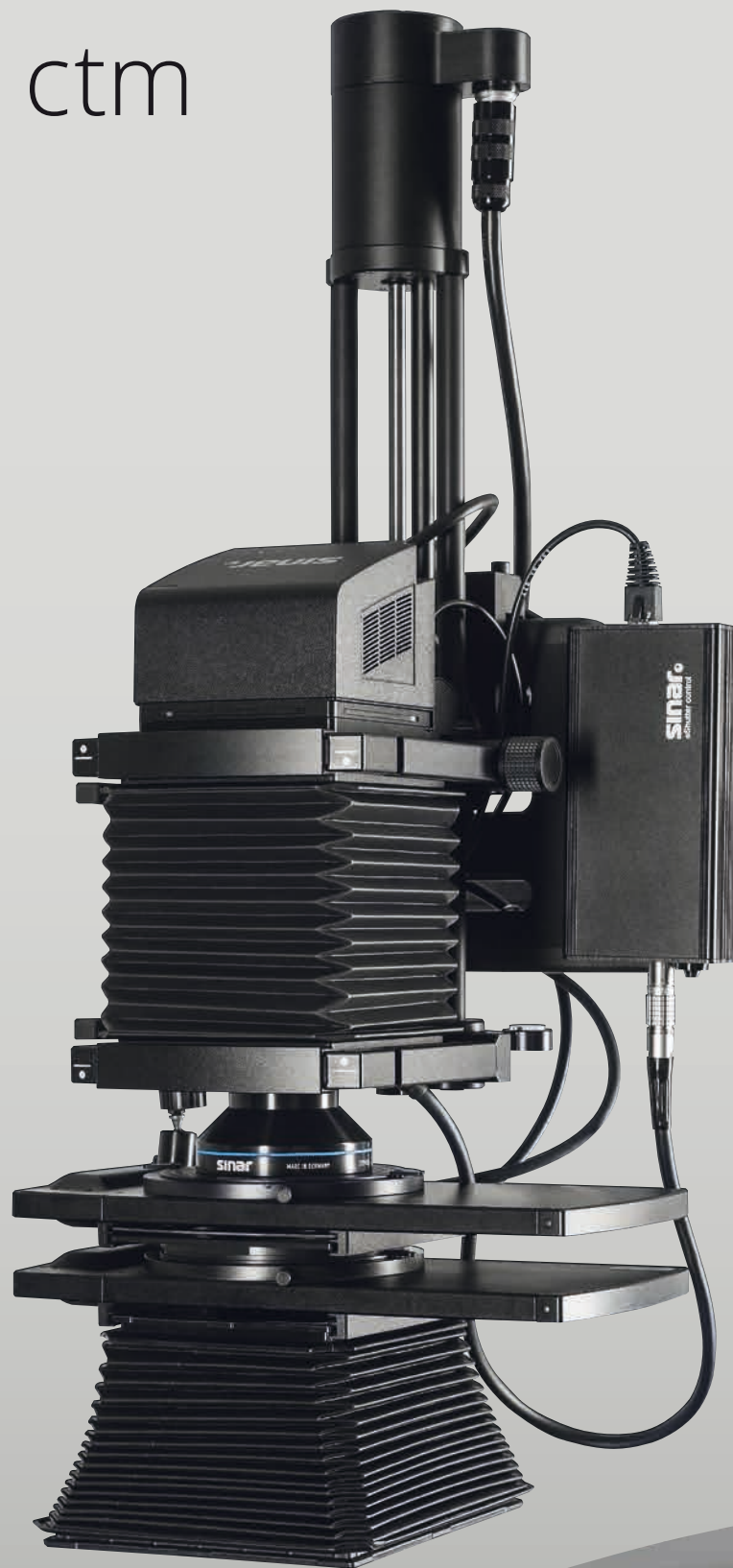


**sinar** <sup>+</sup> ctm



User Manual

**Thank You!**

Congratulations on your purchase of this high-quality Sinar product. It was carefully manufactured by using top quality material and thoroughly tested for performance and reliability. We are very pleased you have chosen Sinar and thank you for your confidence.

Sinar combines highest demands on technology, materials, design and ease of operation. This equally applies to professional cameras, electronics and accessories.

Before use, please read the operating instructions carefully to correctly operate the Sinar CTM (Color To Match) System and fully benefit from all the possibilities and advantages.

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# 1. Scope of Delivery

## 2. General Information

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<b>Scope of Delivery CTM</b>	Product no. 551.65.010 1x Sinar CTM Slider 1x Sinar CaptureFlow rePro Software 1x Hardware Dongle to unlock the licensed software 1x User Manual
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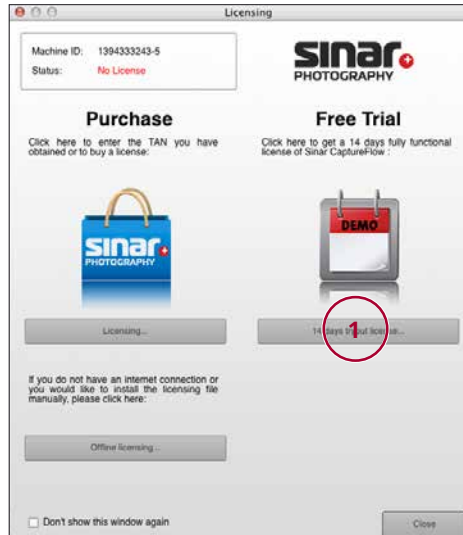
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<b>CTM Software, Dongle</b>	<p>The Sinar CTM (Color To Match) Solution consists of a CTM Filter Slider, CaptureFlow rePro Software and a Hardware Dongle to unlock the software.</p> <p>If you start Sinar CaptureFlow without a Dongle plugged into the Mac, the licensing dialog will open. This dialog can also be activated via help menu at any time.</p> <p>You can also reach the licensing server directly via <a href="http://mylicense.biz/sinar">http://mylicense.biz/sinar</a> to always check your data and manage your licenses.</p> <p><b>Important, please note:</b></p> <p>The CTM solution was developed especially for Sinar digital backs. It exclusively works with Sinar eVolution and eXact models which must be equipped with a clear glass filter to achieve the best possible quality.</p> <p>Sinar CaptureFlow rePro software is designed for use with Sinar CTM only. Step by step, a CTM-Wizard will guide you through the entire process of creating profiles and pictures.</p>
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### 3. Licensing

