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Learn more about Capture One 4 on www.phaseone.com/4

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About Capture One 4 PRO features

This Users guide is created for all users of the variants of Capture One, therefore you might find functionality that might not be present in the application, though in the Guide.

All features presented with either the PRO-Feature logo or the **ORANGE** header is regarded to the users that have Capture One 4 PRO installed.



PRO-Feature

1.0 Welcome to the Capture One 4 User Guide

Thank you for installing Capture One 4, Capture One 4PRO or Capture One 4DB!

Phase One is proud to say that we have created this software to provide a total solution for producing images of the highest quality from your RAW files.

This next generation product is focused on exceptional image quality and a workflow designed from professional photographer's feedback.

This user's guide follows a problem-resolution-oriented approach, not a bit-by-bit walk-through of the functionality. The guide describes Capture One 4 for Apple® Macintosh®. The guide will to a large extent apply to Capture One 4 for Microsoft® Windows® as well.

The interface may look different from Capture One 3, but the editing functions are very similar, with significant improvements in some areas.

The photographer's workflow is paramount in this design.

Enjoy!!

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1.1 What is Capture One 4?

Capture One 4 is RAW workflow software; our improved image quality gives you perfect results with minimum adjustments. We've tailored each parameter of the image quality to ensure optimum results on every camera supported, while keeping all the features you need easily accessible.

The software provides a logical, step-by-step workflow through the image optimization process, allowing you to work efficiently with large volumes of images. Capture One 4 is capable of creating stunning effects and quality from capture to finalized files.

1.2 Recommended hardware and software

Capture One 4 may run on older computers, but Phase One recommends following the minimum requirement to ensure the best result from Capture One 4. While you can run Capture One 4 on other computer / OS configurations than listed below - we do not recommend it. This recommendation is made to ensure you have a good user experience.

Apple® Macintosh®:

Intelbased Macs

1 GB RAM (2 GB when working with digital backs)

10 GB free hard disk space

Calibrated color monitor with at least 1280x800, 24-bit screen resolution

Mac OS X 10.5.5

Microsoft® Windows®:

Intel® Pentium® 4 or equivalent
1 GB RAM (2 GB when working with digital backs)
10 GB free hard disk space
Calibrated color monitor with at least 1280x800, 24-bit screen resolution
Windows XP®, Service Pack 3 or higher
Windows Vista® Service Pack 1
Microsoft® .NET Framework 3.0 Redistributable package
– In case you do not already have this installed, Capture One will initiate installation of this.

We would recommend upgrading your computer in the areas below if you work with high pixel-count cameras or simply want to optimize performance:

Use processors with multiple cores, e.g. Intel Core™ DUO or better.

Having 2GB RAM or more.
Plenty of hard disk space for your images.

You need an internet connection when activating Capture One 4.

Capture One 4, Capture One 4 PRO or Capture One 4 DB?

The version of Capture One 4 is determined by the product key, when you download the application it holds all 3 versions.

Capture One 4 was originally released in December 2007 now holds significant updates compared to the version released.

Capture One 4 DB supports merely Phase One digital backs.

Capture One 4 PRO version holds a series of highly advanced tools created to match the professional photographers daily workflow.

Capture One 4 and Capture One 4 PRO needs online access for activation, but not for daily usage, whereas Capture One 4 DB does not need internet connection for activation.

Feature/function	PRO	4	DB
Mac and PC support with transferable computer activation	√	√	√
Import utility with preview	√	√	√
Support for most popular DSLRs and Phase One digital backs	√	√	
Tethered shooting directly into Capture One	√		★
Overlay feature for composition or layouts	√		√
Multiple monitor support	√		√
Customizable workspaces, tool tabs and floating tools	√		√
Instant, customizable Web contact sheet	√	√	√
Selective color adjustment for image colors and camera profiles	√		√
Styles tool for applying your custom looks to existing or new captures. Provides an easy way to be creative with RAW files.	√		√
CMYK color proofing and output	√		√
High dynamic range tool to recover shadow or highlight detail	√	√	√
Simple Moiré Suppression tool to help eliminate color moiré	√		√
Lens correction tools – Chromatic aberration, purple fringing, pincushion and barrel distortion, vignetting control and sharpness falloff	√		√
Process multiple files with unique recipes from a single RAW file	√		√

★ Tethered shooting only from Phase One backs.

