

Capture One 20



CULTURAL HERITAGE

User Guide

PHASE**ONE**

what the world's best photography is made of

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Introduction

Capture One Cultural Heritage is a special workflow application featuring exclusive tools expressly designed to aid museums, libraries, archives and other institutions when digitizing a wide range of materials.

These exclusive tools have been designed to simplify and automate highly repetitive tasks, saving time and improving productivity.

The Cultural Heritage features are slightly different on the Mac and Windows versions of Capture One CH 20:

- The Mac version includes all features except **Slipstream**.
- The Windows version includes **Slipstream** and all features except for the ability to save and load Presets with the Auto PPI functionality.

Note that this part of the Capture One help only covers the tools that are unique to Capture One CH. Please check the rest of the Online Help for instructions on how to use all the tools that are also available in Capture One Pro.

Activation of Capture One Cultural Heritage

Capture One Cultural Heritage is activated by special license keys available through Phase One Cultural Heritage Partners.

Once the Cultural Heritage license key is obtained, launch **Capture One**. You will now be presented with a license activation dialog. Type in the **License Code**, and the key will automatically be recognized as a Capture One CH license. Then type in your email address, and select **Get Profile**. If you have registered previously, you will be asked for your account password. If you are a new customer, please fill in the rest of the form. Complete this process by selecting **Activate**.

Getting a trial license of Capture One Cultural Heritage

All versions of Capture One 20 need a license key to run, this is also true for the 60 day trial. To obtain a trial license key for Capture One 20 CH, please contact your Phase One Cultural Heritage Partner.

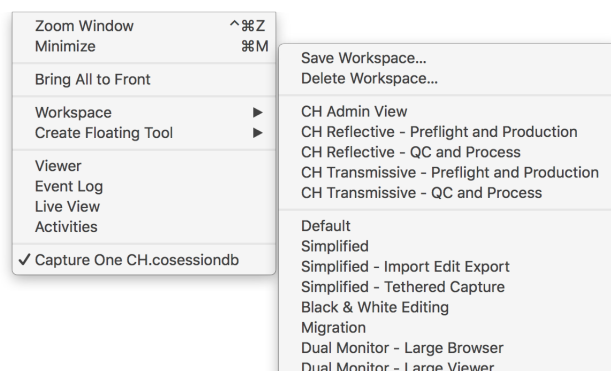
Workspaces

Capture One Cultural Heritage has a number of preset Workspaces to accommodate the specific workflow needs of professionals at the forefront of preserving our cultural heritage.

Selecting a Workspace

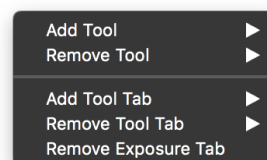
From the main menu go to **Window > Workspace** and select one of the following:

- **CH Admin View**
- **CH Reflective - Preflight and Production**
- **CH Reflective - QC and Process**
- **CH Transmissive - Preflight and Production**
- **CH Transmissive - QC and Process**



There are numerous possibilities to customize each of these workspaces. You can, for example, add any number of tools to a Tool Tab by right-clicking and choosing Add Tool and select the desired tool from the menu. It is recommended to avoid overcrowding a Tool Tab to maintain an efficient workflow.

It is also possible to rearrange the order of the Tool Tabs by pressing Cmd (Mac) and dragging the icon in the tab menu to the preferred position.



For more information on customizing workspaces, please visit the Capture One Help Site at: <https://support.captureone.com/hc/en-us/articles/360002491618-Customizing-user-interface>

Auto Crop

The Auto Crop tool enables automated cropping of images of flat materials, bound documents or roll film, either on capture or with an existing image. The tool is highly customizable with options to select a fixed size crop from a Primary variant (master image), and preselect document edges for straightening. The Auto Crop tool is particularly useful when used with Variants, allowing different crops of the same image. The Auto Crop tool is located by default in the **Production** and **QC** Tool Tabs in several CH Workspaces, or can be added to a Tab by using the **Add Tool** option.

Apply Auto Crop to single image

1. Go to the **Production** or **QC** Tool Tab, and locate the **Auto Crop** tool.

2. From the **Method** drop down menu select **Loose Material** for various materials (photos, documents, objects etc.) or **Bound Material** for bound documents (like a book). This selects the most appropriate algorithm for the subject. Note that the **Fixed Size** methods are covered later.

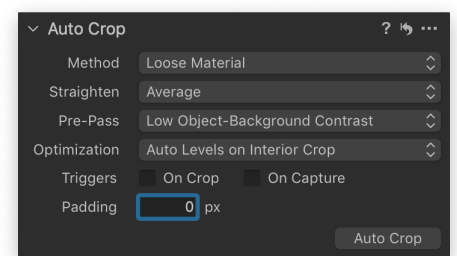
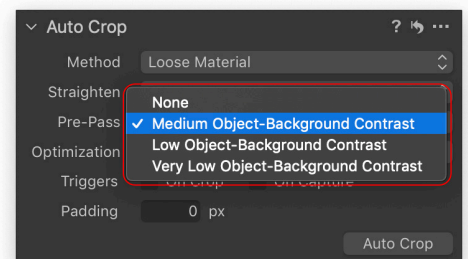
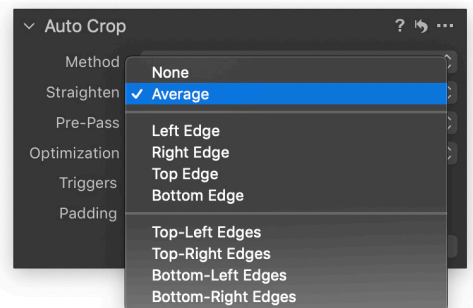
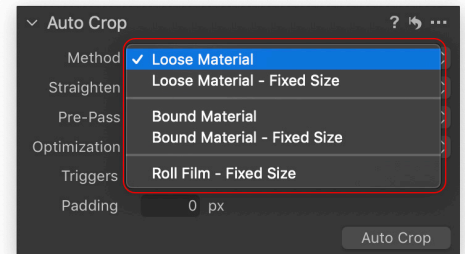
3. Click on the **Straighten** drop-down menu and choose the edge to best align the crop, or select **Average** based on all four edges or if there's no straight edge. Choose **None** to disable the feature.

4. The **Pre-Pass** option helps the crop tool to better distinguish between the subject and the background if the difference is very small. For example, if a white paper is lying on a white background, you should choose or **Low Object-Background Contrast** or even **Very Low Object-Background Contrast**. If the difference between the object and the background is well-defined, **None** should be selected.

5. With **Optimization** it is possible to have Levels adjusted automatically after the auto crop, for example, to enhance the legibility of faded text on a paper or to automatically adjust a black and white negative based on the range of tone in the image. This is done by choosing **Auto Levels on Interior Crop** in the drop-down menu. Note that the adjustment is based on a frame that is 10% smaller than the actual crop to avoid being influenced by a white or black frame. You should also be aware that the way the Levels are automatically adjusted depends on the settings in Preferences > Exposure. Please see the topic **Change the Channel** Mode later on. Select **None** to disable this feature.

6. Insert a positive or negative - (minus) value for the margin in pixels in the **Padding** box. Note that a value must be present, so if no padding is required, type 0 (zero).

7. Press **Auto Crop** at the bottom of the dialog, or select the Crop cursor from top Tool Bar or from the Crop Tool and make the selection. If the **On Crop** option is selected, the Auto Crop will be applied within the area that is manually cropped. This method can be very useful to help isolate objects that are otherwise difficult to recognize automatically by the Auto Crop feature.



8. If fine-tuning is required, click the **Auto Crop** button a second or third time as this will attempt to trace the edges with a tighter margin. You can also adjust the crop manually by selecting the Crop cursor (if not already selected) and then click inside the crop area of the image requiring adjustment and drag into place.

Notes:

- Applying the Undo command in the Main tool bar will cycle through previous steps. Clicking the **Reset Crop** button will revert to the original un-cropped image.
- The **Loose Material** setting selects the largest object in the image.
- The Auto Crop algorithm is designed to recognize rectangular objects and may not work with other shapes; for those objects, you may use a rectangular card or paper as a frame.

Apply Auto Crop to multiple images (Fixed Size)

The workflow is similar to working with one image (see above), however, there are additional steps as the user must specify a master crop as well as the number of images to apply the master crop to.

1. Go to the **Production** or **QC** Tool Tab, and locate the **Auto Crop** tool.

2. From the **Method** drop-down menu select **Loose Material - Fixed Size** for same size material, **Bound Material - Fixed Size** for books and bound documents, or **Roll Film - Fixed Size** for film.

3. Click on the **Straighten** drop-down menu and choose the edge to best align the crop, or select **Average** based on all four edges or if there's no straight edge. Choose **None** to disable the feature.

4. The **Pre-Pass** option helps the crop tool to better distinguish between the subject and the background if the difference is very small. For example, if a white paper is lying on a white background, you should choose or **Low Object-Background Contrast** or even **Very Low Object-Background Contrast**. If the difference between the object and the background is well-defined, select **None**.

5. With **Optimization** it is possible to have Levels adjusted automatically after the auto crop by choosing **Auto Levels on Interior Crop** in the drop-down menu. Note that the adjustment is based on a frame that is 10% smaller than the actual crop to avoid being influenced by a white or black frame. Select **None** to disable this feature.

6. Select the **Crop** cursor from Cursor Tool bar or from the **Crop Tool** and make the selection. Note that it is not possible to click on the **Auto Crop** button when the selected **Method** is a **Fixed Size**. To use the Auto Crop functionality, choose the **Loose Material** or **Bound Material** method temporarily.

7. Insert a positive or negative - (minus) value for the margin in pixels in the **Padding** box. Note that a value must be present, so if no padding is required, type 0 (zero).