#### Activating the Demo License

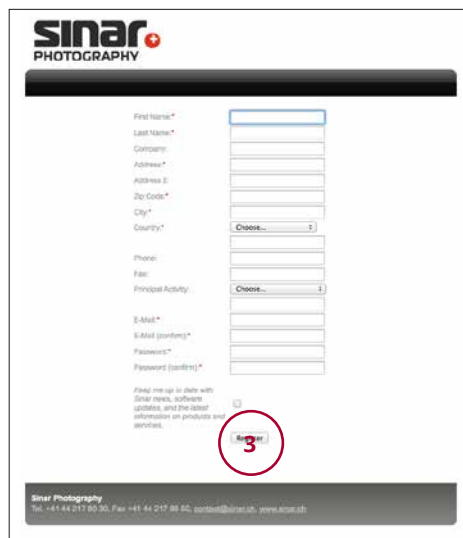
Starting the software on your Mac for the first time without a Dongle plugged in, the following licensing dialog will open:



**1**  
To unlock the software for a maximum of 14 days, click the box (1) "14 days trial license".



**2**  
In the appearing dialog click the link that directly leads you to the registration form.



**3**  
Please completely fill in this form and click "Register"

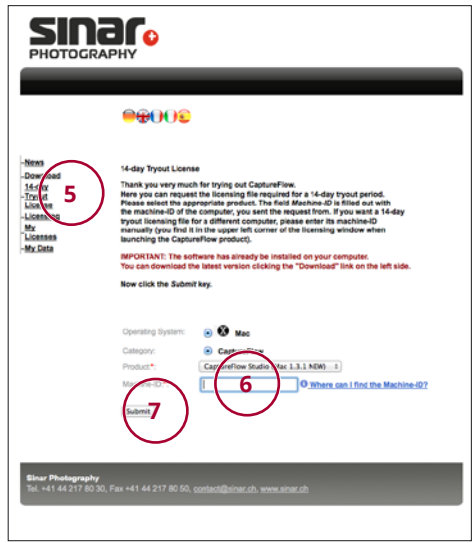


**4**  
This dialog appears and at the same time an email will be sent to the email account you have listed. In this email you are asked to confirm your registration by clicking the mentioned link. By clicking this link a confirmation will show that your account is active now. Click "Login" and enter your data to unlock the software.

### 3. Licensing

#### Activating the Demo License 2

The '.lic file' has to be stored in the same folder when opening for the first time. This enables the software to automatically find it.



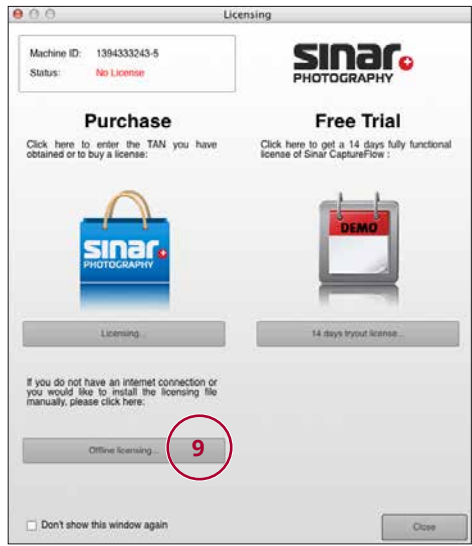
**5** Select menu item "14 days tryout license" so the following dialog is displayed.

**6** This dialog asks you to enter your machine ID to unlock the software on your Mac. Most operating systems automatically fill in this machine ID.

**7** Click the box "submit".

**8** With the following dialog you now download the ".lic file", required for access.

You can also unlock the software as follows: After the download Sinar CaptureFlow rePro software can be closed and restarted.



**9** Now you click "Offline Licensing" and follow the subsequent dialogs to complete activation on your computer.

## 4. Color To Match

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### Color To Match

The comparison between conventional digital photography with a digital back in the range of 1-shot: The benefits of the CTM solution regarding color accuracy are clearly visible. Thanks to the Sinar multi-shot technique and the spectral characterization by special filters the detail resolution and color accuracy are unsurpassed.

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### Color Accuracy redefined

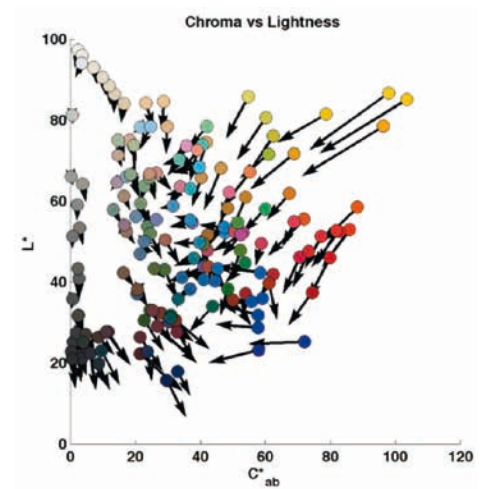
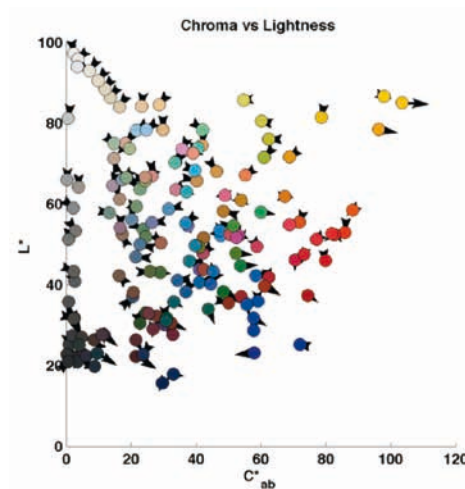
CTM (Color To Match) is a multispectral dual-pass filter solution for highly accurate color reproduction in digital high-end photography. CTM generates spectral-based color characterization. This dual filter solution has been engineered together with the Rochester Institute of Technology (RIT), Rochester, USA, and corrects for known color deficiencies in the Bayer pattern coating applied to photography CCD sensor arrays. CTM was developed exclusively for Sinar digital backs.

