

FlexAdaptor

GETTING STARTED



PostScript Picture
(black logo)

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Printed in Denmark.

Part #: 86023004

1 Contents

1 Introduction

Why choose a FlexAdaptor 2

2 Hardware description

What does the FlexAdaptor include 3

Supported camera backs 3

FlexAdaptor Ground Glass 5

The Viewfinder 5

Accessing the the focusing screen 6

Mounting the FlexAdaptor on a view camera 7

Mounting the camera back in Portrait or Landscape mode .. 8

Phase One One-Shot cable 9

3 Capturing images for stitching

The color markings on the FlexAdaptor 11

Capturing image 13

4 Stitching images in Capture One for Macintosh

Capture One Stitch developer 14

The command buttons 16

5 Stitching images in Capture One for Windows

Capture One Stitch developer 5

The command buttons 20

6 Trouble Shooting 22

7 Technical Specifications 24

1 Introduction

Why chose a FlexAdaptor

1. It is extremely easy to use and it provides you with the opportunity of creating panoramic images on a 4" x 5" view camera.

The FlexAdaptor from Phase One is a sliding adaptor that allows you to capture one, two, or three overlapping images. The individual shots may then be stitched in order to create one high-resolution panoramic image.

2. It offers a unique possibility of creating very large images. With the Phase One FlexAdaptor and build in stitching large files can easily be made. This allows for larger prints and more detail in the images.

3. It lets you take advantage of the view cameras movements even in one-shot mode.

The FlexAdaptor does not need to be removed in order to work in one-shot mode. Just select one-shot mode and shoot like you would with your Phase One single-shot camera back. The focusing screen consists of masked areas that indicate the available image areas for one-, two-, or three-shot mode.

4. Larger angle of view.

By using the FlexAdaptor the effective angle of view of the camera is expanded by moving the camera sensor on the film-plane. This gives you a larger angle of view useful for architecture and interior shots and eliminates the need for expensive wide-angle view camera lenses.

2 Hardware Description

What does the FlexAdaptor include?

The Phase One Flexadaptor consist of the following parts:

- FlexAdaptor with focusing screen
- Removable viewfinder with build in magnifying glass
- One-Shot Sync cable for Phase One camera backs
- This manual
- Interchancable insert for Phase One camera back
- Camara adapter plate for the View camera

Which 4" x 5" View Cameras Does the FlexAdaptor Support?

This very flexible sliding adaptor can be mounted on 4" x 5" view cameras from Sinar and Horseman, Linhof, Toyo, Arca Swiss and Cambo. On certain models of view camera the buttons and the rear standard can limit the tilt and swing movement.

Which Phase One digital backs can be used?

The FlexAdaptor is designed for the all Phase One One Shot backs:

LightPhase, Phase One H 5, Phase One H 10, Phase One H 101, Phase One H 20 and Phase One H 25 can be used with the FlexAdaptor.

FlexAdaptor Getting Started

The FlexAdaptor comes with a Insert Plate to be fitted in the FlexAdaptor. The right insert plate must be used in order to fit the digital back to the FlexAdaptor.

The available insert plates are for Hasselblad, Contax, Mamiya 645 and hasselblad H1.



Insert Plate for Hasselblad



Insert Plate for Contax



Insert Plate for Mamiya 645



Insert Plate for Hasselblad H1

Please note: If ordering a FlexAdaptor for use with the Light-Phase and Phase One H 5/H 10/H 20 for Mamiya RZ 67 Pro II camera the Hasselblad insert is required.

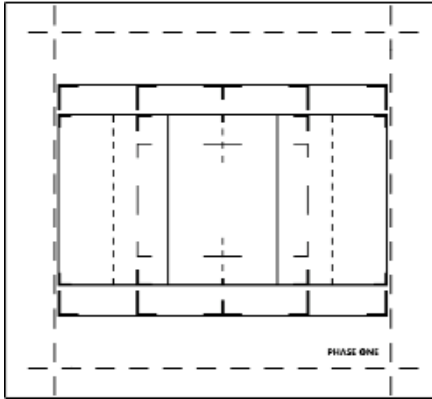
NOTE: The FlexAdaptor DOES NOT support the Phase One H 20 for Rollei cameras

The FlexAdaptor Focusing Screen

The FlexAdaptor is equipped with a special focusing screen that matches the focal plane of your camera.

The masked areas on the focusing screen are guidelines to indicate the image area available in one-, two-, or three-capture mode.

This gives you full control of the capturing process.



The ground glass has printed lines to show the position and orientation of the different Phase One camera backs.