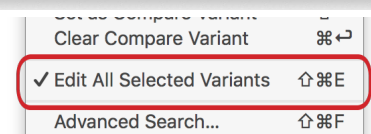
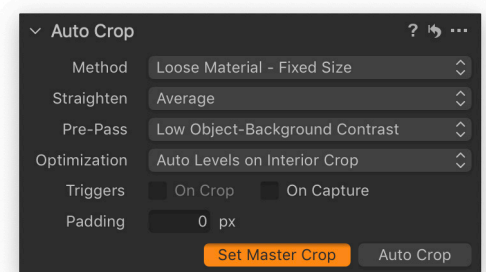
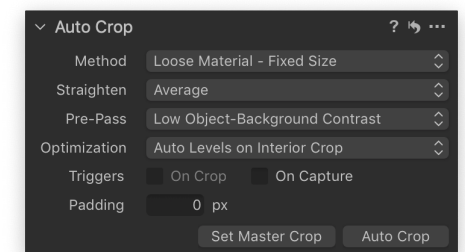
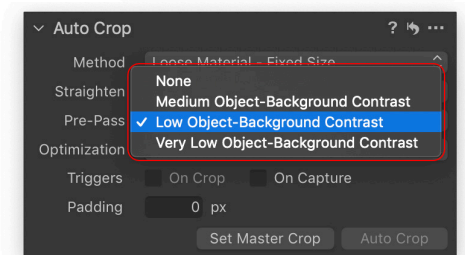
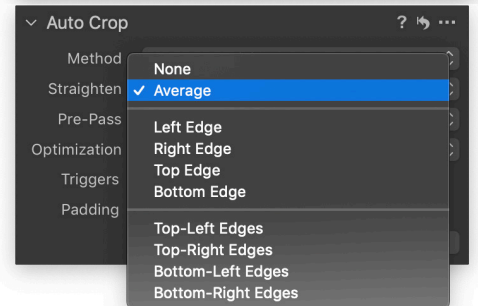
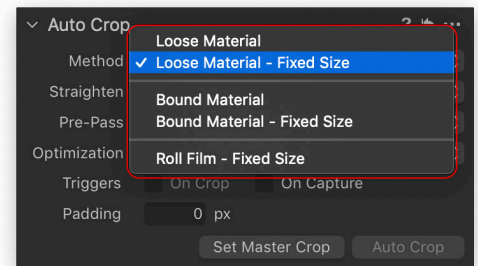
8. Once the crop is done, click on **Set Master Crop**.

9. Press the Cmd (Mac) key and select the images to apply the master crop to.

10. Go to the main menu, select the **Edit** menu and make sure that **Edit All Selected Variants** is enabled.

11. Press **Auto Crop**.

12. If fine-tuning is required, press the **Auto Crop** button a second or third time, or adjust the crop manually by using the **Crop** cursor.



Notes:

- **Straightening** is supported by all Auto Crop **Methods**, within the range of +/-5 degrees.

Tip: Holding the Shift key while applying a crop will override any previous selection.

Film scanning tips:

- The new method is a Fixed Size method, much like the two other fixed size methods. Therefore, it requires setting a primary crop on an image before running the auto crop.
- The film scanning method requires the primary crop to have the exact size of the film frame to be cropped.
- It is important to set a primary crop in an image with the film placed in a “recurrent” position. In other words, if most of the images to be auto cropped have the film horizontally centered in the image, the primary crop should be chosen among those rather than among the few ones with a non-centered film frame.
- The method is optimized for the landscape case: the film strip is placed in landscape, with sprocket holes – if any – located at the top and bottom of the image in two horizontal strips.
- The film scanning method is optimized for auto cropping of positive images: if the films are negative, the “Film Negative” mode in the Base Characteristics tool should be selected before auto cropping. Though some good auto crop results can be achieved anyway.
- As usual, good exposure and contrast in the image help the algorithm perform at its best.

Auto Crop confidence feedback for Roll Film

If **Roll Film – Fixed Size** for film scanning is chosen as the Auto Crop Method, Capture One Cultural Heritage will automatically estimate how successful the auto crop was for each image. This confidence feedback is indicated by three different Color Tags, which is assigned to each variant.

A **Green** color tag means that there is high probability of a successful auto crop. **Yellow** indicates a medium confidence that the auto crop was done correctly, while **Red** denotes a low or very low confidence. Note that the primary image with Set Master Crop will be tagged with a **Blue** color.

This feature is meant to make it easier and faster to review whether the auto cropping was done correctly. A useful workflow would be to filter the auto cropped variants by color tag. This is done by going to the main menu and select **Edit > Select By > Color Tag** and then either choosing Red, Yellow or Green.

The images with a high confidence level (Green) can then be reviewed fast with less scrutiny than those with a Red color tag. If fine-tuning is required, press the **Auto Crop** button again, or adjust the crop manually with the Crop cursor.

Note that the assigned confidence levels are estimates so it is entirely possible that an image with a Red color tag have been auto cropped correctly, while one with the Green tag could be improved upon.

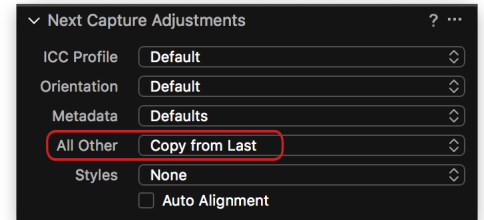
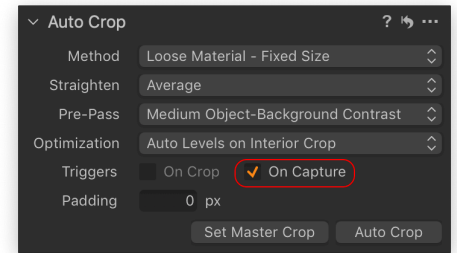


Note: In case of significant frame changes, cropped variants will likely result in medium confidence crops (Yellow tag). The amount of yellow tags can be greatly reduced if a new primary crop is set whenever film size changes significantly.

Apply Auto Crop on capture

Capture One Cultural Heritage can crop automatically on Capture, potentially saving time and reducing unnecessarily repetitive actions.

1. Go to the **Production** or **QC** Tool Tab, and locate the **Auto Crop** tool.
2. Check-mark the **On Capture** option at the bottom of the dialog.
3. In the **Next Capture Adjustments** tool, located in the **Production** tool tab, make sure that the **All Other** drop-down menu is set to **Copy from Last**.
4. Capture the first image and follow the procedure for multiple images on page 5, from step 2 to step 8.
5. Now that the function is setup and enabled, any images captured will have the crop applied automatically after all other settings have been applied.



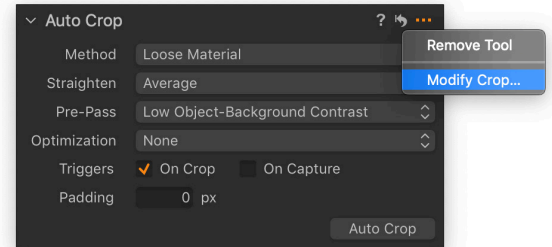
Tip: The Auto Crop can also be implemented by setting up a keyboard shortcut, see here for further details: <https://support.captureone.com/hc/en-us/articles/360002494558-Editing-keyboard-shortcuts>

Modify Crop

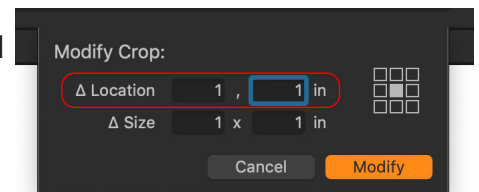
It is possible to change both the position and the size of a crop or multiply cropped selections after they have been applied. This is done with the Modify Crop feature, which is especially useful when multiple cropped selections must be changed at once.

1. If the goal is to modify the crop on multiple images, press the Cmd (Mac) key and select all the images that need to be modified.
2. Go to the main menu, select the **Edit** menu and make sure that **Edit All Selected Variants** is enabled. If this option is not enabled, only the Primary selected image will have the crop changed.

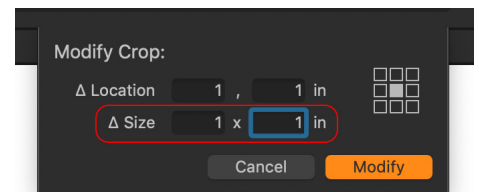
3. Click on the option icon in top-right corner of the **Auto Crop** tool or the **Crop** tool and select **Modify Crop...**



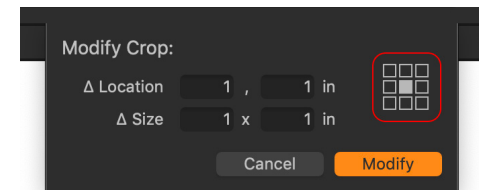
4. To change the location of the crop, enter a value in the two **Location** fields, the first handles a horizontal move and the second a vertical move. Note that positive values will move the crop right and downwards, while negative values (adding a minus to the value) will move the crop left and upwards.



5. To change the size of the crop, enter a value in the two **Size** fields, the first changes the width and the second the height of the crop. Positive values make the crop larger, while negative values will make it smaller.



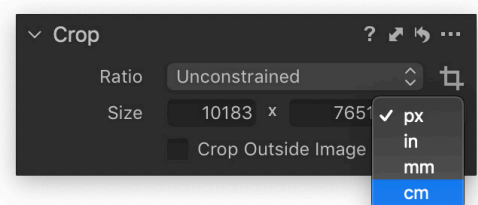
6. Choose where the current crop should be anchored when changing the size of the crop by clicking on one of the nine points in the **Anchor box**. By default, the changes will be done from the center out. By choosing the top-right corner, for example, it is possible to make sure that all changes to the size happen in the opposite direction, e.g. to left side and bottom of the crop.



7. Click on **Modify** to apply the changes.

Notes:

- It is possible to use a combination of positive and negative values for both Location and Size. For example, the values -3 and +3 in the Size fields will reduce the width of the crop by 3 cm while expanding the height by 3 cm.
- The size unit in the Modify Crop Tool mirror what is currently selected in the size unit drop-down menu in the Crop Tool. In the example above, cm is the chosen unit.
- Depending on the settings in the selected Process Recipe, the size unit drop-down menu in the Crop Tool might be locked to the unit chosen in the Process Recipe Tool in the Basic tab. Change the unit under Scale or select Fixed in order to unlock the size unit drop-down menu in the Crop Tool.