This extreme color accuracy is especially required in digitization of valuable cultural objects of art, in reprography, scientific and advertising photography. The results achieved are digital image files with unmatched color accuracy that guarantee an efficient workflow and a high throughput.

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### Measurable Color Accuracy

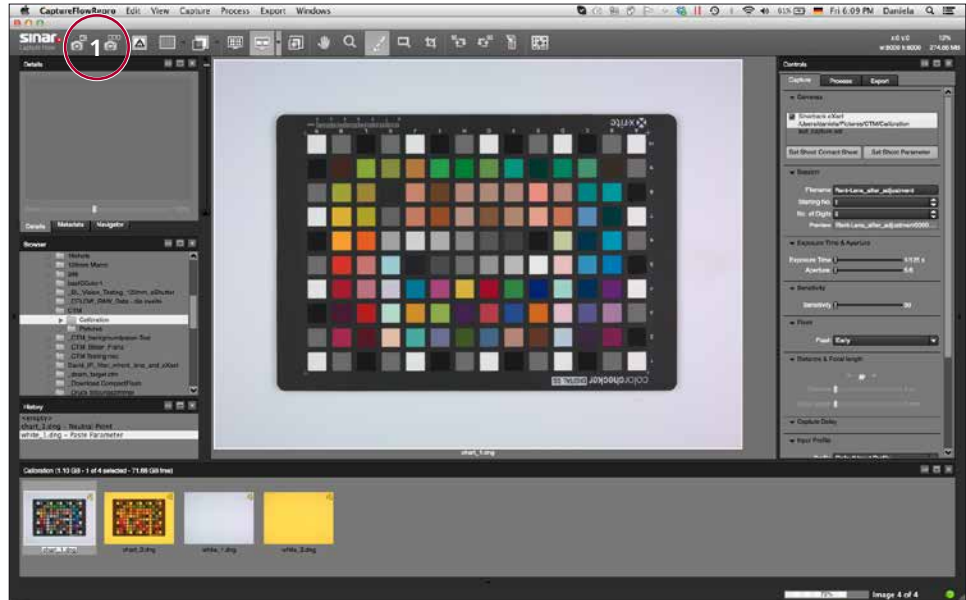
This graphical comparison illustrates the outstanding color accuracy of Sinar CTM (left) compared to an image taken with a current, commercially available digital back (right). The arrow diagrams show the target/actual results for the corresponding colors. Analyses of other digital backs may vary, but overall they show similar deviations from the nominal values.



## 5. The Software

### 1. Select Capture Mode

Sinar CaptureFlow rePro is a workflow software with integrated color management. To ensure the sequence of the workflow as well as optimum results, the software offers a CTM-Wizard that guides you through the required steps. Sinar has deliberately designed the software in a way that makes manual execution of the production steps unnecessary.



#### 1 Select Capture Mode

After opening CaptureFlow rePro software, on the top left you select the capturing mode you want to apply.

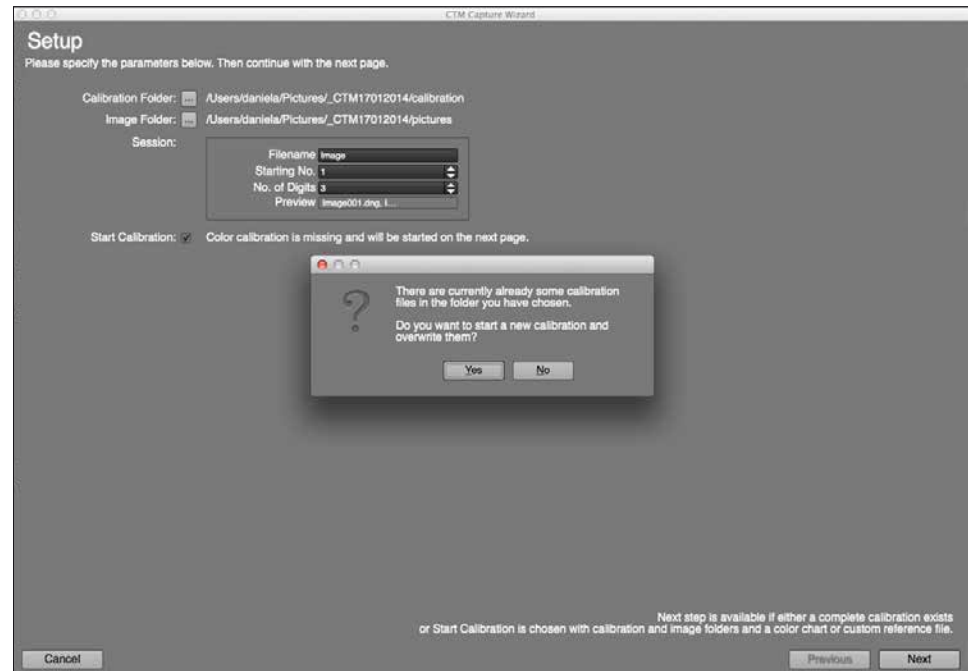


## 5. The Software

### 2. Basic Settings

For details about the individual settings please also consult the ReadMe instructions included with the download of CaptureFlow rePro software.