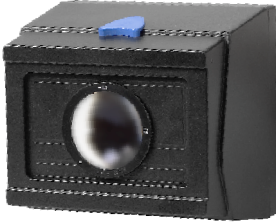
- Phase One LightPhase, H 5, H 10, H 101
- Phase One H 20
- Phase One H 25

The FlexAdaptor Viewfinder

The viewfinder that comes with the FlexAdaptor is equipped with a built-in magnifying glass. Mount the viewfinder on top of the FlexAdaptor's focusing screen by placing the right side of the viewfinder at the right side of

FlexAdaptor Getting Started

the ground glass. Now gently press the viewfinder's left side down on the focusing screen until it clicks. Make sure that both sides are properly mounted.



FlexAdaptor Viewfinder



How to access the focusing screen

The viewfinder has a built-in magnifying glass. You can choose to focus your camera by using the magnifying glass or you can flip the viewfinder to the left and only use the focusing screen. You simply release the viewfinder's right side and turn it to the left. Now you will have direct access to the focusing screen. The magnifier can be removed from the focusing screen by flipping it. The magnifier returns to its original position in front of the focusing screen when you press the blue

button on top of the viewfinder. Also, you may choose to remove the viewfinder and use the focusing screen for focusing.

NOTE!

Always use the FlexAdaptor's handle when lifting the FlexAdaptor. Never use the viewfinder!

The viewfinder will come off. Phase One does not cover any physical damage caused by dropping the FlexAdaptor

Mounting the FlexAdaptor on a view camera

- 1.** Remove the focusing screen on your view camera.
- 2.** Mount the FlexAdaptor onto the view camera. In order to facilitate mounting, the FlexAdaptor matches both the mounting of the focusing screen of the view camera as well as its closing mechanisms.
- 3.** Remove the FlexAdaptor once your work is completed, and mount the original focusing screen onto your view camera.

Does the FlexAdaptor Limit Your Shooting?

You can still benefit from the original functionality of your view camera in terms of movement i.e. tilt, shift, or swing, image area, and supported lenses.

Please note: Some view cameras do have certain limitations in terms of movements, once the FlexAdaptor is mounted. For instance, mounting of the FlexAdaptor on view cameras with L-shaped back rears e.g. Linhof Kardan GTL will limit positive and negative tilts.

Since the focus plane of the FlexAdaptor matches that of the view camera, you can use all available camera settings. Also, you may use all types of lighting and you may even use wide-angle lenses.

Mounting the digital back in Portrait or Landscape Mode

As mentioned above, the FlexAdaptor allows image capturing in both portrait and landscape mode.

In order to switch from portrait mode to landscape mode and vice versa the interchangeable insert, onto which the digital back is mounted, must be turned to the right orientation:

- 1.** Open the insert lock by pressing of the two blue switches on the closing mechanism
- 2.** Turn the insert 90° or 270°
- 3.** Click the insert back on again

Though carried out manually, the procedure is facilitated by the switches and you do not have to remove the digital back single-shot camera back while changing orientation.

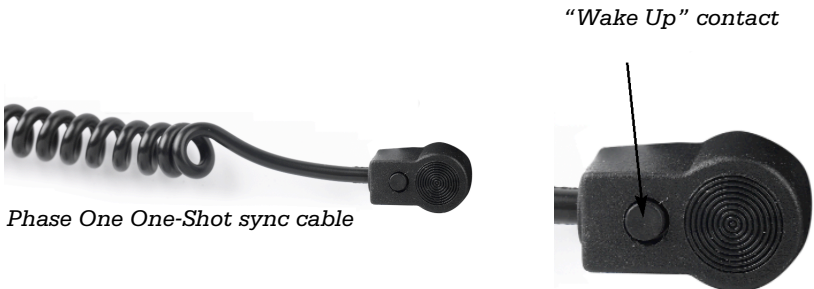
With Phase One H 101, LightPhase/Phase One H 5 for CONTAX 645 or Mamiya 645AF you always have to turn the insert. Where the LightPhase for Hasselblad lets you turn either the digital camera back or the insert 90°. The rotation of a digital back only makes sense for backs with a rectangular sensor. Therefore the Phase One H 20 cannot be rotated.

The Phase One One-Shot sync cable

Phase One's backs works in the way that the camera "wakes up" the camera back prior to the exposure. The camera body does this electronically or mechanically. This feature does not work on a view camera.

In this case the lens shutter must be fired twice to get an image. The first shot is to "wake up" the back and the next shot will capture an image.

The time between the two captures must be between 5 and 20 seconds depending on the cameraback model used.