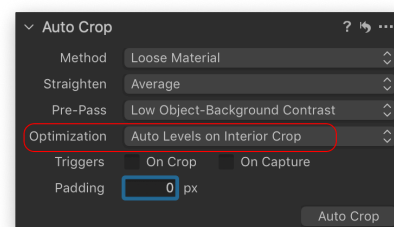
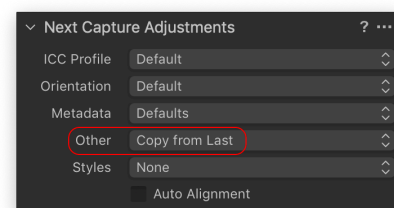
Multi-Crop Feature

The Multi-Crop feature greatly improves productivity as it allows multiple images with a specific crop each to be automatically created from a single capture. This feature is particularly valuable with high volume archives where multiple crops can be made in the same position, such as when scanning film (particularly small format), or when digitizing postcards or similar. With books, for example, both pages can be cropped into two separate images, leaving the original capture complete with an Object Level Target (OLT).

The resolution of the original capture will obviously dictate the number and size of crops, but the feature can greatly speed up a workflow. Note that this feature needed a script to run on earlier versions, but this is no longer the case.

Applying Multi-Crop to multiple images

1. Connect the interface cable from the Phase One digital back or iXG camera and make an initial capture.
2. Select this primary image in the thumbnail **Browser**, right-click and select **New Variant** or use the keyboard shortcut F2.
3. Add a crop as desired on the variant with the Crop cursor.
4. Repeat the process from step 2 for each crop of the subject that is required. If there are eight postcards per capture, for example, you will need eight variants with each their specific crop. The original image (Primary) can be kept unaltered for reference, with the OLT.
5. In the **Next Capture Adjustments** tool, located in the **Production** Tool Tab, make sure that **Copy Variants from Last** is selected in the **All Other** drop-down menu. If the cropped positions should be copied from another set of selected variants, choose **Copy Variants from Primary** instead.
6. Hold the Cmd key (Mac) and select each of the variants where the crop position should be copied from.
7. Make sure the **On Capture** box is unchecked (deselected) in the **Auto Crop** tool, located below in same Tool Tab.
8. Capture another image. The same number of variants are now duplicated with their specific crop positions alongside the new capture (primary image). Manual fine-tuning of crops is possible if required. Click on the selection with the **Crop** tool and adjust to suit.



Note: Raw files are not duplicated, the different variants are instead virtual copies with their own distinct adjustments that take up only a few kilobytes of disk space.

Tip. When combined with Styles, this feature can be used to automate the application of preset adjustments to new captures, for example, when applying one of the **Cultural Heritage Film Scanning** Styles.

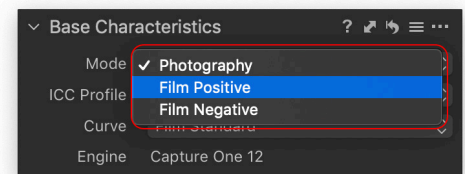
Film Reproduction

The Film Reproduction Mode drop-down menu is used for the conversion of positive and negative black & white and color film as well as other transmissive materials. It applies automatic conversion adjustments and employs the appropriate film curve characteristics based on the selected ICC color profile prior to the user's manual adjustments.

The Film Reproduction mode is located in the **Base Characteristics** tool in the **Pre-Flight** Tab, the **Tone and Color** Tab and **QC** Tab, depending on the chosen CH workspace. Like all other tools, it is available in all Tabs, by using the Add Tool option.

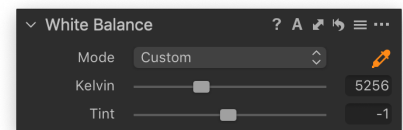
Invert Negative or Positive Film

1. From the **Base Characteristics** Tool, click on the **Mode** drop-down menu and change the default operating mode from **Photography** to **Film Negative** or **Film Positive**, depending on the film type captured.



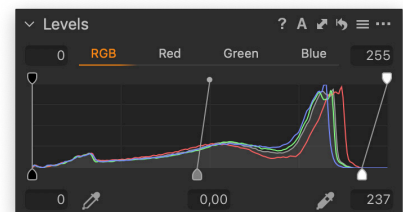
2. Change the **Channel Mode** for **Auto Levels** in the preferences under the **Exposure** tab to use the individual **Red, Green and Blue Channels Mode** instead of the default **RGB** mode. See **Change the Channel Mode** on page 15 for full instructions.

3. Apply **White Balance** adjustment, typically using the neutral frame.



4. Set a crop using either the Crop Tool or the Auto Crop Tool.

5. Apply **Auto Levels**. Note that when using the Auto Crop Tool it is possible to have Levels adjusted automatically after the auto crop by choosing **Auto Levels on Interior Crop** in the **Optimization** drop-down menu.



Tip. If the capture includes a large unshielded area of the light-box, crop individual frames before applying levels adjustments.

Film Scanning Styles

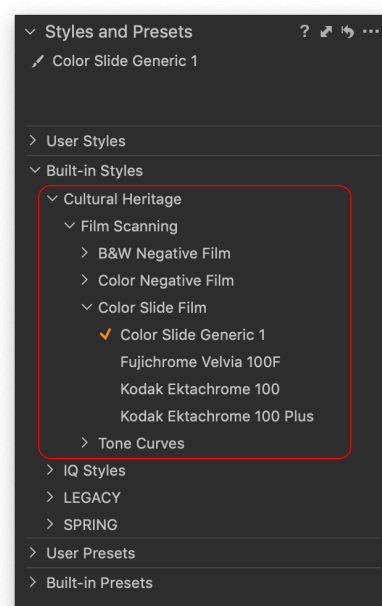
In addition to the Film Reproduction modes, Capture One Cultural Heritage offers built-in Styles crafted specifically for Film Scanning that can accommodate B&W and color transparencies and negatives as well as other transmissive materials. Using Styles can optimize workflow, save time and greatly increase productivity.

Specific Styles can automatically invert the film curve and apply image parameters such as noise reduction, sharpening, levels and contrast to suit the specific film type.

All adjustments applied are non-destructive and when used with the **Next Capture Adjustments** Tool, Capture One Cultural Heritage generates both a primary (master/original) file of the film negative, as well as an inverted variant for convenient viewing.

Apply Film Scanning Style

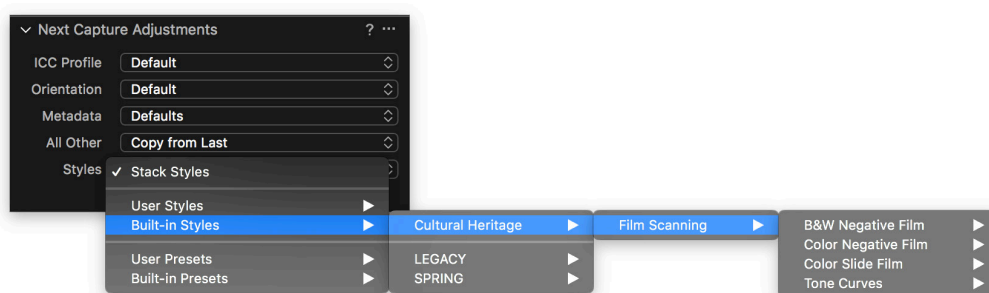
1. Depending in the chosen workspace, navigate to either the **Adjustments** Tab or **Tone and Color** Tab and locate the **Styles and Presets** tool.
2. Double-click on **Cultural Heritage** and then on **Film Scanning** to view the different styles. Double-click on either **B&W Negative Film**, **Color Negative Film** or **Color Slide Film** and then finally select the most appropriate Film type.
3. Make further adjustments to exposure, contrast, brightness and white balance as required.



Apply Film Scanning Style on capture

Capture One Cultural Heritage can apply Styles automatically on Capture, saving time and greatly improving productivity.

1. In the **Next Capture Adjustments** tool, located in the **Production** Tool tab, make sure that the **ICC Profile** is set to **Default**.
2. From the **Styles** drop-down menu, select **Built-in Style > Cultural Heritage > Film Scanning** and then either **B&W Negative Film**, **Color Negative Film** or **Color Slide Film** and finally select the most appropriate Film type.



3. Connect the interface cable from the Phase One digital back or iXG camera and make a capture. The resulting image will be automatically converted for convenient viewing.

Tip: Combine the Auto Crop **On Capture** feature to isolate specific frames, or use the Dual-Crop feature to separate two or more frames while maintaining the original capture.

Auto Levels Clipping Thresholds

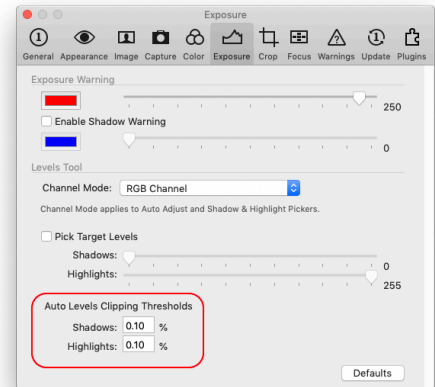
When using the Auto Levels feature, Capture One Cultural Heritage by default sets a 0.10% threshold for Shadows and Highlights. This allows a small number of pixels to clip in one or more color channels. For example, a low number of small specular highlights can be allowed to clip without reducing the overall contrast and dynamic range of an image. If the defaults need to be altered, the settings may be adjusted from the Preferences panel.

Adjust Thresholds

1. From the Main menu, select **Capture One > Preferences**. The Preferences dialog opens.
2. Click on the **Exposure** tab and locate the two **Auto Levels Clipping Thresholds** fields at the bottom of the window.
3. Type in the required values and close the preferences dialog.

Notes:

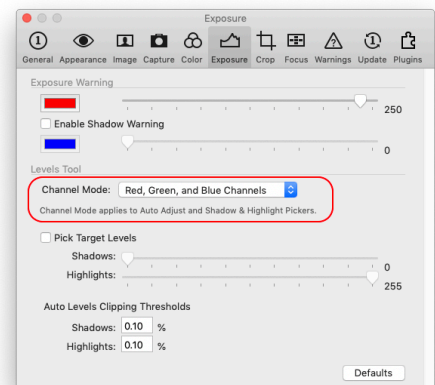
- The range is adjustable between 0-10%, although in practical terms it's unlikely that anything approaching 1% and above would be necessary.
- The Auto Levels Clipping Thresholds deliver the specified percentage of clipped pixels precisely.



Change the Channel Mode

When using the Auto Levels feature in conjunction with conversions of positive and negative black & white and color film, it will give improved results if the Channel Mode is set to using the Red, Green and Blue Channels. This is particularly true in regards to color accuracy and is recommended for film reproduction.

