropped image within the original size of the full image without scaling it.

MASK INTEGRATOR

Manual



Boundary of the Cropped Image

1 This Button shows the boundary of the cropped image. This means that the turquoise line jumps from the outside to the first non-transparent pixel and marks it with an arrow. All pixels outside this line are 100% transparent. It is relevant for all output size settings but the first.

Save Single Image

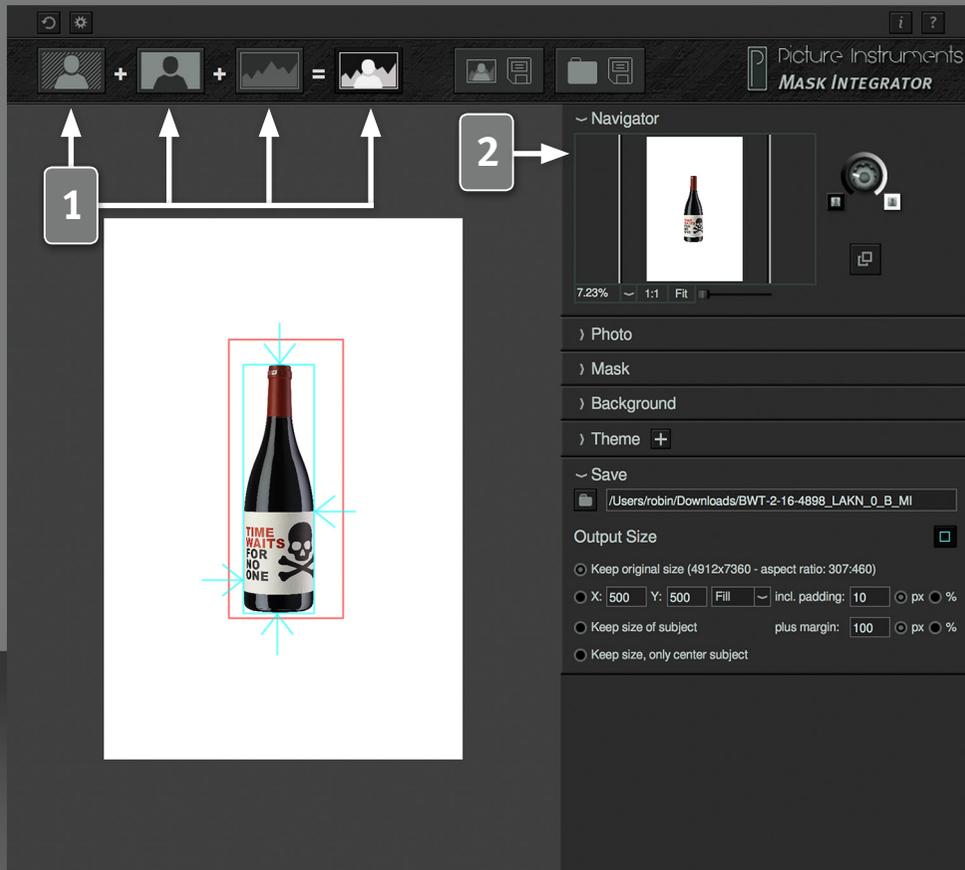
2 Saves the current target image to the selected folder (storage path). All file formats selected in the settings will be saved.

Save Entire Folder

3 Works the same way as "Save Single Image" but all target images of all photos and masks from one folder (the folder the current image was loaded from) will be saved consecutively. This feature is recommended if there is a large number of images with the same settings (i.e. shots with a turntable). The settings of the image currently open will automatically be applied to all images not yet opened. This feature is also useful if you don't want your workflow to be interrupted by the saving procedure. In this case you can first adjust all settings and then save all target images in one go.

MASK INTEGRATOR

Manual



11

Viewing Options

- 1 Here, you can select which image will be displayed in the main window.
From left to right the symbols stand for:

Normal exposed image, mask (backlight image which Mask Integrator inverts automatically and uses as mask), background image and output image.

Sometimes it can be better to select the mask view and other times the output image view to fine-tune the mask.

The output image will be saved no matter which viewing option is selected.

The Navigator

- 2 The navigator contains all settings for the view in the main window.
None of the settings have any influence on the saved output image. Although navigation is done with the mouse, at times it can be useful to fit the image with the "fit" button below the small viewer or select the original resolution with the "1:1" button. Both features are also available via shortcuts (Shortcuts behind the "Help" button).