The One-shot release cable has a little contact built in to the housing that connects to the digital back. By pressing the contact the back receives the “wake-up” signal and prepares for taking a capture and the back will remain active until it times out.

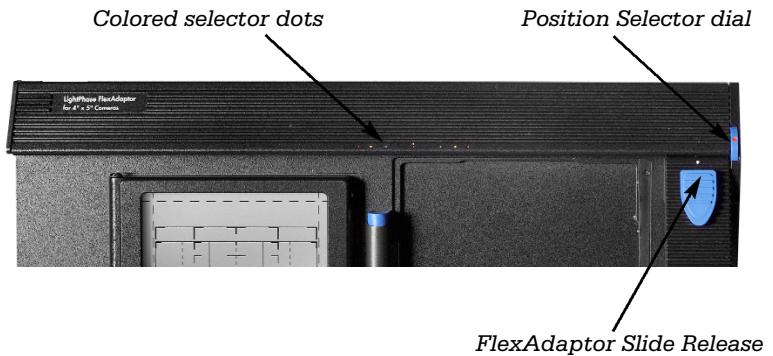
In the instance of a time out a Dialog box will be displayed on the computer.

This cable reduces the work of firing and cranking the shutter twice and reduces the risk of moving the camera due to the cranking of the lens shutter.

3 Capturing Images for Stitching

The color markings on the FlexAdaptor

The FlexAdaptor has four color codes on the small position selector dial on the left right of the FlexAdaptor. Each color identifies the position of the stops used for stitching.



For the Phase One LightPhase, H 5, H 10 use the color dots:

- | | |
|---------------|-------------------|
| Red | One-capture mode |
| Yellow | Two-capture mode |
| White | Tree-capture mode |

For Phase One H 20, H 25 use the color dots:

Red	One-capture Mode
Yellow	Two-capture mode (Large overlap)
Green	Two-capture mode (small overlap)

Start by setting the position selector in two-shot mode (i.e. yellow dot for LightPhase and green and yellow dots for Phase One H 20). Then slide the adaptor to the left by means of the handle. Please note that in order to slide the adaptor, the blue button on the handle must be pushed down. Smoothly, the adaptor moves forward until a position is reached. Once reached, the adaptor physically falls into place with a "click", in this case at the first yellow respectively green dot. Now you are ready to capture your first image, provided of course that you already focused the camera. After capturing, you slide the adaptor to the next position.

Select three-shot mode by turning the position selector to the white dot and slide the adaptor to the next position and so forth until all three captures are carried out. In order to work in one-shot mode please select the red dot on the position selector.

The sliding is very accurate, since the Phase One single-shot camera back is displaced parallel to the focal plane of the 4" x 5" view camera. The mechanical construction ensures that the distance between the positions and the available image area at each position are exactly alike. The FlexAdaptor slides smoothly and accurately and the masked areas on the focusing screen provide you with full control over each single capture.

Capturing the images

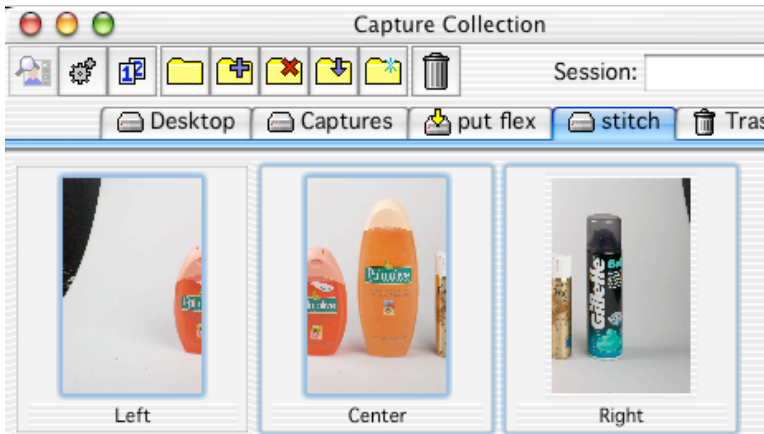
When the composition and lighting of the subject is done we are ready for capturing the files for our stitched image.

- 1.** Rotate the position selector on the FlexAdaptor into the desired position.
- 2.** Then gently slide the camera back into the desired capture position for the first capture. It does not matter if you shoot the left or right image first. The order can be changed in the Capture One stitch developer later.
- 3.** Capture the first image, and slide the FlexAdaptor into the second position and capture the second image and third image. Keep in mind that even small vibrations can change the tilt and swing of the camera and make stitching a problem.
- 4.** The images are now ready for stitching in the Capture One.