1. From the Main menu, select **Capture One > Preferences**. The Preferences dialog opens.
2. Click on the **Exposure** tab and select **Red, Green and Blue Channels** from the **Channel Mode** drop-down menu.
3. Close the preferences dialog.



L*A*B* Color Readout

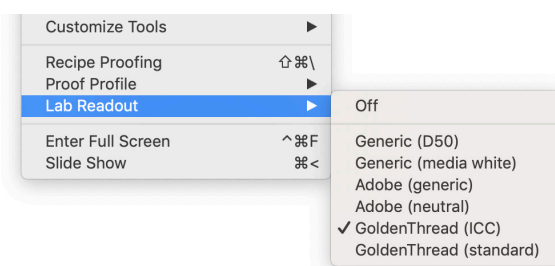
Capture One Cultural Heritage can display multiple L*a*b* color readouts for precise measurement and analysis of colors depicted on Object Level and Device Level targets. The CIE L*a*b* color space is a popular choice for use in measuring reflective and transmissive objects and is specified in both the FADGI 4-Star and Metamorfoze imaging guidelines.

Apply multiple L*a*b* color-readouts

Capture One Cultural Heritage provides an option to display multiple L*a*b* color readouts in various locations in the image. For Capture One to display L*a*b* readouts, the Output Profile selected must adopt an RGB color space. This should be confirmed first, otherwise no readout will be displayed.

1. From the main menu select **View > Proof Profile**, confirm or select the relevant RGB output profile, for example **Adobe RGB** or **sRGB**.

2. From the main menu select **View > Lab Readout** and choose the appropriate L*a*b* conversion from the following options **Generic (D50)**, **Generic (media white)**, **Adobe (generic)**, **Adobe (neutral)**, **GoldenThread (ICC)** and **GoldenThread (standard)**. If you're using one of the GoldenThread targets, you should take care to select the appropriate readout option.

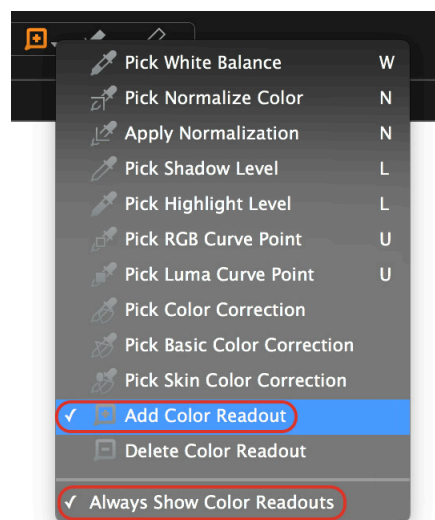
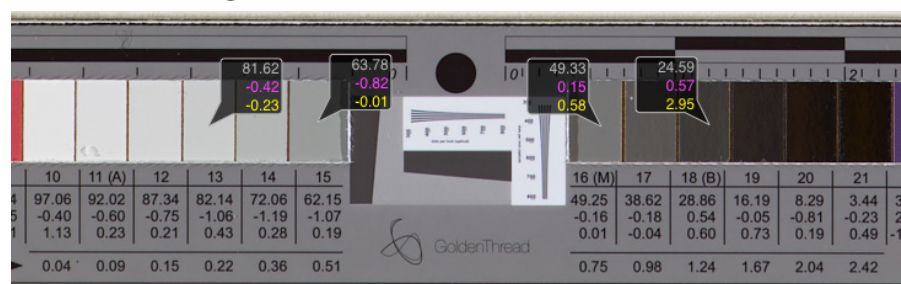


3. Connect the interface cable from the Phase One digital back or iXG camera and make a capture, or select the intended image from the Browser.

4. Choose the **Add Color Readout** picker from the Cursor tools.

5. Select **Always Show Color Readouts** from the Cursor tool drop-down menu. Readouts will now remain on screen even when another tool is selected.

6. Click on the relevant color patch in the Object Level Target or Device Level Target. You can add more than one.



7. To delete a readout, select **Delete Color Readout** from the Cursor tool drop-down menu and click on any readouts that you want to remove. Alternatively, position the readout cursor tool above the readout and hold the Alt key while clicking to delete it.

Tip. Hold down shift while deleting a readout will remove all readouts at once.

Please see the **Color Reproduction Guide for Cultural Heritage** for more information. You can find it at <https://www.phaseone.com/en/Products/Cultural-Heritage/Resources/White-Papers.aspx>

Specialized ICC Input Profiles

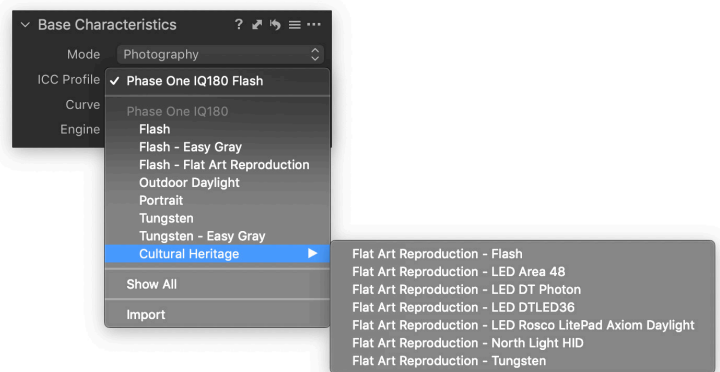
Capture One Cultural Heritage ships with a number of ICC input profiles specifically for Phase One digital backs and various light sources, particularly flash and tungsten. All recent digital backs have a profile specifically optimized for Flat Art Reproduction using flash.

Most of the Phase One digital backs and cameras have additional ICC profiles that are optimized to be used in combination with the LED lights supplied with the DT RGC180, DT RG3040, DT Atom, and DT BC100 reprographic solutions. These profiles have been designed to match the specifications of common reproduction standards such as those specified by Metamorfoze and FADGI.

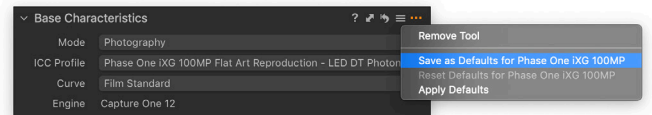
Select an ICC Profile

The ICC profile is selected via the **Base Characteristics** tool, which is located under the **Pre-Flight** Tool Tab, **Tone and Color** Tab or **QC** Tab depending on the chosen Workspace. Capture One automatically identifies the Camera make and model and applies an ICC Flash profile by default.

1. Locate the **Base Characteristics** tool.
2. From the **ICC Profile** drop-down menu, select the appropriate profile for the Phase One back from the list. Note that the specialized profiles for LED light etc. are found in a sub-menu under the **Cultural Heritage** menu item.



Tip. The chosen ICC Profile can be set as the default (along with the Mode and Tone Curve). Click on the Action menu [...] icon in the top-right corner, and select **Save as Defaults for Phase One IQXXX**.

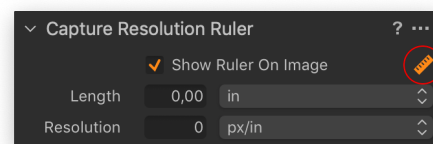


Resolution Ruler

The **Capture Resolution Ruler** can be used to confirm the resolution of images after capture, as well as when performing test shots using the composition mode. The **Capture Resolution Ruler** is located in the Main Tool Bar and the **Pre-Flight** and **QC** tabs in several CH workspaces. If it's not visible, use the Add Tool option to add it to any Tool Tab.

Measure image resolution

1. Capture an image with an object level target displayed, such as that supplied by Golden Thread.
2. Locate the object level target using the **Pan** cursor and then double-click in the **Viewer** to display the image at 100% for improved viewing and accuracy.
3. From the **Pre-Flight** Tool Tab or the **QC** Tool Tab, locate the **Capture Resolution Ruler** panel and click on the Ruler icon. It turns orange when active. Note that the Capture Resolution Ruler tool is also available from the main Tool Bar.
4. Click and drag on the object level target's ruler as if to measure it with the cursor, taking care to align the **Capture Resolution Ruler** cursor's end-points with the target ruler's scale. For higher accuracy, measure the whole of the object level target's ruler, if possible. Click and drag either end of the ruler's end-points to reposition and improve precision, if needed.
5. Select the target ruler's unit of measurement for **Length** and then select the unit of measurement for **Resolution** (for instance, **px/in** for **PPI**) from the relevant drop-down menus.
6. Type in the value of the target's ruler measured in the **Length** field, then click inside the **Resolution** field and the measured figure will be displayed. The length and resolution will also be shown on the resolution ruler in the Viewer.



Notes:

- If **px/in** is chosen as the unit of measurement, Capture One automatically converts any metric measurements for length in the Resolution field.
- Reset the **Capture Resolution Ruler** from the Action [...] button in the top-right corner of the tool by selecting **Reset Tool**.

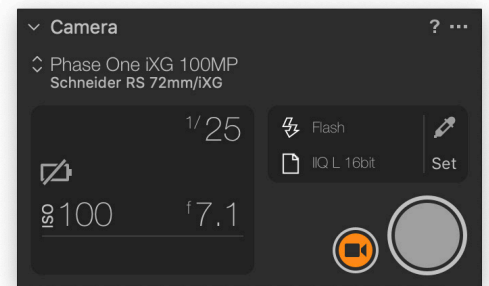
Tip. Many tools are context sensitive in Capture One; right-click over the ruler cursor in the Viewer to activate the **Capture Resolution Ruler** tool.

Using PPI Assist with the Camera Focus tool

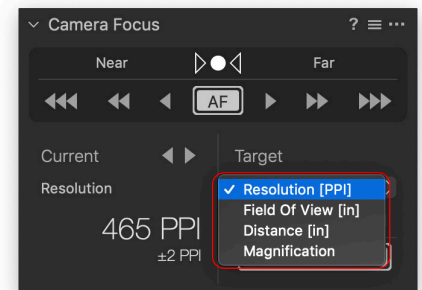
The PPI Assist feature will let you specify a target resolution, and the Camera Focus tool will then calculate how much the iXG camera needs to move relative to the subject to achieve the desired resolution. This feature requires an iXG camera because it is capable of measuring the distance to the subject. In addition to entering a target resolution, you can also enter a desired magnification, image dimension (Field of View) or distance to the subject.