1.3 Install and setup notes – how to

Before you install Capture One 4, please read the release notes carefully!

Install on Mac OS X:

Capture One software includes an easy-to-use installer that will install all the software necessary to run the application on Mac OS X.

To install the software please follow the procedure below:

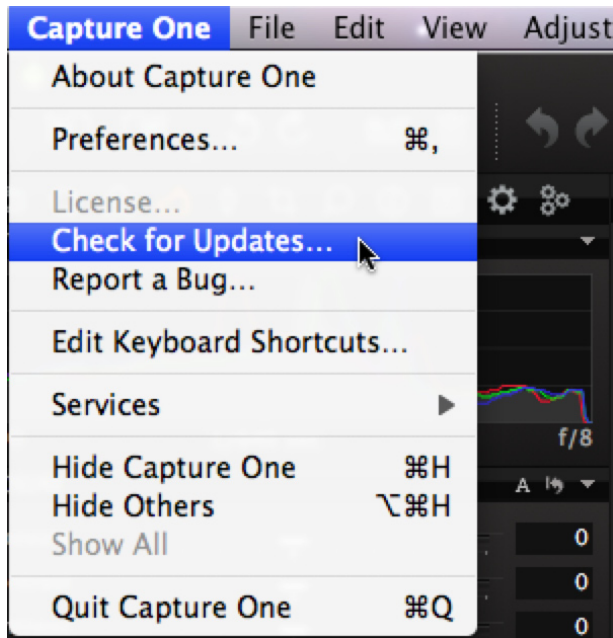
1. Either load the Capture One DVD, or download the application from the Phase One website: www.phaseone.com.
2. Open the Capture One disk image
3. Read and accept the license agreement presented
4. Drag the Capture One icon to the Applications folder
5. Open Capture One from your Applications folder

Install on Windows:

Capture One software includes an easy-to-use installer that will install all the software you need to run the application on a Windows based computer.

To install the software please follow the procedure below:

1. Either load the Capture One DVD, or download the application from the Phase One website: www.phaseone.com.
 2. Run the executable software install file.
 3. Read and accept the license agreement presented
 4. Follow the on-screen instructions to complete the installation.
- In case you do not already have Microsoft® .NET Framework 3.0 installed, Capture One will initiate installation of this.

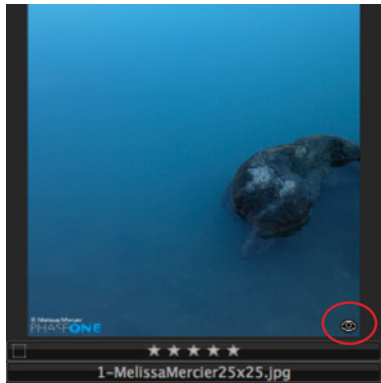


Manual update to latest version.

It is important to keep your application updated, normally you would receive a newsletter reminding that a update is ready for download, but it is much more convenient to choose Capture One>Check for Updates

If your Capture One 4 is downloaded from www.phaseone.com it will always be up-to-date, but if you have installed a CD version it is most likely that you can find an update ready for download.

- You can do scheduled checks for updates, read about this in the section about preferences



Why can I not edit my files?

Capture One 4 is a RAW workflow application; this means that though you can process TIFF, JPEG and DNG files, you can merely edit RAW files.

Still you can see most files in Capture One, if a thumbnail is included in the file, if the file is showing a small eye icon, this means that you cannot edit the file, and then all tools will be “blinded”.

If the file is showing a pencil instead of an eye, it means that the file is a read only file, or that the file is placed on a drive from where you cannot work. This will often appear if you try working directly on a camera or a burned CD, try instead and import the RAW files to a new session.

1.4 Activation of Capture One 4

To activate Capture One 4 you need to be connected to the internet.

Open the license activation dialogue via the menu Capture One>License.

Your first step towards activating Capture One is opening the license activation dialogue in the application as illustrated.

Choose the mode you wish to run Capture One in - see tips box.

Enter your License code and personal details in the license activation dialogue, type in the license code provided with your purchase of Capture One. You received the License code either by email or with the original software package.