After selecting the desired multi-shot mode and by double clicking the camera icon again the CTM-Wizard opens and shows the following dialog:



#### Calibration Folder

Defines the location to store calibration data.

#### Image Folder

Defines the location to store image data.

#### Session

In the "Session" plugin you define a file name to assign the images of a particular session.

##### File Name

In the input box "File Name" you enter the filename. This name will be applied to the images that are subsequently captured.

##### Starting Number

In "Starting No." you set the number for the first captured image. The following images will be numbered consecutively.

##### No. of Digits

With this box you define the number of digits.

##### Preview

In section "Preview" the image names and their numbering according to selected settings are displayed.

#### Start Calibration

Calibration data is required in order to start multi-channel profiling.

If there's none or incomplete calibration data in the "Calibration Folder", the button "Next" is not active.

Calibration data includes following files:

Color Checker, 2 shots:

chart\_1 and chart\_2

SceneReference/WhiteBoard, 2 shots:

white\_1 and white\_2.

If data exists in the specified "Calibration Folder" the software will overwrite existing files when a new calibration is performed. A software message indicates when calibration data will be overwritten.

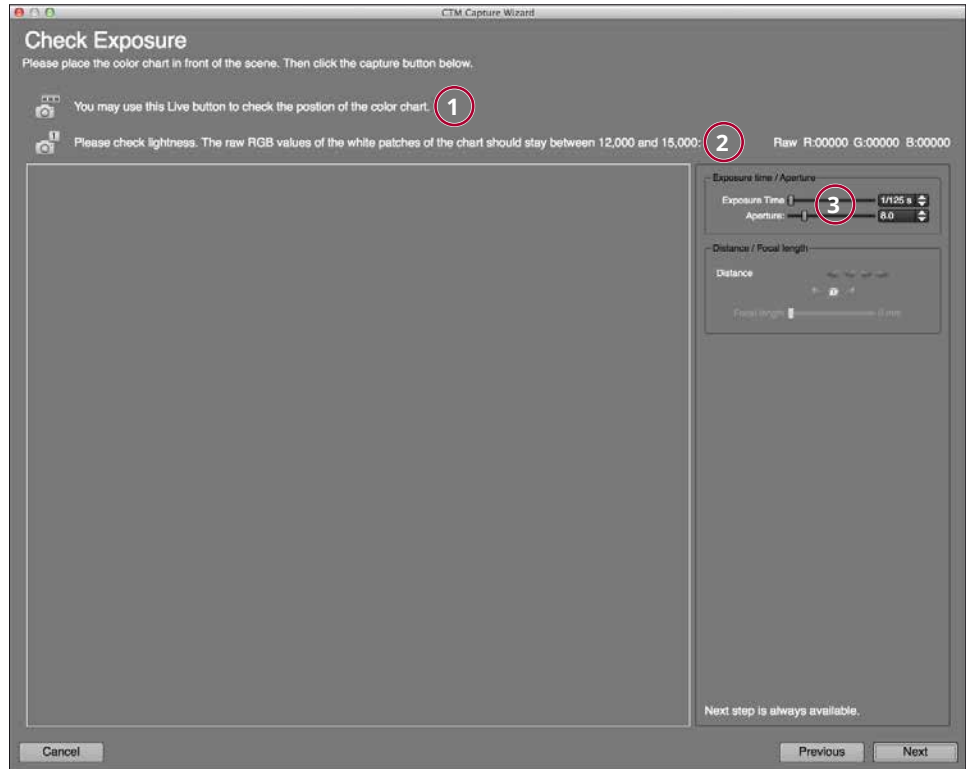
Please note that the images of the SceneReference/WhiteBoard (white\_1, white\_2) are also stored in the "Image Folder". Later they will be used as a shading reference while generating the image.

The images with their appropriate identification are also displayed in the contact sheet.

## 5. The Software

### 3. Preparing for Profiling

By clicking the button "Next" the second dialog opens to resume the workflow. This process can be skipped when a profile for this lighting situation has already been created.



**1** After clicking this button the live image displays to align the object respectively the camera.

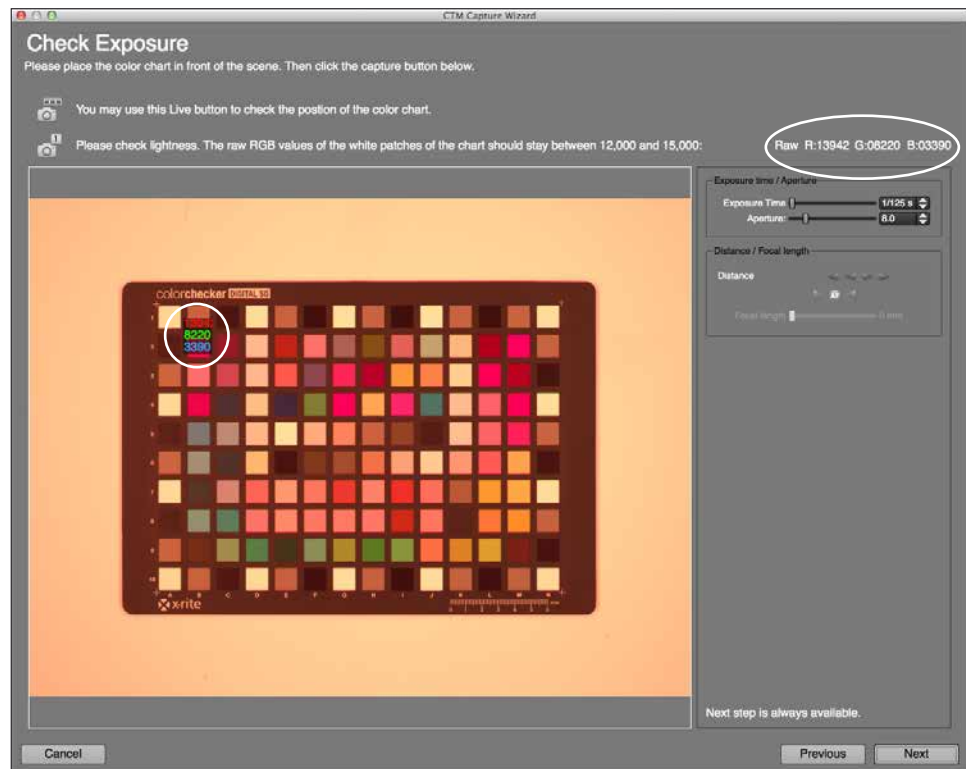
**2** With this function you create an image of the Color Checker.