Note that the PPI Assist feature requires an iXG camera with firmware version 3.06.4 or later installed.

1. Attach the iXG camera and activate live view by clicking on the **Live View** button in the Camera tool.

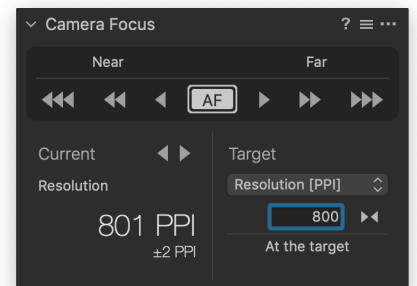


2. Click on **AF** in the Camera Focus tool to let the iXG camera autofocus on the target.

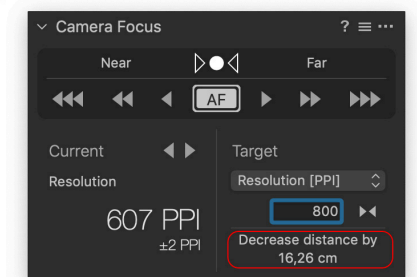


3. Select the desired **Target** unit from the drop-down menu, choosing either **Resolution (PPI)**, **Field of View** (image dimension), **Distance**, or **Magnification**.

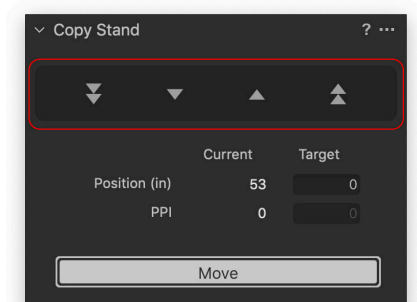
4. Enter the **Target** value in the field and click on the button next to it to apply the value.



5. The Camera Focus tool will now indicate how far the camera has to move on the copy stand to reach the desired target resolution.



6. Use either the Copy Stand tool to move the camera or operate the camera position manually on the copy stand.



7. Once you have moved the camera, focus on the subject by clicking on the **AF** icon on the Camera Focus tool.

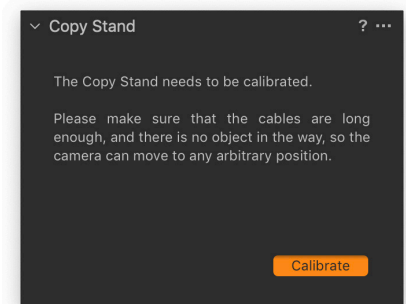
8. The Camera Focus tool will now report if the desired target resolution has been achieved with the message **At the Target**. If you still need to adjust the camera's position, do so as in step 6, and remember to autofocus again.



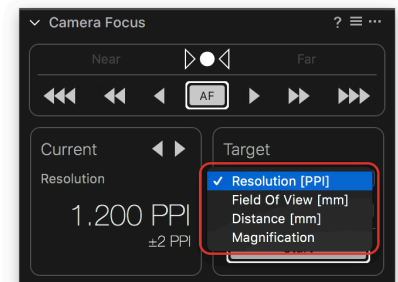
AutoPPI

If you have the iXG camera installed on a specialized copy stand – either a Phase One AutoColumn or a Cambo DT AutoColumn - the process will be fully automated as the stand will be able to move the camera the required distance.

The copy stand needs to be calibrated for the AutoPPI feature to work correctly. Click **Calibrate** in Copy Stand tool, and the camera arm on the column will start moving.

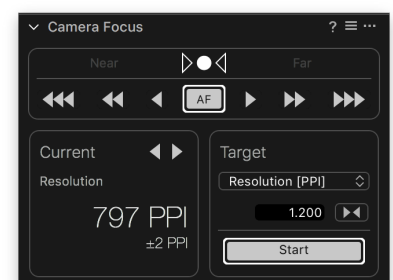


Select the desired Target unit from the drop-down menu, choosing either Resolution (PPI), Field of View (image dimension), Distance, or Magnification.



Enter the Target value in the field and click on the button next to it to apply the value.

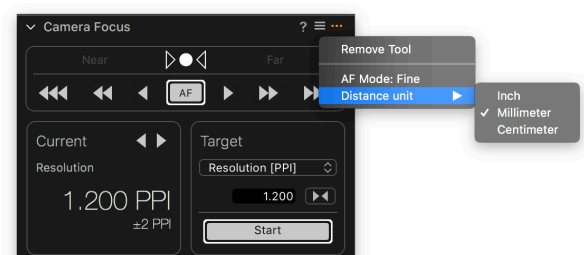
Click on Start. The AutoPPI feature will autofocus on the target, and once focus is achieved, the camera will move automatically on the copy stand to reach the desired resolution. Finally, the camera will autofocus on the target.



You can double check whether the **Target Resolution** is indeed achieved by comparing it to the info under **Current Resolution**. If that isn't the case, click on the button next to the Target value, then click on **Start**.

Notes

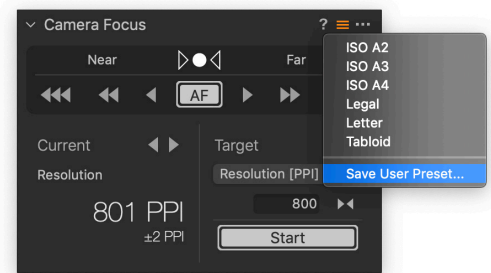
If you select either **Field of View** or **Distance**, you can change the units by clicking on the options icon, selecting **Distance** unit and choosing either **Inch**, **Millimeter** or **Centimeter**.



If you need to reuse a certain target resolution, it can be saved for later use as a Preset. Click on the Preset icon and choose **Save User Preset...** Then save the value. When you select the Preset later, it will be entered into the Target field.

Make sure that the camera isn't positioned too close to the subject. It is better to start with the camera near the top of the copy stand than vice versa.

It is recommended to position the orange autofocus frame in live view so it covers a high-contrast area as well as being as close to the middle of the subject as possible.



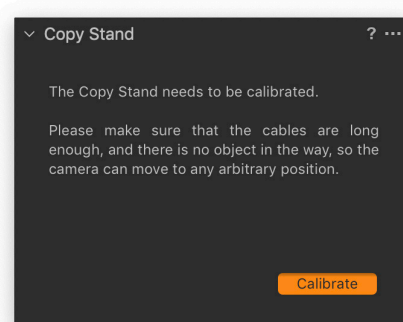
Using PPI Assist with the Copy Stand tool

The Copy Stand tool can be used to automatically move the camera cart on a connected copy stand until a chosen target resolution is obtained. This feature is only supported on Cambo/DT AutoColumn stands.

During use the camera may move to the bottom of the copy stand so it is very important to ensure the hard safety stops are set correctly. The bottom safety stop should be set so the lens cannot hit the table top or the subjects placed on the table, so please follow the steps outline in this chapter.

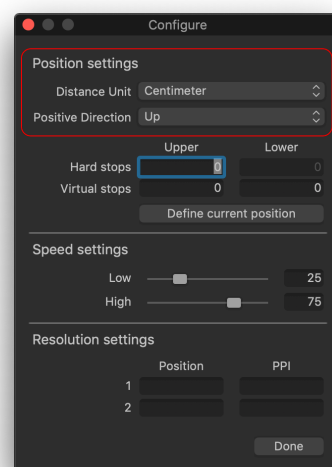
Also make sure that any cables between the computer and camera will not snag because of the camera movement.

1. Connect a supported copy stand to your computer and then start Capture One Cultural Heritage. The **Copy Stand** tool needs to be calibrated and configured manually first before the feature is fully working, so the Copy Stand tool will now inform you that the stand needs to be calibrated. Click on **Calibrate**, and the camera cart on the column will move.

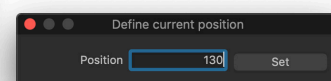
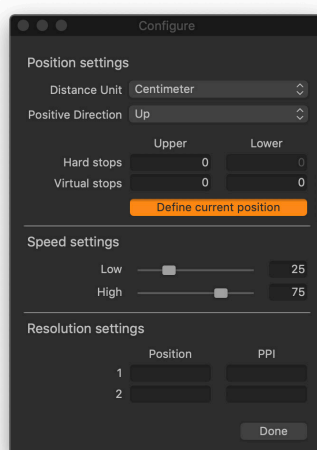


2. You start by setting the hard safety stops by clicking on the options icon and choose **Configure...**

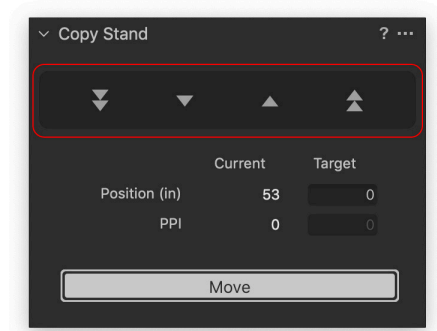
Set the **Distance Unit** to **Centimeter** and **Positive Direction** to **Up**. This matches the physical markings on the column (which are in centimeters) and increases as the camera is moved upwards.



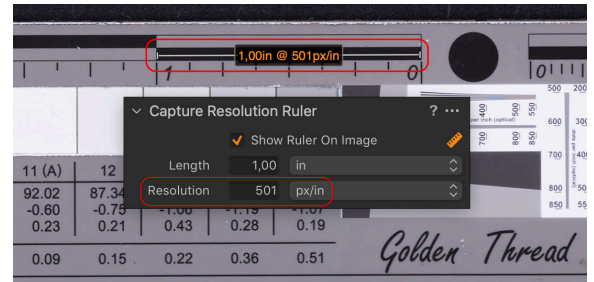
Note the height position of the camera carriage. This value is read where the bottom of the carriage aligns against the copy stand ruler. Click on **Define Current Position**, enter the carriage height, then click **Set**. Finally, click **Done**.



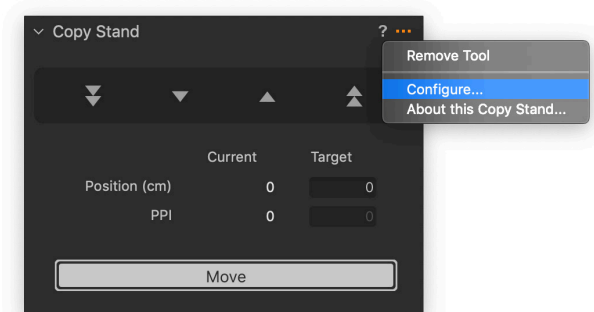
3. Once the calibration is complete, you can move the camera height position on the copy stand manually by clicking on the arrows in the Copy Stand tool.