Type in your details in the required fields to activate your software. Once you have entered the information press the “Activate License” button and your activation will be validated by Phase One’s activation server. Your software is now activated and ready for use!

Troubleshooting

If you are experiencing problems activating the software, follow the instructions provided in the application or visit our website for inspiration and troubleshooting: <http://www.phaseone.com/support>

Tip:
 When running the application choose between:
 1. Trial mode Capture One 4 OR capture One 4 PRO (30 days in total)
 2. Digital Back only mode (only Phase One digital back supported)
 3. Activating the application

1.5 Deactivation of Capture One 4

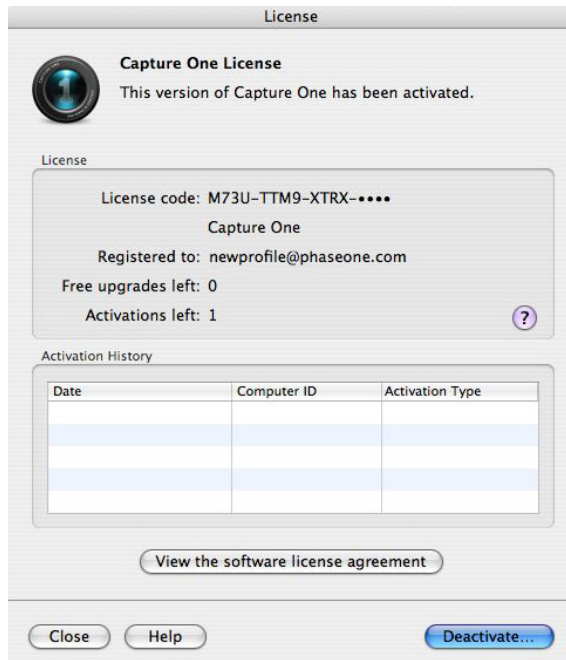
To deactivate Capture One 4 from a computer you need to be connected to the internet.

Open the license dialogue via the menu Capture One>License.

Press the Deactivate button.

Once you deactivate Capture One, the application will return to trial mode. If the trial period for the computer has expired, all current and pending processing will be cancelled, and you will not be able to continue working with the application until you reactivate it.

Confirm that you want to perform the deactivation. After doing so, you can activate Capture One on another computer.



1.6 Calibrate your screen

Second to your camera and lenses, the monitor, with your computer, is the most important piece of hardware in your workflow. In days of film, it was possible to hold up a transparency or negative to the light or pop it on the lightbox to know the density and color of the original image.

With a digital workflow, this is no longer possible and the monitor is the only way to evaluate images. Consider your monitor the new digital lightbox. To ensure accuracy, monitors need to be hardware calibrated for accuracy. A quality monitor and calibration tool provides you with a guarantee that what you are seeing on screen is correct

Once a monitor has been calibrated, the color and brightness controls should be locked to prevent inadvertent changes.

How do we recommend calibration?

Hardware-based monitor calibrators are now available at reasonable prices. The process is simple, quick and enables images to be judged with certainty. If the budget allows, higher level monitors have internal calibrating software that works with professional calibration devices for ultimate accuracy.

1.7 Global application preferences

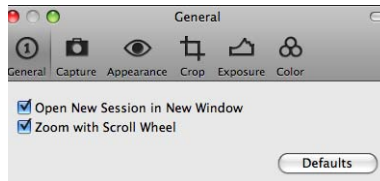
The preferences allow you to customize the workflow of the application as desired. This can be useful when performing similar edits to a large number of images.

What's the global applications preferences?

By choosing Capture One>Preferences you can choose to personalize Capture One, by editing the global applications preferences.

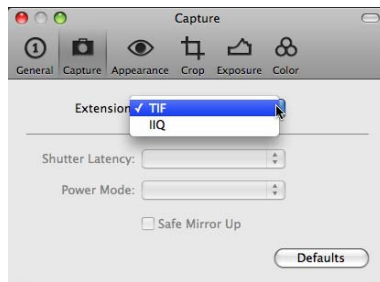
General

Allow you to decide function of mouse scroll wheel and whether to open a new session in a new window or not.



Capture in preferences

Choose standard extension from Phase One digital back, IIQ or Raw TIF files. The TIF extension is default as it is compatible with older applications.