**3** Exposure time and aperture can be set here depending on camera configuration.

## 5. The Software

### 4. Verifying the Image of the Color Checker

Based on this Color Checker image the exposure is determined. The RAW values of the red channel for all the white patches have to stay within the range between 12 000 and 15 000. If this is not the case, adjust exposure by changing flash output or by changing shutter speed and aperture. You should always pay attention to illuminate your object with an even repro lighting.



After reaching the above mentioned values and the light is appropriately set, click "NEXT" to open the dialog for capturing.

### 5. Creating Images of Color Checker

The position of the Color Checker has to remain unchanged while shooting these two images



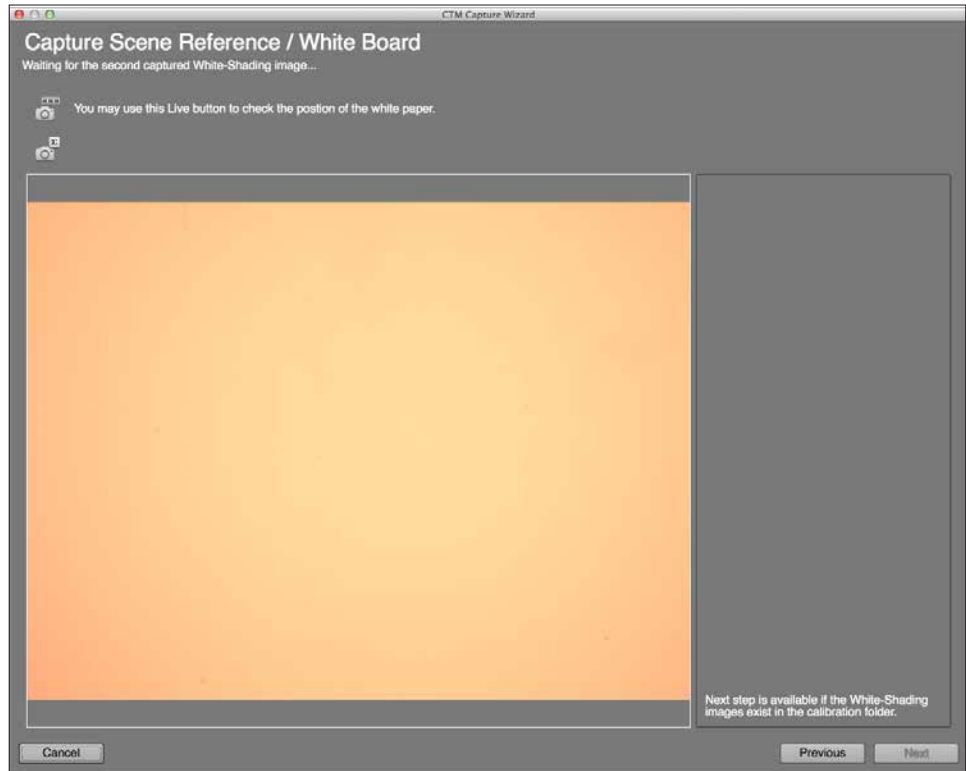
Click the release button and the images with the two filters are shot automatically in sequence.

## 5. The Software

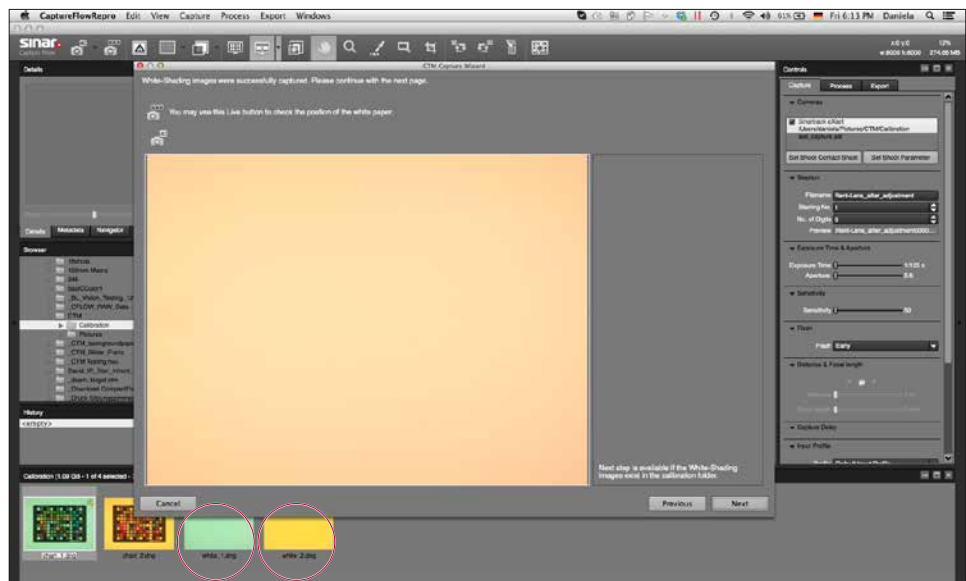
### 6. Create a White-Shading

For highest possible color accuracy all over the image area you now create a white shading. Use a white surface (paper, photo board etc.), which does not contain optical brighteners.