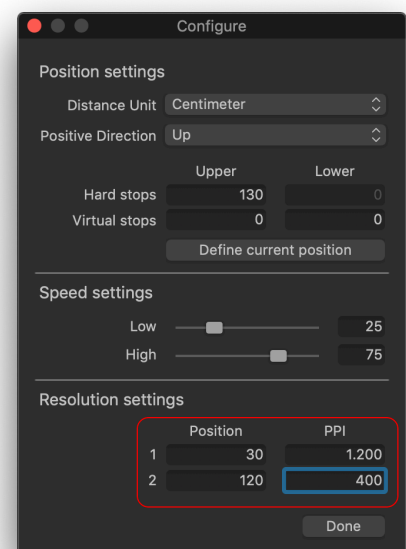
4. If you want to take advantage of the Auto PPI feature, the tool needs to be configured first. This is done by taking two captures with the camera placed in two different height positions on the copy stand. You will need to capture a subject with a clear distance measurement, like a ruler. Select and use the **Capture Resolution Ruler** tool to measure the pixel per inch value for each height position and note the height information on the stand and the resolution for both positions.



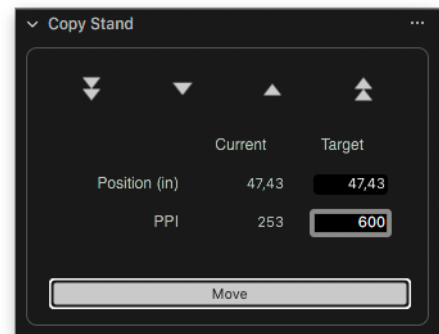
4. Once done, click on the options icon and choose **Configure...**



5. Under **Resolution settings**, enter the height **Position** and the corresponding **PPI** for both positions noted in step 3. Then click **Done**.



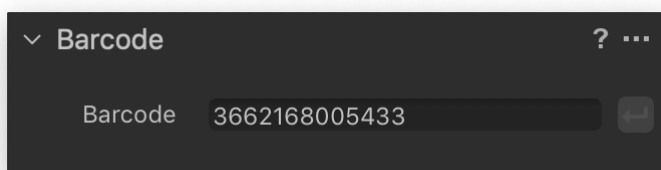
6. Enter the desired **Target** PPI value and click on **Move**. The copy stand will now move the camera cart on the column until the target resolution is reached. Focus the camera and begin the captures.



Note: The Copy Stand tool will reach the target PPI by interpolating between the two entered Position/PPI settings. This is done quite accurately. The tool can also extrapolate outside of the two measured height positions, but it will be less precise.

Barcode scanner tool

The integrated Barcode scanner tool in Capture One 20 CH will help you ensure that the assets are named and identified correctly as they are captured.



It is important to point out that the Barcode tool is intended to be used in conjunction with the Next Capture Naming tool. The scanned barcode ID needs to be inserted as a part of the image name created during capture. This is done by using the Barcode Token as a part of naming structure in the Next Capture Naming tool.

This setup means that it is important to scan the Barcode before capturing the associated image – otherwise it cannot be applied automatically to the image name.

If you are using Capture One 20 CH on a Mac, you will have additional possibilities to use the Barcode string by taking advantage of Apple Script.

Supported barcodes

The Barcode scanner feature only support scanners that can be set up with a prefix/suffix. This is needed for Capture One CH to know precisely when the barcode text string starts and ends.

These Linear 1D barcodes are supported:

- UPC-A,
- EAN-13,
- Interleaved 2 of 5, Straight 2 of 5 industrial Code 39, Code 93, Code 128
- Codabar
- Matrix 2 of 5
- Rss-14

Note that 2D barcodes, for example a QR code, are not supported.

Supported Barcode scanners

The following barcode scanners have been tested to work correctly with Capture One 20 CH:

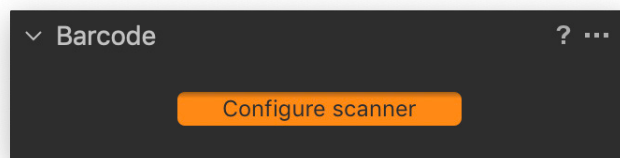
- Zebra Motorola Symbol LS2208
- Honeywell Xenon 1900
- Honeywell Xenon 1902g-bf
- Datalogic Gryphon I GD4130

Note that scanners not on this list might still work and that the list will be updated as more scanners are verified to work correctly. It is not possible to use multiple scanners at the same time. Only one scanner can be configured and used at a time.

Configuring the scanner

The scanner needs to be configured so that Capture One CH know precisely when the barcode text strings start and end. This is done by scanning a predefined barcode that will automatically detect the prefix and suffix of the scanner in question.

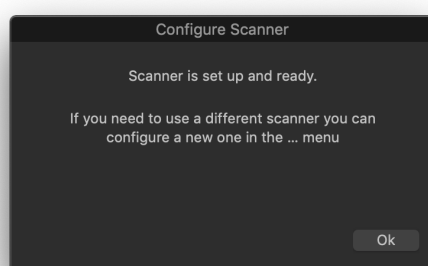
1. Open the Barcode tool and click on Configure scanner:



2. A dialog box with the predefined, known barcode is now displayed. Scan the barcode on the screen with your scanner. There is also the option to print the barcode by clicking on Print code if this step cannot be complete on the screen.

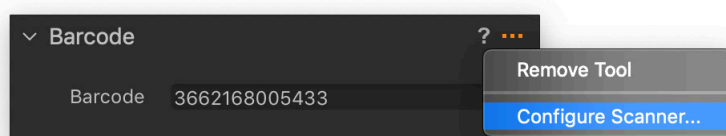


If the configuration is successful, a dialog box will inform that the scanner is now ready to be used.



If the process encounters an issue, a dialog box will give you the option to try again. Note that the configuration process basically collects all keyboard events, so an error might be caused by using the keyboard while scanning the test barcode.

If you at some point need to change to another scanner, you will need to configure it first. This is done by choosing the Action drop-down menu and selecting Configure Scanner....

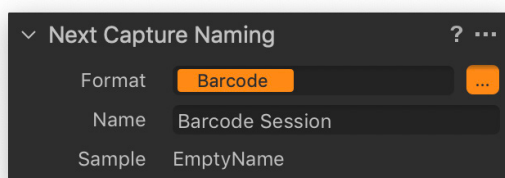


Then complete the steps to configure the new scanner outlined above.

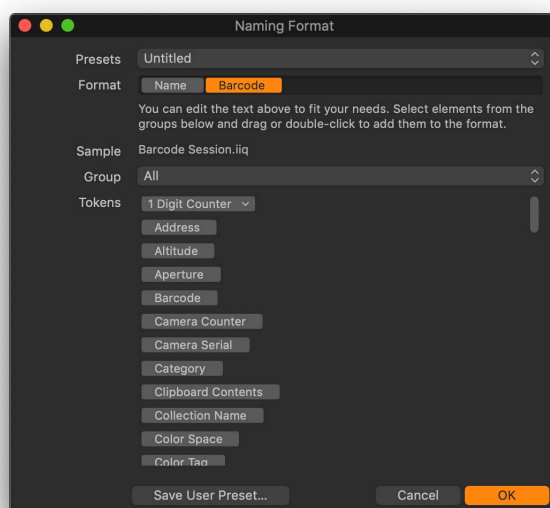
Using the barcode scanner

A scanned barcode ID is meant to be inserted as a part of the image name created during capture. It is therefore important to set up the **Next Capture Naming** tool with a **Barcode** Token before using the Barcode scanner tool.

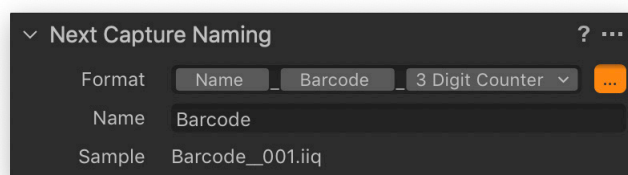
1. Go to the **Next Capture Naming** tool and click on the three-dotted button at the end of the **Format** field.



2. Find the **Barcode** Token from the list and drag it to **Format** field.



3. Add other suitable Tokens like **Name** and **3 Digit Counter**. Close the dialog.
4. Remember to add an underscore or dash between the Tokens to ensure that the barcode letters or numbers are not mixed with other strings as the image name is created.



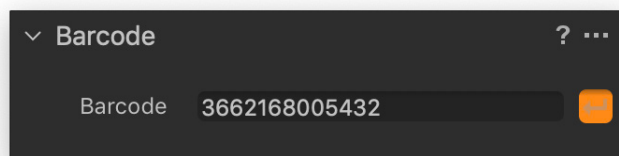
Once the Barcode Token is added as a part of naming structure in the Next Capture Naming tool, you are ready to use the Barcode scanner tool.

1. Scan the product barcode and check that it is inserted in the Barcode tool.
2. Capture the associated image.

3. The scanned barcode is now added as a part of the image name.
4. If the same barcode should be added to more images, continue to capture those images.
5. If you need to associate a new barcode with the next image, remember to scan the new barcode before capturing the associated image.

Modifying the barcode string manually

If you encounter a scan error and need to enter the barcode manually, click in the Barcode text field, type in the correct numbers, and click on the Enter icon to apply the change.



Then capture the associated image.

Manually adding a barcode to the image name

There might be situations where you need to scan and add a barcode to an image that have already been captured. If that need arises, follow this procedure.

1. Scan the product barcode and check that it is inserted in the Barcode tool.
2. Select the full test string in the Barcode field and copy it.
3. In the Browser, click on the name of the image in question to highlight name field.
4. Paste in the barcode as a part of the name.

This procedure can also be used to copy and paste a scanned barcode into a metadata field in the Metadata tool if need be.

