

H 101

GETTING STARTED

PostScript billede
(black logo)

Phase One A/S
Roskildevej 39
DK-2000 Frederiksberg
Denmark
Tel +45 36 46 01 11
Fax +45 36 46 02 22

Phase One U.S.
24 Woodbine Ave
Northport, New York
11768 USA
Tel +1 631-757-0400
Fax +1 631-757-2217

Notice

The name Phase One is a trademark of Phase One A/S.

The names Apple Macintosh, Hasselblad, Microsoft Windows and Adobe Photoshop are all registered trademarks of their respective companies.

All specifications are subject to change without notice.

Phase One takes no responsibility for any loss or damage sustained while using their products.

This manual ©2002, Phase One A/S Denmark. All rights reserved. No part of this manual may be reproduced or copied in any way without prior written permission of Phase One.

Printed in Denmark.

Part #: 80025000

1 Contents

1 Introduction	2
2 Special H 101 features	3
Camera LCD display	3
Histogram	4
Viewfinder Information	5
Auto exposure	5
Double exposure protection	5
Image orientation detection	6
IR filter on the CCD.	6
3 Getting ready for taking pictures	7
Mounting the viewfinder mask	7
Mounting the H 101 on the Hasselblad H1	8
Use of cables	9
4 Maintenance	10
Cleaning the IR filter	10
Cleaning between the IR filter and the CCD	10
5 Technical data	11

1 Introduction

The Phase One H 101 is a single shot digital camera back for the innovative Hasselblad H1 camera. The Hasselblad H1 utilises a hybrid TTL phase-difference-detection type auto-focus system. Further more the Hasselblad H1 provides auto exposure settings. The Hasselblad H1 with a Phase One H 101 back encourages all kinds of photographic uses from portraiture and wide-angle photography to high speed shooting to capturing fast action with telephoto lenses. This exiting combination is a result of a joint development project between Phase One and Hasselblad.

The functionality of the Phase One H 101 is well integrated with the Hasselblad H1 camera. The H 101 camera back communicates with the H1 camera through a fast internal electrical computer interface.

The H 101 is based on the highly recognised Phase One camera back technology. The application software for the H 101 is the same as for all other Phase One single shot products. The Capture One User Guide is a general manual for these products. This Manual “H 101 - Getting Started” covers only specific H 101 features and functionality.

2 Special H 101 features



Camera LCD display

The Hasselblad H1 incorporates a display which displays information of the actual condition of the camera. It shows flash method, lens use, trigger setting, f-stop value, exposure time etc.

The Phase One H 101 will also display some camera back specific conditions in this display.



Camera back ISO setting is displayed. ISO 50, 100, 200 or 400 can be set inside the Capture One Application. Error messages like "Storage media full" will also be displayed.



(for detailed information on various camera specific items in this display please consult the Hasselblad H1 User Manual that came with your H1 camera).

Histogram

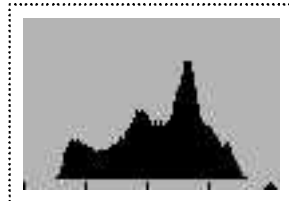
This is a very useful feature which enables evaluation of the image exposure, if you are unable to see the computer monitor.

Whenever a capture is made, the LCD screen on the H1 can show you a histogram image of the capture you just made.

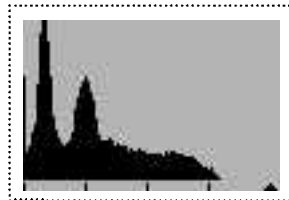
These histograms corresponds to the actual amount of pixels from the black color 0 to the white color 255.

If the capture is under exposed the histogram moves to the left, and if over exposed it moves to the right.

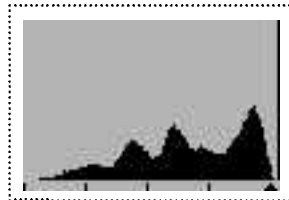
The histogram may continue outside of the top of the display area. The vertical axis only show the amount of the color there is at that particular position and does not have any significant value when evaluating the exposure, only the horizontal axe are used.



Correctly exposed image



Underexposed image



Overexposed image



To turn on the Histogram display on your Hasselblad H1 go to the Custom settings and select "Yes" from the Show Histogram menu point.

Viewfinder information

The icon on the second position from the right shows the actual captures left on the harddisk, an "E" indicates that storage media is exceeded, and you will need to free some space on the harddrive before continuing.