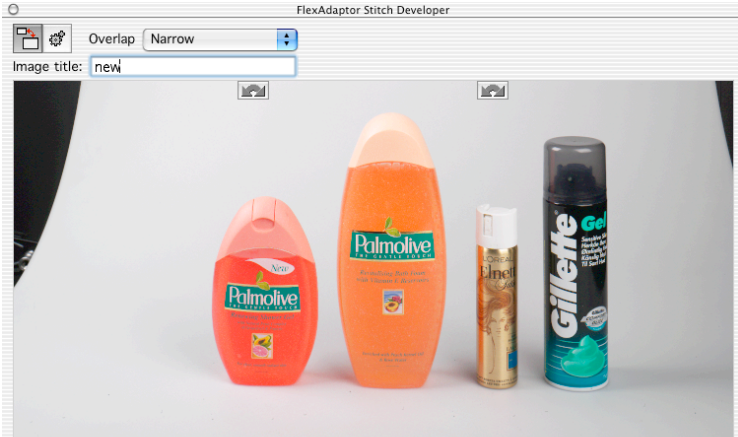
4 Stitching images in Capture One for Macintosh

Stitching images in Capture One is a simple process. Keep in mind that the Curve, Histogram, Unsharp Mask, Color-Management and other image settings in Capture One will be similar for all the images stitched together.

1. Now select the images to be stitched in the capture collection of Capture One. Selecting multiple images can be done by Shift-Clicking on images.



2. Transfer the captures to the build in stitching processor by clicking the Stitch Developer button in the Capture Collection.



3. In the FlexAdaptor Stitch Developer arrange the images if the order is not right and give the stitched image a filename and start the stitching process by clicking the stitch images button.

The stitching process will now start and stitch the images and make it a tiff file.



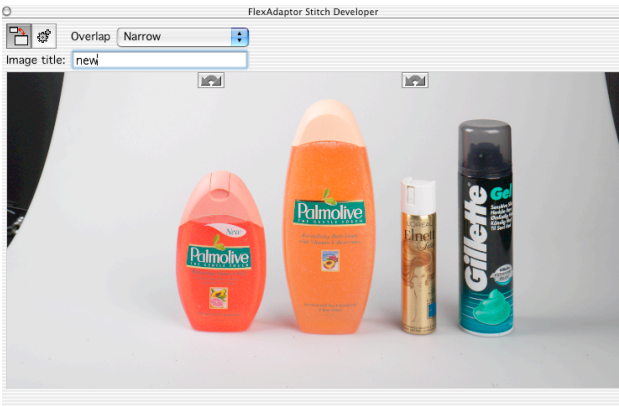
The command buttons

Stitch Images



The Stitch button in the capture Collection. This will bring the selected captures into the FlexAdaptor Stitch Developer.

Capture One Stitch Developer



Resize window



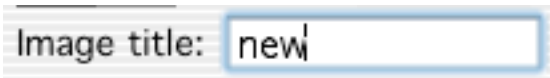
The resize window toggles between a large and a small stitching window.

Stitch Images



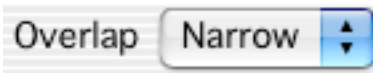
Starts the stitching process and develops a tiff file.

Image Title.



Sets the filename for the stitched image.

Overlap



Selects the overlap of the stitching. Select Narrow wide or Landscape depending on the capture overlap used when capturing the images.

Swap images

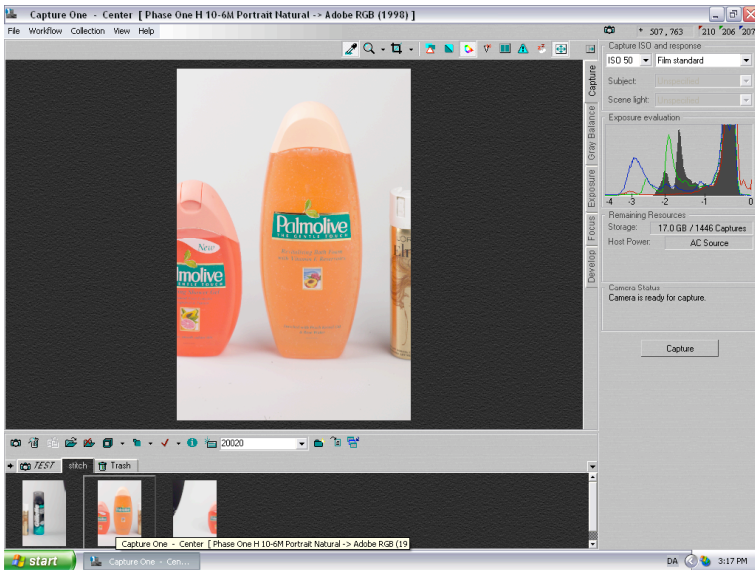


The swap images button(s) is used to set the order of the images. If the stitched preview has the leftmost image in the right side click the Swap Images button to get the order right.