Barcode tool notes

- The Barcode feature works with both Sessions and Catalogs.
- The last scanned barcode value is stored in the document's database and will be remembered if you close and reopen Capture One 20 CH.
- Only the last scanned barcode value is stored. You will need to copy all previous barcodes to an image name (or metadata field) in order to save them.
- The barcode configuration information (what prefix and suffix characters the scanner will send with the barcode) is stored on the computer (not in the Catalog or Session). This means that it can be reused in a new Catalog or Session.

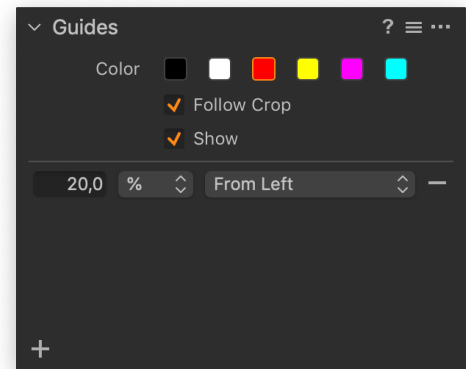
Guides

The Guides tool will allow you to position and display Guides over the image in the Viewer as an aid to getting the composition right and it is particularly useful when shooting tethered or cropping the image. It is optimized to let you add guide lines and adjust their location with a high degree of precision by entering a specific position value in either %, px, mm, cm or in.

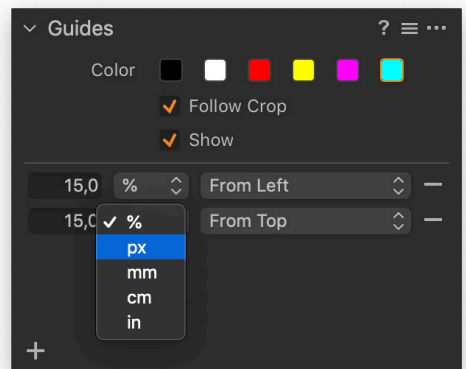
Creating a Guide

You will find the Guides tool in the **Lens** Tool Tab where the Crop tool is also located.

1. First enable the visibility of the Guides in the Viewer by selecting the **Show** option in the **Guides** tool or go to the menu and select **View > Guides** to toggle them on and off. You can assign a keyboard shortcut to this command.
2. Click on the + (plus) icon in the bottom left corner to create a new guide. You will now get a couple of options to position the guide with high precision.

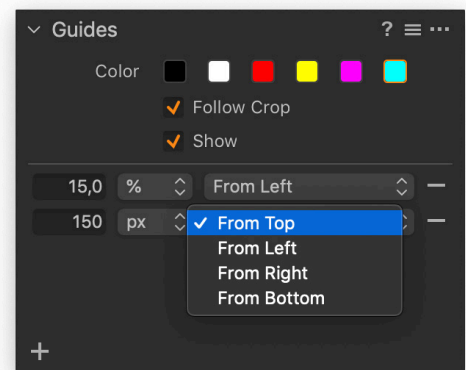


3. First select the desired position unit (**%**, **px**, **mm**, **cm** or **in**) from the unit drop-down menu. Then select what edge of the image the position should be calculated from.



This is done by selecting either **From Top**, **From Left**, **From Right** or **From Bottom** from the position drop-down menu.

4. Finally, enter the desired position value in the field to position the guide line where you want it (like **10% From Left** edge).



5. If you want to add another guide line, click again on the + (plus) icon in the bottom left corner. Note how the settings will be copied from the guide settings above, making it easy to add several guides where you only have to change a single value or setting.
6. You can select one of the six available grid colors to ensure that the grid will be easy to see against the image subject. You can choose between black, white, red, yellow, magenta or cyan. The selected color will be applied to all the added guide lines. **Red** is default.

The **Follow Crop** option will fit the guide lines inside the chosen crop and follow it as you readjust the crop. If the option is deselected, the guide lines will fit the full image, regardless of the chosen crop. This can be a great way to add a visual “safe zone” along the boundaries of the image when cropping.

If you want to assign a keyboard shortcut command to toggle the visibility of the Guides on and off, select **Edit > Edit Keyboard Shortcuts...** and find the **Guides** command. Note that you can also assign additional keyboard shortcuts to other related Guides commands under Customize Guides in the Edit Keyboard Shortcuts dialog box.

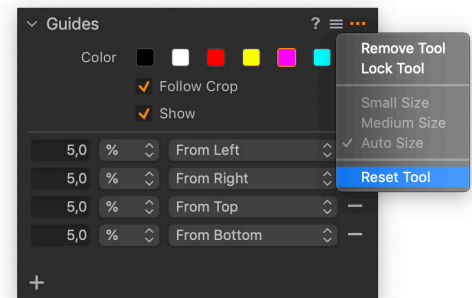
Edit and deleting a Guide - Adjusting a Guide position

You have two ways to change the position of a guide: Type in a new position value in the number field of the desired guide line in the **Guides** tool to move it to the new position. Choose the **Select** cursor (V) and hover over the guide you want to move. A Move cursor is now displayed. Click on the guide and drag it to the new, desired position. Note how the associated position value changes in the Guides tool as you drag the line.

Deleting a Guide

Click on the – (minus) icon at the end of a Guide to delete it.

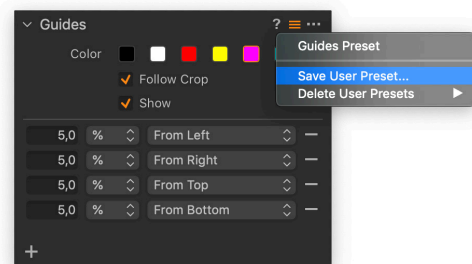
If you want to delete all Guides at once, click on the Action menu and select **Reset Tool**. This will then remove all guides.



Using Guides Presets

Presets are a great way to save and reuse commonly used guide settings, potentially saving a lot of time.

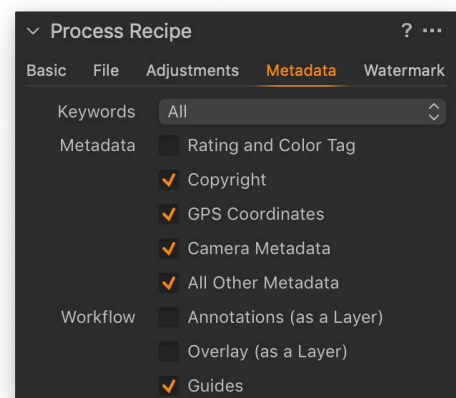
1. Go to the Guides tool and set up your guide lines (see above) as desired for reuse.
2. Click on the small preset icon and select **Save User Preset**. Remember to enable the **Guides** and **Follow Crop** option in the Save Preset window. Click on the **Save** button. Name and save the Preset.
3. You have now created a Guides Preset that can be selected from Preset menu in the Guides tool.



Exporting Guides

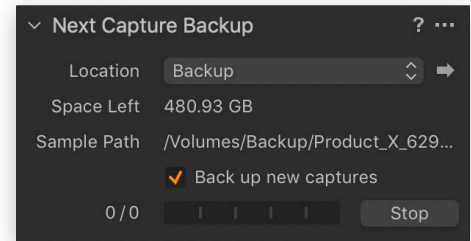
The Guides can be exported for reuse in an external image editing app. If you export the image in the PSD file format, the guides will be converted to Photoshop's guide system so that you can move and readjust any guides added in Capture One CH as well as toggling their visibility on and off in Photoshop. This is done by selecting the **Guides** option in the **Process Recipe** tool under **Metadata** and **Workflow**.

If you export the image in a file option other than PSD, the Guides will be baked (flattened) into the image file, when you select the Guides option in the Process Recipe tool under Metadata and Workflow.



Next Capture Backup

The **Next Capture Backup** enables Capture One CH to automatically make a backup of all the captured images during a tethered session to another drive. The tool also has a built-in backup queue manager that will let you stop and resume the backup procedure at any point in time, making it possible to continue the backup even after you have closed and re-launched Capture One CH.



It is worth noting that the Next Capture Backup tool works with Sessions only. It is designed to do a backup of the original captured images (RAWs and/or JPEGs) only. This means that none of the image adjustments, metadata or keywords that are applied during the tethered capture session are backed up.

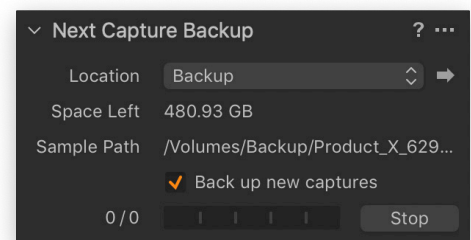
Do note however that the file naming being applied to the captured images with the **Next Capture Naming** tool will also be included in the backed-up image files. This means that any scanned barcodes that are applied as a part of the naming scheme will also be part of the file naming on the backed-up files.

You should therefore consider including some method of shot reference in the file naming with the Next Capture Naming tool in the unfortunate event that you will need to rely on the backed-up image files.

Using Next Capture Backup

You will find the Next Capture Backup tool under the Capture Tool Tab. It works with Sessions – not Catalogs – so ensure that you are running a Session when shooting tethered.

1. Set up your desired file naming with the **Next Capture Naming** tool as this choice will be mirrored to the file naming of your backed-up files.
2. Enable the option **Back up new captures** in the tool.
3. Select the backup drive destination from the **Location** drop-down menu. This should obviously be on another drive than you are capturing the primary images to. Capture One CH will automatically create a folder in the chosen destination with the current **Session name** together with a **unique ID**. Within this folder, a Capture subfolder is also added. You can check the full destination file structure and naming in the **Sample Path** field.
4. Start your tethering session by capturing the images with the **Camera** tool.
5. Click on **Start** to enable the backup queue.
6. Once the captured images are saved to the drive, the Next Capture Backup tool will start to copy them to the backup drive location.



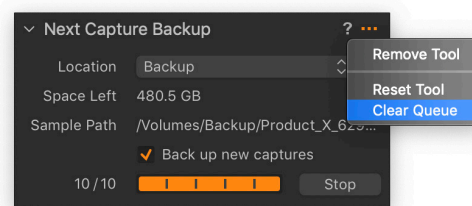
Managing the Backup Queue

The backup Queue feature ensures that the backup process is handled independently from the capture process. This means that you can always continue to capture new images regardless of how far the backup process is. The backup queue manager will also let you stop and resume the backup procedure at any point in time, and you can even let the backup process continue after you have relaunched Capture One CH at a later point in time. This is made possible because Capture One CH keeps a list over the progress of the backup queue.