Use a white surface (paper etc.) without optical brighteners, so the result is not falsified.



The position of the white object can be easily checked by using "Live View". Same as point (3.1).

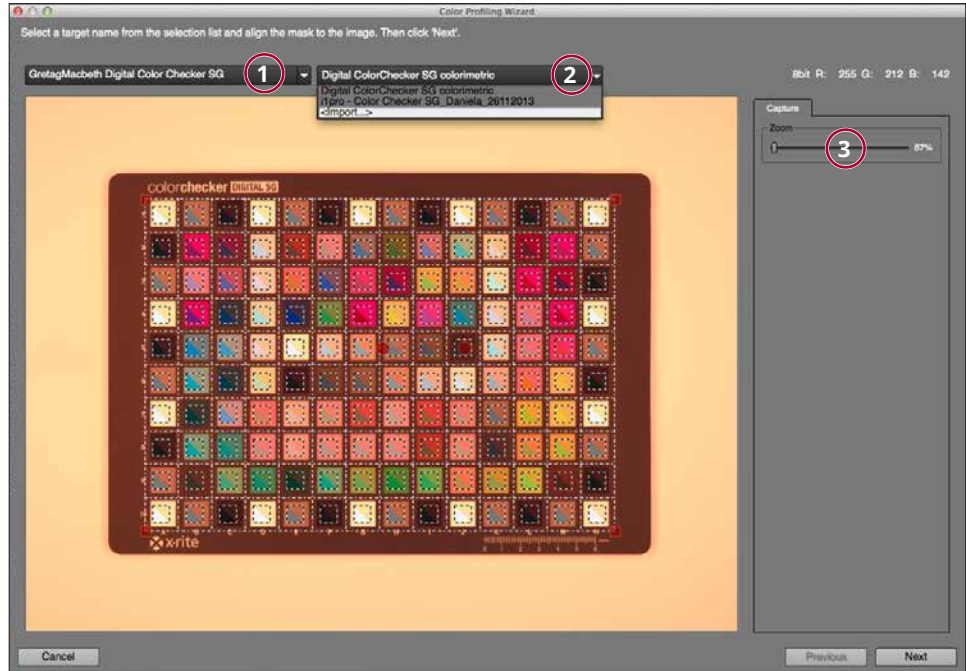


By clicking the release button the two images are taken and displayed in the contact sheet of the software.

## 5. The Software

### 7. Creating a Profile

Now you create a profile, this dialog is displayed:



Please note: The proper condition of the Color Checker is important for an accurate result.

**1**

#### Selecting the Color Checker

Here you select the Color Checker you are using. We recommend X-Rite's Color Checker SG. Please note that the condition of the Color Checker has a significant influence on your result.

**2**

#### Selecting the Reference File

Here you can select the reference file for the corresponding Color Checker. If you do not want to choose an averaged reference that may already have tolerances, you also have the possibility to import reference files measured by you. Given that these measurements were carried out correctly, even higher color accuracy can be achieved.

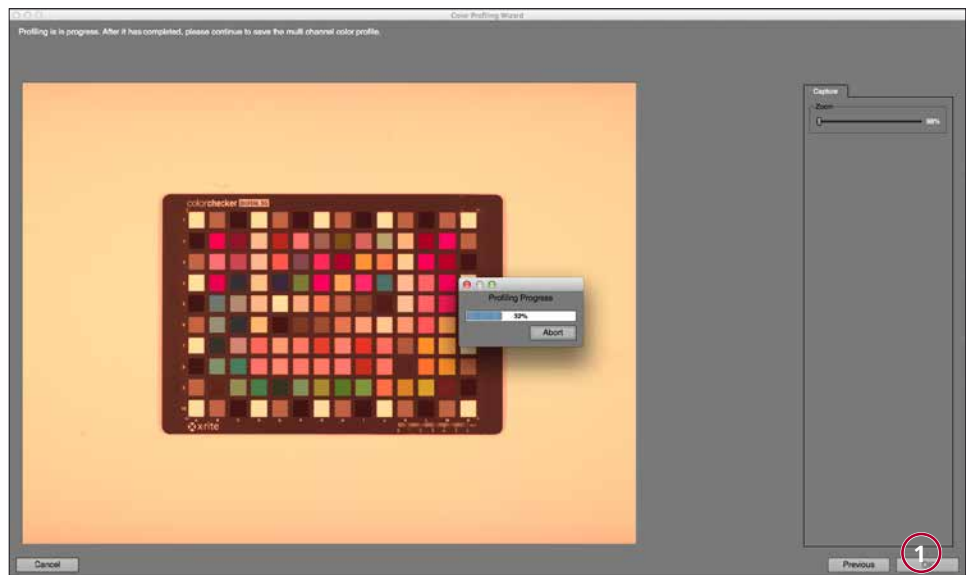
**3**

#### Control for Size Adjustment of the Mask

Upon selecting the Color Checker you are using, you now match its color arrays and the analysis mask. For this purpose, select the corners and properly place the mask on the Color Checker. None of the square color measuring patches should be placed on the black delimitation area.