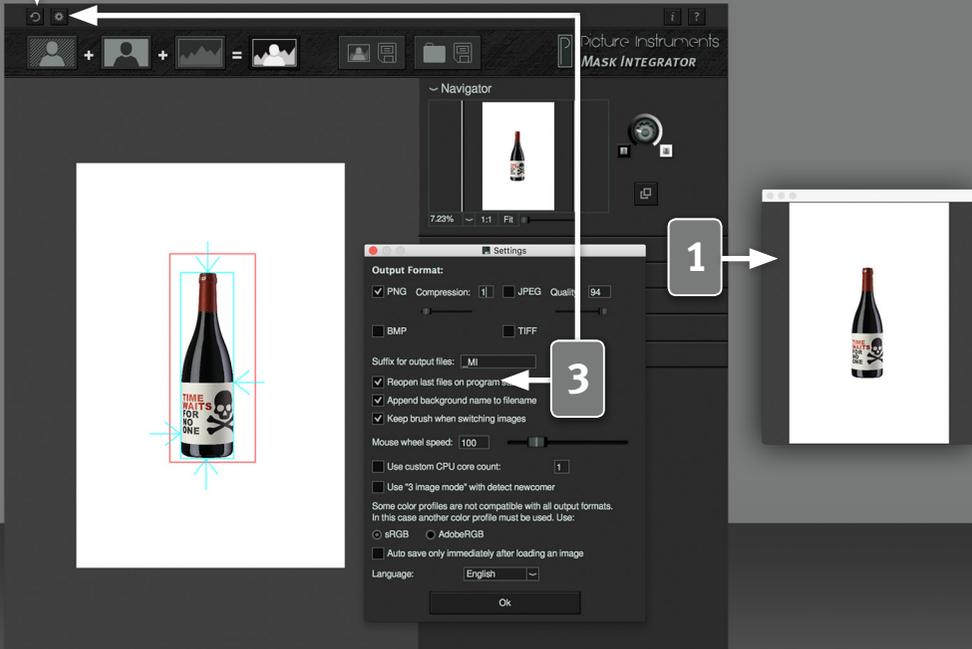
If a zoom level has been set and the image does not fully fit into the viewing area the image section can be moved in the preview image of the navigator as well.

Use the wheel control to adjust the brightness of the background of the main window. A different brightness of the image sometimes helps in identifying its edges.

MASK INTEGRATOR

Manual

2



12

External View

1 With this button you can open a second window with the resulting image. You can place the external window e.g. on a second monitor for a customer preview.

Reset-All

2 The reset-all button will purge all images including their settings currently selected in Mask Integrator. At the same time all adjustments you have made to images that are contained within the same folder can optionally be deleted (by deleting the .brush files - you will be asked to confirm deleting the files after clicking the button). The images themselves remain on your hard drive.