The backup Queue progress bar shows how many captured images that have been added in total to the queue and how many of these that have been backed-up so far. As an example, the numbers

80/100 indicate that 80 out of 100 images have already been backed-up, and that 20 still needs to be done. The queue is completed when both numbers are equal, like 100/100.

- You can pause the backup queue by clicking on **Stop**. Note that the queue is not cleared by doing this, the process is merely halted.
- You can start and resume the backup queue by clicking on **Start**.
- If you try to close Capture One CH without the having finished the backup yet, you will get a warning. It is advised to click Stop first, then close CH.
- Capture One CH will save the status of the backup queue to a file. This means that even after re-launching the software at a later date, you will still be able to confirm whether all the image files were indeed backed-up (this is the case when both numbers in the queue are equal, like 100/100).
- If you want to remove the backup queue completely, click on the action icon in the top-right corner and choose **Clear Queue** from the drop-down menu. This is only recommended when the backup queue is completed.



Next Capture Backup Notes

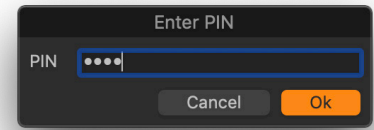
The Next Capture Backup tool will automatically mirror the file structure of any subfolders that you create within the Capture folder. For example, if you create the subfolder Product1 within the Capture folder (and set this to be the capture destination folder), all the images will be backed-up to a Product1 subfolder too. This will keep things nicely organized.

Capture One CH on Mac has the added benefit of being able to run Apple Script to automate the workflow further. These are the options that Apple Script can control in the Next Capture Backup tool:

- Change destination folder
- Enable/disable next capture Backup
- Enable/disable queue

Tools Lock

Capture One CH has the ability to lock specific tools so that they cannot be altered by accident during a busy shoot by for example changing the camera settings or file naming. It is also possible to assign a pin code to the locking system so that the administrator or photographer in charge can prevent assistants from unlocking the tools and change important capture properties.



The following tools can be locked:

Cature tools:

- Camera + Camera Settings (except the Live View and Capture buttons) Camera Focus
- Next Capture Adjustments
- Next Capture Location
- Next Capture Naming

Workflow tool:

- Guides

Output tools:

- Process Recipe
- Process Recipes
- Output location
- Output Naming

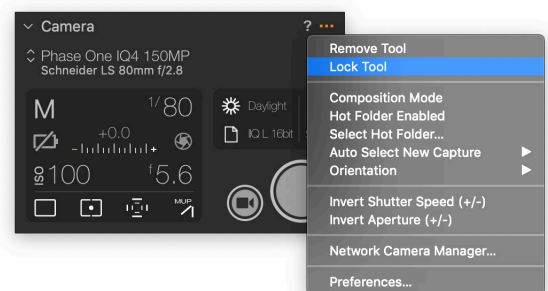
It is possible to lock/unlock a single tool locally or to lock/unlock multiple tools at once with the Manage Locks dialog box. Both will be explained below.

Locking a single tool

Find the tool that you want to lock, click on its Action menu in the top-right corner and select **Lock Tool**.

A padlock icon will now be displayed next to the tool's name to indicate that is locked.

If a pin code is set to control the locking/unlocking of the tools, you will be prompted to enter that before you can lock the tool. See below for more information on how to set a pin code.



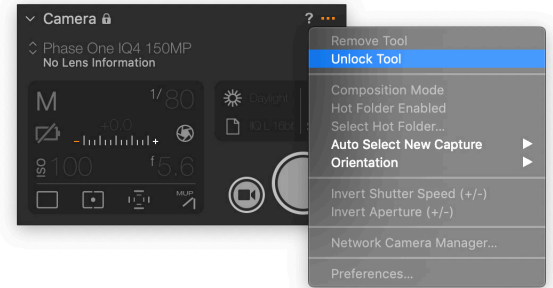
Note that you can still use the Live View and Capture buttons in the Camera tool when it is locked to ensure that an assistant can still capture images even if he/she is not allowed to change for example the exposure settings. Also be aware that any keyboard shortcuts associated with the functionality of a locked tool will be disabled.

Unlocking a single tool

Find the tool that you want to unlock, click on its Action menu in the top-right corner and select **Unlock Tool**.

The padlock icon will now be removed to indicate that is no longer locked.

If a pin code is set to control the locking/unlocking of the tools, you will be prompted to enter that before you can unlock the tool. See below for more information on how to set a pin code.

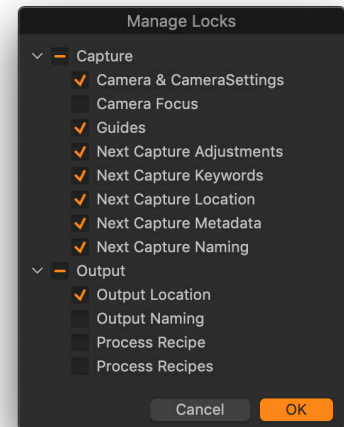


Locking or unlocking multiple tools at once

If you need to lock or unlock multiple tools at once, go to the menu and select **Window > Manage Locks**.

If a pin code is set to control the locking/unlocking of the tools, you will be prompted to enter that before you can access the Manage Locks dialog box. See below for more information on how to set a pin code.

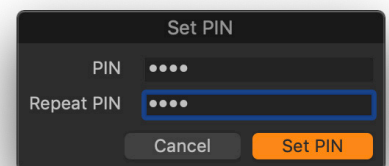
Once the Manage Locks dialog box is open, you can check-mark all the tools that you want to lock or unlock them by removing a check-mark. Note that is easy to select or deselect all the tools in the Capture or Output group by clicking on the group name. Once you have locked or unlocked the desired tools, click on OK. Note how the padlock icon will be displayed on the different tools to indicate whether they are locked.



Adding a Pin code

It is possible – but not mandatory - to assign a pin code to the locking system. This will allow the administrator or photographer in charge to prevent assistants from unlocking the tools and changing the capture properties.

1. To add a pin code, go to the menu and select **Window > Set and change PIN...**
2. Enter the same four-digit pin code twice and click on **Set PIN**.
3. Enter a **Pin code**.

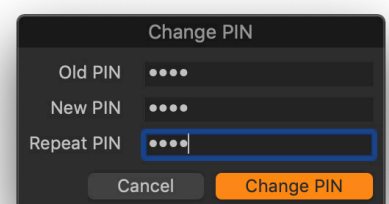


If a Pin code is set, you will be prompted to enter it each time you try to lock or unlock a single tool and each time you want to access the Manage Locks dialog box.

Change the Pin code

To change a pin code, go to the menu and select **Window > Set and change PIN...**

Enter the current pin code in the **Old PIN** field and the enter new four-digit pin code twice below, then click on **Change PIN**.



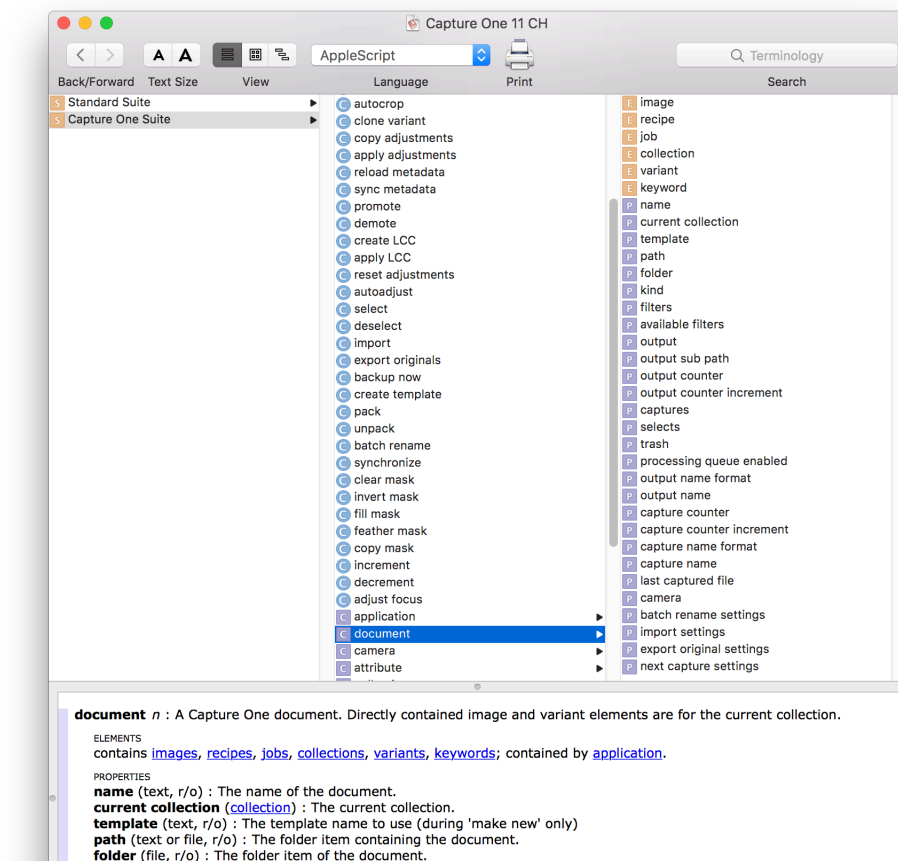
Automation with Apple Script

Capture One Cultural Heritage can be used to automate a number of functions by using Apple Script. Instructions on how to create an Apple Script is beyond the scope of this User Guide, but for those that can take advantage of this powerful feature, a list of some of the functions that can be used are supplied below.

Useful commands available:

- Import settings
- Keywords
- Batch Rename settings
- Current collection
- Next Capture Adjustments (configuration)
- Output counter
- Selections
- Camera controls
- Stop live view
- Sync folder
- Adjustments clipboard (copy/apply)
- Current document
- Resetting Import Counter
- Accessing variants in a collection
- Cloning a variant
- Deleting a variant
- Variant Color Tagging
- Variant Rating
- Adding and removing variants from a selection

If you need to see all the commands available, open the Script Editor on the Mac (found in Applications/Utilities folder) and chose **File > Open Dictionary**, then select Capture One from the list. Select **Capture One Suite**, which will list all commands available.



**For more information please visit:
www.phaseone.com**