

# **H 10 C645**

## GETTING STARTED

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# 1 Introduction

The H 10 C645 is a single shot digital camera back for the innovative CONTAX 645 camera. The CONTAX 645 utilizes a TTL phase difference detection type auto focus system. Furthermore the CONTAX 645 provides auto exposure settings. The CONTAX 645 with a H 10 C645 back encourages all kinds of photographic uses from portraiture and wide-angle photography to high speed shooting to capture fast action with telephoto lenses.

The functionality of the H 10 C645 is well integrated with the CONTAX 645 camera. The H 10 camera back communicates with the CONTAX camera through a fast internal electrical computer interface. This exciting direct digital solution is a result of a development project fully supported by Kyocera.

The H 10 C645 is based on the highly recognized Phase One technology. The application software for the H 10 C645 is the same as for all Phase One single shot products. The Capture One User Guide is a general manual for these products. This Manual "H 10 C645 Getting Started" covers only specific H 10 C645 features and functionality.

# 2 Special H 10 C645 features

## **Auto exposure**

The CONTAX 645 can work in different auto exposure modes. This is fully supported by the H 10 C645, which communicates the equivalent film speed of the digital back to the CONTAX 645 camera.

When capturing with auto exposure modes, exposure times between 1/4000 sec. and 32 sec. can be obtained. Please note that images captured with exposure times longer than 2 sec. can be degraded because of increased digital noise. The auto exposure of the CONTAX 645 camera use the ISO value set by the H 10 C645. The ISO value set by the H 10 C645 corresponds to the sensitivity set in the Capture One application. The sensitivity can be set to ISO 50, 100, 200 or even 400.

**Double exposure protection**

With the C645 it is not possible to accidentally double expose the image by capturing one image quickly after another e.g. when using continuous capture mode. The H 10 communication with the CONTAX 645 is disabling capture functionality in the camera when necessary.

**Image orientation detection**

The CCD in H 10 C645 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 with the correct orientation 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 application.*

### **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 10 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 focusing screen**

The image area of the CONTAX 645 is 41.5mm x 56mm.

The image area of the H 10 C645 is 24mm x 36mm.

A dedicated H 10 C645 focusing screen is provided.

This focusing screen has to be mounted instead of the original focusing screen. Refer to the CONTAX 645 Instruction Manual "Replacing Focusing Screen" before the focusing screen is mounted.





## **Mounting the H 10 C645 to the CONTAX 645**

The C645 is fully integrated with the camera house and acts as a true part of the whole camera system.

When attaching the H 10 C645 to the camera house it is important to ensure that the bottom part of the H 10 C645 back is pressed well into the locking mechanism before the upper locking mechanism is pressed together.

To avoid that the H 10 C645 back is released by mistake from the camera house, the enclosed screwdriver can be used to lock the H 10 C645 locking mechanism.



*Step 1*

*Step 2*

*Step 3*

## Use of flash sync cable



*No cables are required between the H 10 C645 and the CONTAX 645. Flash sync cable must be connected to the CONTAX 645 camera house.*



*The flash sync cable may NOT be connected to the H 10 C645*

### **Operating the camera from the host computer**

The supplied release cable must be connected between the "M" connector on the H 10 C645 and the mini-jack connector on the CONTAX camera house.



### **Use of sync cable for bulb exposures**

When using bulb exposure, a sync cable must be connected between the C connector on the H 10 C645 and the flash connector on the CONTAX camera house.



# 4 Maintenance

## **Cleaning the IR filter**

When the H 10 C645 camera back is not attached to a CONTAX camera, the camera back shall be protected with the protection plate. Still dust particles can stick to the IR filter. 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 specialized process that assures 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 Current limitations

## **TTL flash**

Using TTL flash with the CONTAX 645 camera and the H 10 C645 back, will result in 3 f-stop overexposure. When using TTL flash, the exposure compensation on the flash unit must therefore be set to  $-3$  f stops.

# 6 Technical data

- Single shoot camera back for CONTAX 645
- Electrical computer interface between the H 10 C645 and CONTAX 645
- Full support of dedicated lenses at all shutter speeds (1/4000 - 32 sec.)
- Electronic protections against double exposures
- Orientation sensor for correct display of landscape and portrait images

Resolution:	3992 x 2656 pixels
Image modes	RGB, Grey or CMYK
Pixel depth:	3 x 8 or 3 x 16 for RGB 8 bit or 16 bit for Grey 4 x 8 or 4 x 16 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:	See Section "Strobe Equipment" in the Capture One Users Guide