Settings

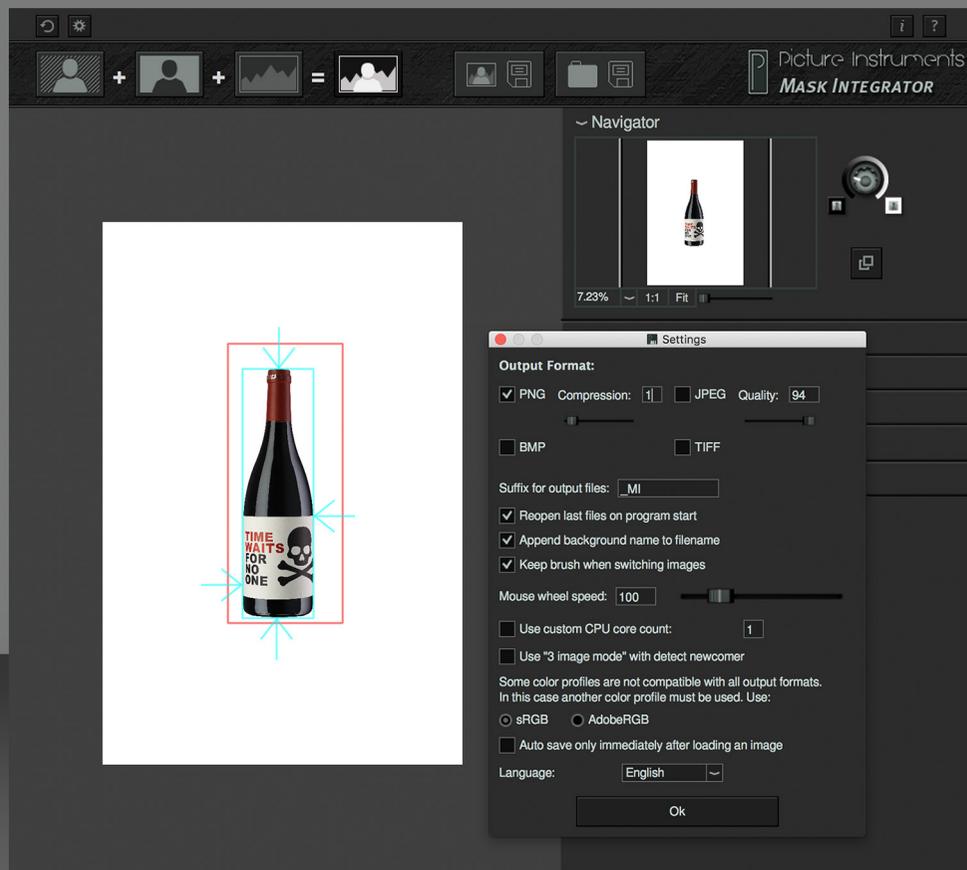
3 **Output formats**
You can select the format for the target images in the settings. If multiple formats are selected the respective target image will be saved in all selected formats when you use the "Save Single Image" or "Save All" features (more info in the chapter on saving path and size). Please note that the formats JPG and BMP cannot save any transparencies. These formats are not recommended with transparent backgrounds. For this the formats PNG and TIFF are well suited.

PNG compression

PNGs are always compressed losslessly - as opposed to JPGs. Level 0 means uncompressed (very large file). Level 1 reduces the size significantly while the compression only takes slightly more time. With every higher level the process of saving the PNGs will get slower while the reduction in file size is of no real benefit compared to the longer processing time. We recommend compression level 1.

MASK INTEGRATOR

Manual



13



Compression level 9 can take up to several minutes of time to save one single image - depending on image size and computer. This usually only makes sense for a relatively small output size for internet use.

JPG compression

The smaller the quality of the JPG, the smaller the file size. Since JPG compression is a lossy compression artefacts will appear in the image at lower quality settings. We recommend a setting higher than 70.

TIFF compression

The TIFF format can include uncompressed and lossless compressed images as well as ones with a lossy compression. Since most creatives regard TIFF as the synonym for the best image quality we have decided to use a lossless compression.

Suffix

In addition to any file name any desired set of characters can be added to the output files.

Reopen Last

opens the images on program start which you had open as you closed Mask Integrator.