5 Stitching images in Capture One for Windows

Stitching images in Capture One is a simple process. Keep in mind that the Curve, Histogram, Unsharp Mask, Color-Management and other image settings in Capture One will be similar for all the images stitched together.

1. In the Capture Collection of Capture One for windows select two or tree images by shift clicking.



2. Select "FlexAdaptor Stitch Developer" from the Workflow menu. This will open the FlexAdaptor Stitch Developer. Now select the images to be stitched in the capture collection of Capture One.



In the FlexAdaptor Stitch Developer give the stitched image a filename and start the stitching process by clicking the stitch images button.

If the capture files needs to be re-arranged the stitch order can easily be set right here to.

The stitching process will now start and stitch the images and make it a tiff file



The command buttons

Develop and stitch the captures



Develop and stitch the captures starts the stitching process.

Add selected captures



This adds the selected Captures in the Capture Collection to the Stitch Developer window.

Identify stitch Order



Identify Stitch Order lets the operator select the image that should be at the left in the final developed stitched image file.

Clear capture selections



Clears the Stitch Developer window.

Stops stitch operation



Starts to develop the images in the Stitch Developer window.

Expand the stitch preview area



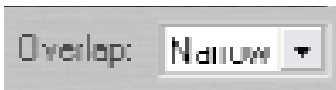
Gives a larger preview area of the Stitch Developer window.

Image title



Sets the image title for the processed tiff file

Overlap



Sets the overlap of the stitching. Select narrow , wide or landscape depending on the capture overlap used when capturing the images.

5 Troubleshooting

What to be aware of when capturing and stitching images

Phase One's versatile Flex Adaptor allows you to create high-resolution, panoramic images by stitching two or three images together. A straightforward process you quickly learn to master.

The easy process of capturing and stitching images requires a higher precision of the lens shutter and the lighting used than just capturing single images. Even small variations in the exposure from one image to another can be visible in the final stitched image.

Exposure changes due to strobe equipment

Older strobe packs and generator strobes may vary with up to 1/3 f-stop from one strobe pop to another. This is due to the fact that the capacitors may "leak" power and are therefore not always fully charged when the strobe pops. Also, most strobe systems are optimized for the so-called "Near Daylight" light. However, the color temperature of the Near Daylight light will change if the effect of the strobe system changes. Modern strobe equipment charges the capacitors more accurately and is therefore more consistent.

Exposure changes due to lens aperture

The exposure may be affected if the lens' spring loaded aperture vary. Variations can be caused by common wear and tear. Modern lenses like 35 mm lenses, medium format lenses, and some large format lenses are equipped with

built-in spring loaded apertures.

If you are experiencing variations in the exposure try to disable the spring-loaded.

The images does not align perfectly in the final stitched image

Even small changes in the camera position or in the camera tilt and swing settings might have an effect on the accuracy of the stitched images. Try to reduce the camera movement in the capture process by using a heavy tripod or a studio stand. Be careful when sliding the FlexAdaptor from one image position to another and when cranking the shutter.

My final stitched image is darker in the comers

Most lenses have an image circle that by far exceeds the capture area of the FlexAdaptor. However most lenses will lack light in the corners. This might not be seen when shooting film, but can be seen using a digital camera. Especially older lens designs and wide angle lenses has this flaw.

My final stitched image is not sharp in the comers

Most lenses have the highest optical resolution in the center of the image circle. Then the resolution drops at the edges. The resolution of a high-end digital back is higher than what can be achieved on film and therefore the blurring in the corners is not likely to be seen when using film. The corner blur is usually seen when using large tilt and swing movements on the view camera or when using old lenses.

5 Technical Data

Phase One FlexAdaptor specifications:

4" X 5" view camera support:

Sinar, Horsmann, Toyo, Linhoff, Cambo, Arca Swiss

Dimensions:

Lenght:	307 mm
Width:	172 mm
Depth:	50 mm without viewfinder
Depth:	97 mm with viewfinder

Viewfinder dimensions:

Lenght:	102 mm
Width:	108 mm
Depth:	86 mm

Insert dimensions:

Lenght:	106 mm
Width:	106 mm
Depth:	83 mm
Catches:	3 - 4 mm