For a general description of the viewfinder information please consult the Hasselblad H1 User Manual.

Auto exposure

The Hasselblad H1 can work in different auto exposure modes. This is fully supported by the H 101, which communicates the equivalent film speed of the digital back to the Hasselblad H1 camera.

The default film speed of the H 101 camera back is ISO 50. However, this setting can be changed to 100, 200 or even 400 ISO, please consult the Capture One User Guide for details on setting the ISO in your camera back.

Double exposure protection

When using the Hasselblad H1 with a H 101 it is not possible to accidentally double expose the image by capturing one image quickly after another. The H 101 communication with the Hasselblad is disables the capture functionality in the camera if necessary.

At the end of an image exposure the image information in the CCD has to be moved from the CCD to the host computer. During this short period of time the CCD must be protected from light exposure. The H 101 ensures a safe emptying of the CCD by ignoring the shutter release from the Hasselblad camera.

H 101 Getting Started

Image orientation detection

The CCD in H 101 is positioned in landscape orientation. Whenever an image is captured in portrait position by rotating the camera, an internal sensor detects this new position and the image will appear as a correct image in the Capture One application.



Camera orientation:

Images can be captured in all three positions - and will appear with the correct orientation in the Capture One software.

IR filter on the CCD

The IR filter (Phase One TG1 Infrared cut-off filter) is placed on top of the CCD.

The filter may not be removed for several reasons.

- The focusing of the H 101 camera back will be damaged
- It is only possible to remount the filter without dust in between the filter and the CCD if you have access to special clean room facilities.
- The Phase One Product Warranty is terminated.

3 Getting ready for taking pictures

Mounting the viewfinder mask

The image area of the Hasselblad H1 is approximately 6 cm x 4.5 cm. The image area of the H 101 is 2.4 cm x 3.6 cm.

A H 101 viewfinder mask is provided. This mask has to be mounted instead of the original focusing screen. The viewfinder mask is positioned in the bracket that holds the focusing screen.



H 101 Getting Started

Mounting the H 101 on the Hasselblad H 1

The H 101 integrates fully with the H1 camera house and acts as a part of the whole camera system.

When no cassette is attached to the Hasselblad camera house the mirror is up and the shutter is open. This is the correct position, when no film cassette is attached.

When attaching the H 101 to the camera house, the shutter will close and the mirror comes down.



It is important to ensure that the bottom part of the H 101 camera back is pressed well into the locking mechanism before the upper locking mechanism is pressed together.

Use of cables



CORRECT

No cables are required between the H 101 and the Hasselblad H1 .

Flash sync cable must be connected to the Hasselblad H1 camera house.



NOT CORRECT

The flash sync cable must NOT be connected to the camera back when used on a Hasselblad H 1.

The flash sync connector on the Camera back is only intended for use with a Phase One FlexAdaptor, or other large format adaptors.

4 Maintenance

Cleaning the IR filter

When the H 101 camera back is not attached to a Hasselblad H1 camera, the camera back shall be protected with the protection plate. Dust particles can still stick to the IR filter, and this will degrade the image quality.

The cleaning procedure for cleaning the IR filter is described in the guidelines for the CCD cleaning kit that came with your camera back.

Cleaning between the CCD and the IR filter

Do not try to clean between the CCD and the IR filter!

The mounting of the IR filter is done at the factory in a high-class clean room. This process is a very specialised process that insures an extremely high quality of the glass surfaces of the CCD and the IR filter. The screws for locking the IR filter are sealed. If the seal is broken Phase One will not guarantee for any particles between the CCD and the IR filter.

5 Technical data

- Single shot camera back for Hasselblad H 1
- Electrical computer interface between the H 101 and The Hasselblad H 1
- Full support for H1 auto focus lenses (1/4000 - 30 sec.)
- Electronic protections against double exposures
- Orientation sensor for correct display of landscape and portrait images

Resolution:	3.992 x 2.656 pixels
Image modes:	RGB, Grey or CMYK
Pixel depth:	3 x 8 bit or 3 x 16 bit for RGB 8 bit or 16 bit for Greyscale 4 x 8 bit or 4 x 16 bit for CMYK
Image area:	24.6 mm x 36.9 mm (1" x 1.5")
Computer connection:	IEEE 1394
Power consumption:	7 watt
Compatible strobe systems:	When used on a H1 Camera Body, please refer to the Hasselblad documentation. When used on a Phase One FlexAdaptor, please refer to the section "Strobe Equipment" in the Capture One User Guide