Extended Filenames

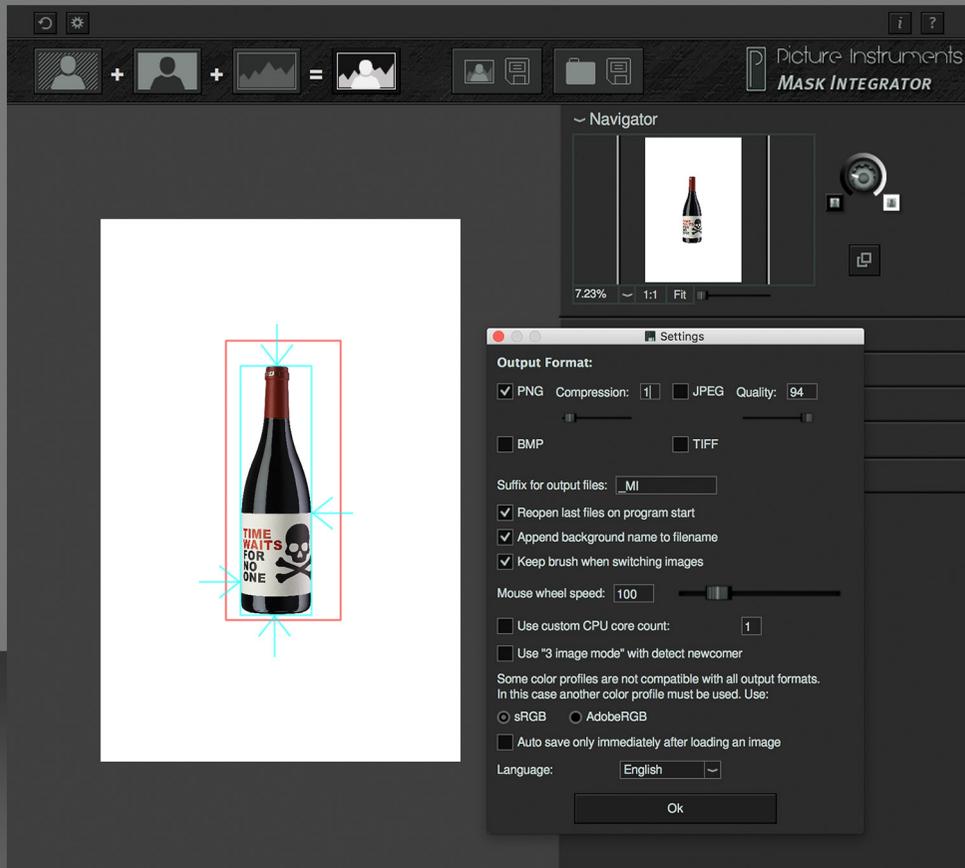
Add the background name to the file name for clarity for example.

Keep brush when switching images

In some cases some disturbing elements outside of the subject cannot be cropped with the "shrink mask" feature since this would, in some cases, also cut the actual subject. In this cases these elements can be removed with

MASK INTEGRATOR

Manual



14

the black brush. If these elements happen to always be in the same spot, for example due to the setup, activation of this feature will automatically apply this brush correction to the next subsequent image. Only images which already had an existing brush correction applied to them previously are exempt.

You can adjust the sensitivity of the mouse wheel to your personal preference. Especially for the zooming speed in the images.

The application tries to use all available **processor cores** whenever possible. Use this option to determine how many cores may be used.

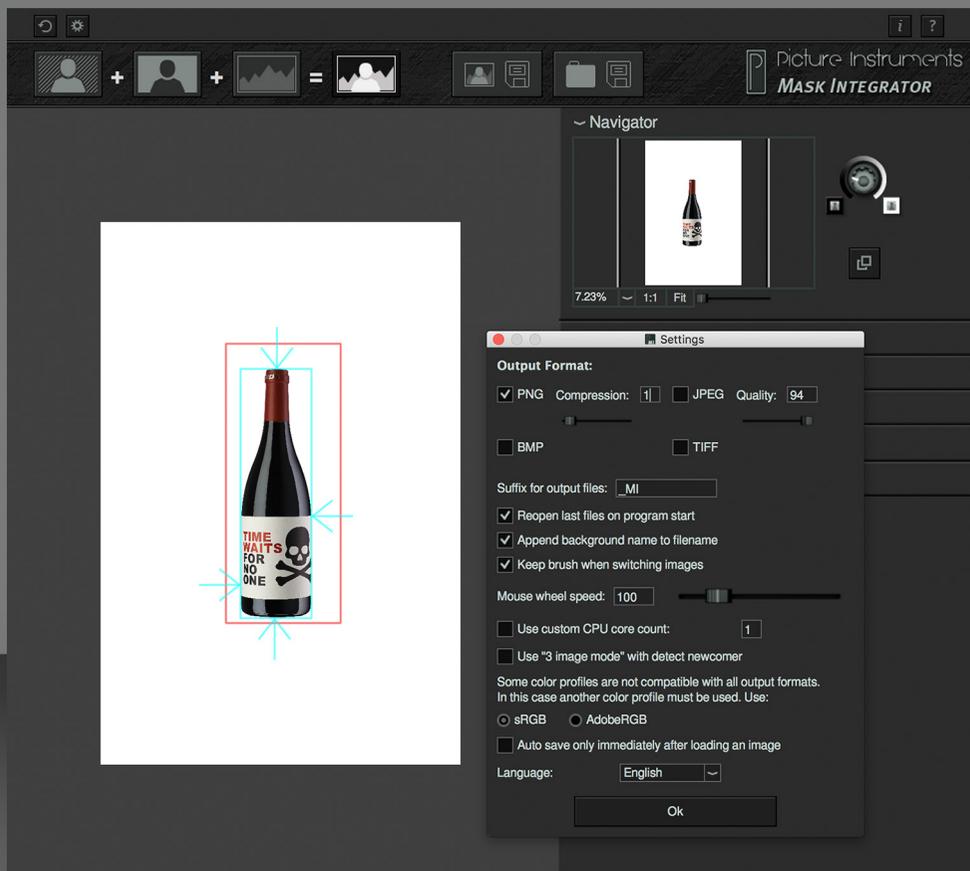
“use 3-image-mode” simplifies the shooting with cameras which can't be adjusted to stop automatically after exactly two photos in continuous shooting mode. Mask Integrator always handles incoming images as alternating motive and mask. If you accidentally take three photos in a run (motive, mask, motive) without enabling 3-image-mode, and then start with a motive again, Mask Integrator will mix up motives and masks. To avoid these troubles you can use the bracketing option (usually for shooting HDR images) of your camera in combination with the 3-image-mode. Set the camera so that the first image will be normal, the second one will be underexposed with 1/3 f-stop and the third image will be overexposed. The 1/3 f-stop underexposure will not affect the quality of the mask. By enabling 3-image-mode Mask Integrator will automatically move every third incoming image (in this case the overexposed ones) into a subfolder and it will be ignored in the workflow. You can delete the subfolder with the dropped images after your session. Thus you can also work with cameras which only can shoot three-part series.