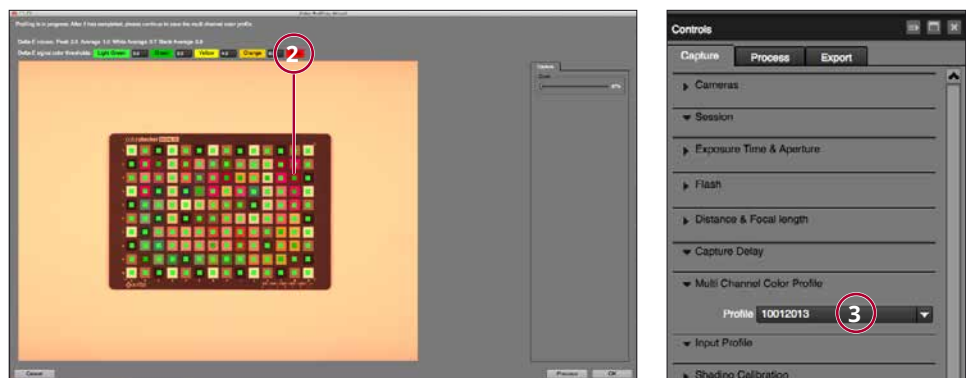
## 5. The Software

### 8. Creating and Evaluating the Profile



To let you decide if the profile meets your requirements, values are indicated as follows:

Click the "OK" button (1) to start the calculation of the profile.



Above the image, the deviations will be displayed in delta values (2). In the image, these deviations are marked in color to let you quickly detect which colors show the largest deviations from the nominal values.

The deviations of each individual color patch will be displayed by placing the cursor on the appropriate color. All stored multi-channel profiles can be selected in the process tab of the multi-channel plugin and can be applied to an existing CTM picture.

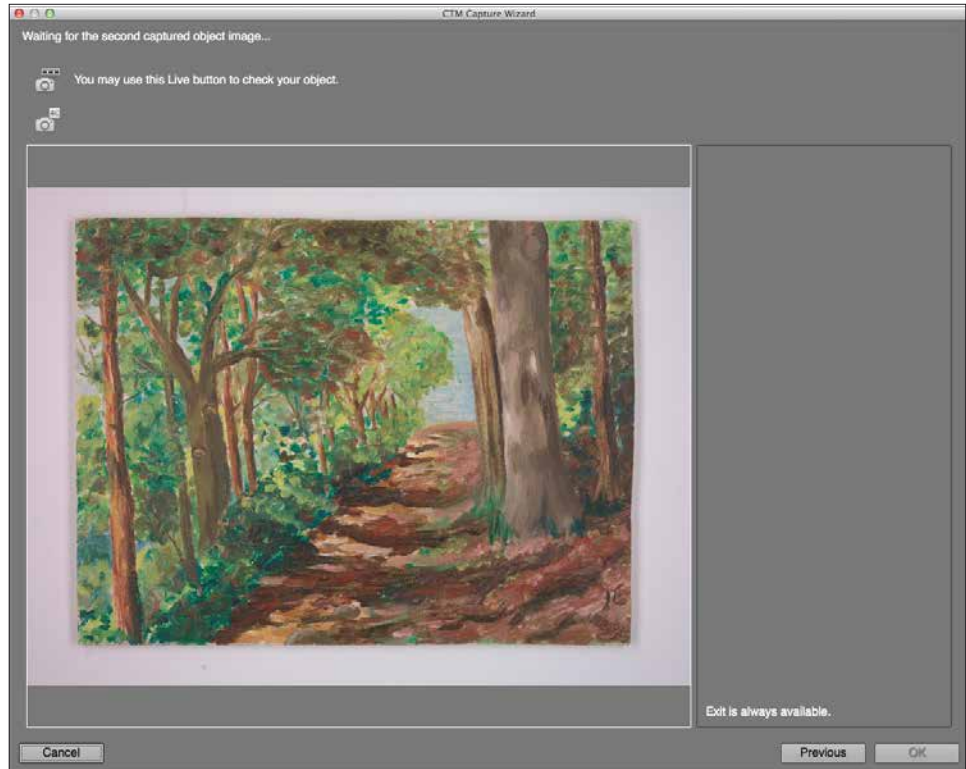
It is also possible to use existing images to create a profile. For this, please select the calibration files white\_1, white\_2 plus chart\_1 and chart\_2. The calibration process can be started by clicking the calibration icon in the tool bar or by typing the shortcut ctrl+i.

If you are satisfied with this profile, you can save it now. The created profile (3) is automatically activated for the following shots and appears in the Capture Flow rePro software. An already existing profile can also be selected here.

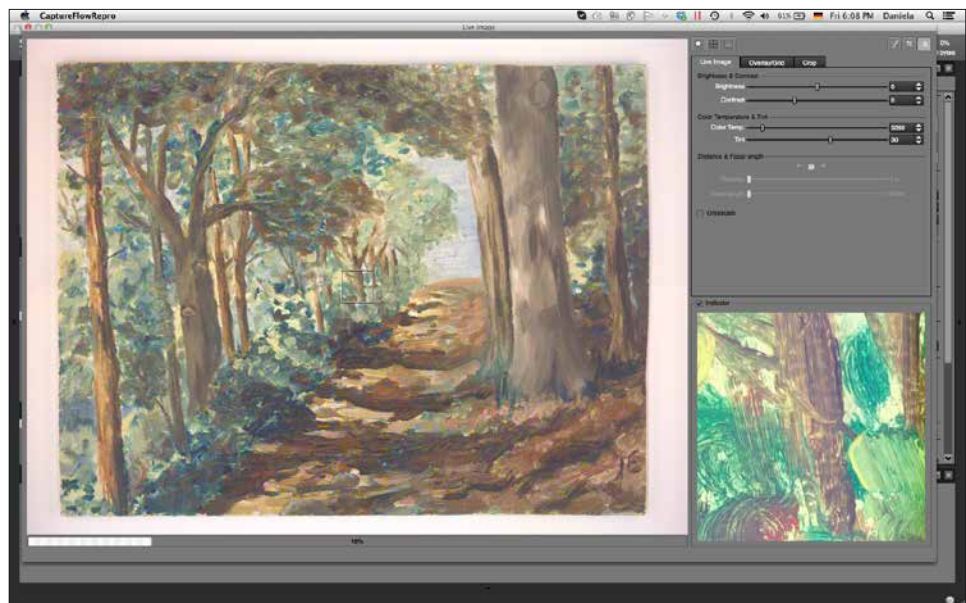
## 5. The Software

### 9. Shooting CTM Images

For the next step, shooting CTM images, please proceed as follows:



In LiveView mode you check the scene, define the image section and adjust focus.