Color Profiles

Mask Integrator is able to load color profiles and display images correctly

MASK INTEGRATOR

Manual



15

according to the loaded monitor profile. When saving the images, the color profile of the loaded image will be saved along with the target image. Some color profiles may contain data which may not comply with the specifications of all output formats. In this case the application will convert the image into either Adobe RGB or sRGB and save the respective profile into the target image.



If the loaded foreground image contains a different color profile as a possibly loaded background image, the background image will be converted into the foreground images color space and the color profile of the foreground image will be saved into the target image.

Auto Save (only in the PRO-version)

If the "Auto Save" feature is activated the respective target image will automatically be saved under the specified folder path. Whether the image is saved immediately after it is loaded or just before loading the next image can be specified here. If "immediately after loading an image" is selected, certain adjustments to the image will not be saved automatically to the target image. In this case the image would have to be saved manually by clicking on the "save" button. If this option is not selected you will be asked to save the resulting image when quitting the application.



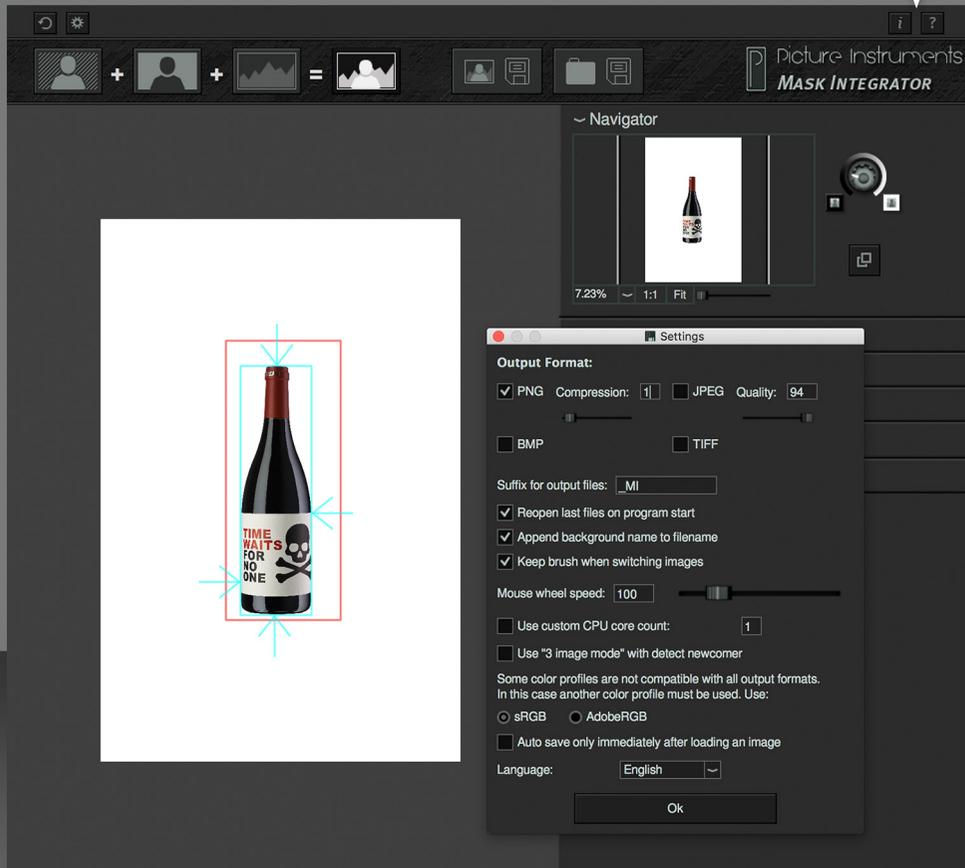
Saving just before loading a new image is recommended for workflows in which images normally require manual adjustments. Saving immediately after loading an image is recommended for automated processes and use in photo booth applications.

Language

Here you can set the language of the user interface. After changing it you have to restart the application.

MASK INTEGRATOR

Manual



16

Info, Help and Shortcuts

- 1 In the info window you can find more information on the version of Mask Integrator and the license you use.

The help window contains a link to our Mask Integrator tutorial videos as well as shortcuts you can use to make your workflow more efficient.

Inter Process Communication (only in the PRO-version)

Mask Integrator is able to remotely communicate with other Picture Instruments applications. Among others this includes the transfer of images, presets, commands and status information. It is also possible to remotely open or close an instance of Mask Integrator, including all settings, with another Picture Instruments application. This feature is only available for the PRO-version of Mask Integrator. All settings that are necessary for this feature are implemented in the application which communicates with Mask Integrator and will therefore not appear in Mask Integrator's user interface.

Shoot for Mask Integrator

Mask Integrator is a tool that enhances the workflow of masking images if a backlight image has been shot for every normal light image. This usually requires some initial work but in this case guarantees for very high quality masks that are created automatically. Shoot the first picture like you always would if you didn't want to mask it. For the mask, the same picture is shot again with backlighting. Light the background as evenly as possible. To avoid any stray light that falls from the background onto the edges of the object it is advisable to place shading elements around the object. This will only let the part of the light fall onto the back of the object that shines in the exact direction of the camera. Therefore the edge of the backlight image will be much more precise.

MASK INTEGRATOR

Manual



In practice the lighting of the model or the object (image) and the background (mask) can be achieved by triggering two flash groups. While it is still possible to switch between the two flash groups manually when shooting products, people photography requires a system which accomplishes this task in the shortest amount of time possible. (i.e. the Hensel Freemask system, Rollei Easy Cap or similar).

In people photography it is also advisable to use a camera with a high consecutive shooting frame rate (10 images per second or more) to make sure the intervals between shooting the image and the mask are as short as possible (1/10th of a second or less) to shorten the time in which a model can move. Even in product photography is it quite an advantage to use Freemask or a similar system to have a more efficient workflow when shooting in large quantities.

Motive



Backlight Image



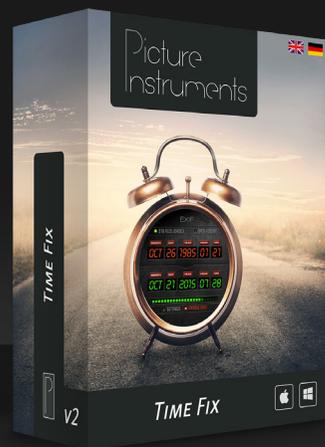
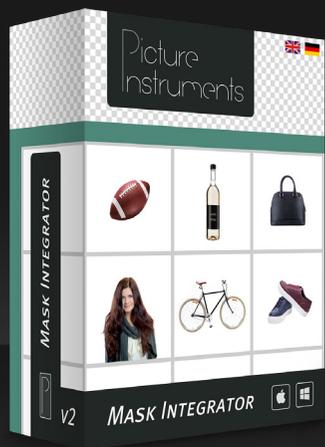
Output Image



More information and video tutorials available on:

www.picture-instruments.com

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www.picture-instruments.com