## 5. The Software

### 10. Exporting Images

Two images are generated, both are needed and will be combined when exporting.

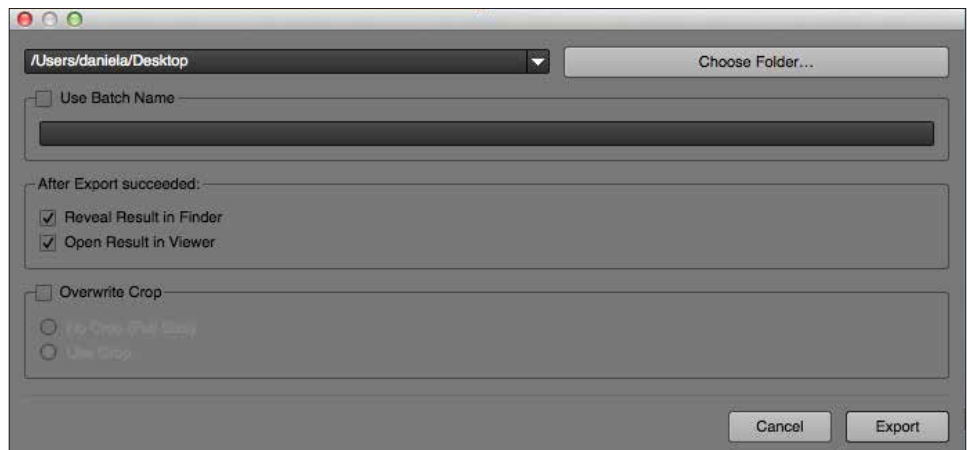


All shots you have created in this process are CTM components in DNG format and cannot be used as individual images. Therefore, the next and final step is exporting your images as TIFF files.

In order to achieve the desired quality when exporting, the corresponding profile for the images has to be applied in the plugin multi-channel.

For each image 2 shots are saved. It is sufficient to select one of the two and start the export process. Both shots are automatically used to generate the TIFF file for export.

For a batch processing select all the desired images in the folder and start export.



There is no need to select the shots of the Color Checker and the Scene Reference.



## 6. System Requirements/Specifications

Sinar CaptureFlow supports Apple Macintosh computers with Intel processors with Mac OS 10.8.5, 10.9 and higher.

### Minimum System Requirements

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Processor	Intel Prozessor
Physical RAM	10 GB
Hard disk space	10 GB + space for images
Mac OS	10.8.5 or higher

### Camera Configurations

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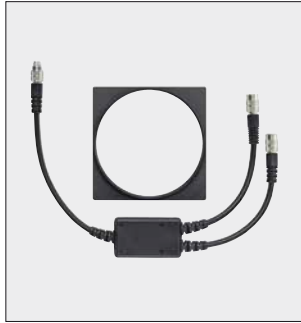
Sinar p3, Sinar rePro, Sinar rePro RC equipped with

- Sinar eShutter or
- Sinar CMV shutter system

Sinar eVolution75 H, eVolution86 H or eXact digital back with

- Clear Glass Filter

## 7. Accessories



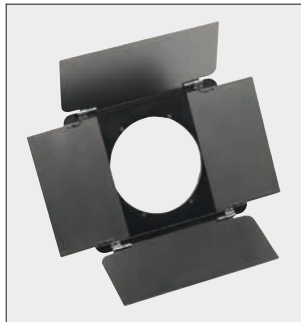
551.65.011  
Sinar CTM Slider/LC Shutter Kit



711.01.000  
Sinar parallel



452.16.010  
Tapered Bellows 4x5/100 as Lens Shade



493.23.041  
Lens Shade



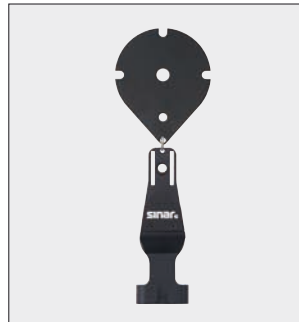
473.31.000  
Bellows Holder Clip



472.41.000  
Rod Holder 100



472.51.010  
Joint Rod 2



581.01.001  
Strain Relief



547.81.XXX  
Lens Adapter Ring

## 8. Sinar Core Products



Sinar p3



Sinar rePro



Sinar lanTec



Sinar arTec



Sinar eXact digital back



Sinar eShutter



### **Flexibility and Creativity**

For more than 65 years, Sinar is the leading manufacturer of view camera systems for professional photography. Sinar stands for exquisite camera precision made in Switzerland as well as for ergonomic design and unlimited creative freedom. All relevant elements for composing the image are available, like swings and tilts or horizontal and vertical shifts. The consistently modular products include digital capture devices, digital lenses, capture software and view cameras. Sinar customers profit from solutions designed as complete imaging systems supplied and supported from a single source. This system approach makes the difference and delivers superb image quality. In-house manufacturing, expert know-how in fine mechanics and interaction with specialized suppliers meet the highest demands and ensure best possible products with excellent long-term reliability. Continuous new and further developments guarantee the integration of modern and coming technologies into the flexible Sinar product range.