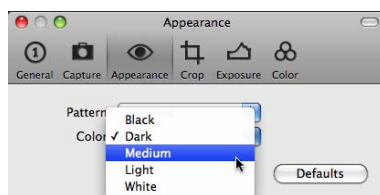
It is important to emphasise that the TIF extension is a RAW file not the TIF format known from e.g. Photoshop®

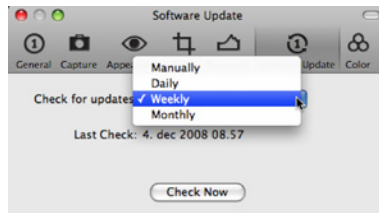
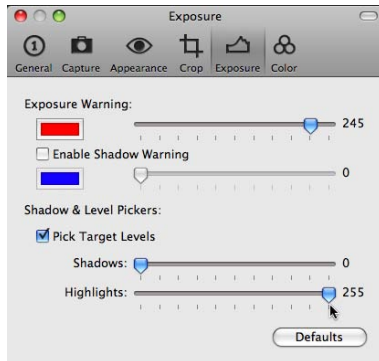
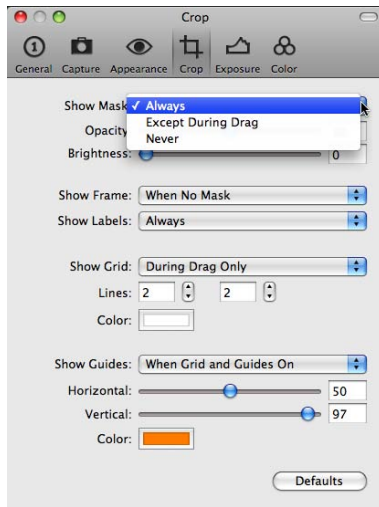
Shutter latency controls the timing between back and camera; some cameras or backs can however not handle the fastest timing, these should be set on long shutter latency.

Power module and Safe Mirror Up are both related to older Phase One backs.

Appearance in preferences

The background of the Viewer can be adjusted to different shades of gray, white and black. Best practice is to choose a dark background color. This choice provides a calm, neutral background on which the tools can be displayed.





Crop in preferences

The crop preferences provide options for the Crop function. This preference controls showing or hiding the grid, the opacity and the mask, framing, and measurement.

This feature also allow you to control the Guidelines, and color of these

Exposure in preferences

Exposure is about warnings; preset highlight warning is value 250 to avoid your images will turn out with non-printable areas, you can enable shadow warning too, in that case it could be a recommendable setting to 3. – If enabled you can double click on the color area to change the showed color and choose freely on a palette.

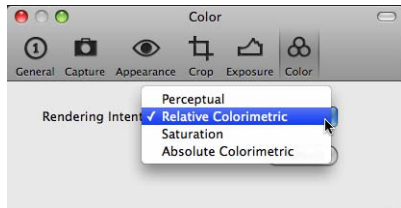
The Exposure Preference allows you to set warnings for exposure values. The Preset highlight warning is 250. For best practice set the shadow warning to 5. When enabled, the exposure warning colors can be customized from the color palette.

Shadow/level

Shadow and level pickers allows you to set max and min values on levels, to ensure that there will be no areas blown in case of e.g. off-set printing of your image.

Software Update

You can set Capture to do automatic updates on schedule, Daily, Weekly, Monthly or manual. If you set the update guide for manual, read the “Manual update to latest version paragraph”



Color in preferences

Color allows you to control the rendering intent; or how to convert one color to another. The conversion is referred to as rendering intends, and below you can see a description of the different ways of converting the colors.

Perceptual

Compresses the total gamut from one device's color space into the gamut of another device's color space when one or more colors in the original image is out of the gamut of the destination color space. This preserves the visual relationship between colors by shrinking the entire color space and shifting all colors – including those that were in gamut.

Saturation

Reproduces the original image color saturation (vividness) when converting into the target device's color space. In this approach, the relative saturation of colors is maintained from gamut to gamut. This render intent is primarily designed for business graphics, where the exact relationship between colors (such as in a photographic image) is not as important as are bright saturated colors.

Relative Colorimetric

When a color in the current color space is out of gamut in the target color space, it is mapped to the closest possible color within the gamut of the target color space, while colors that are in gamut are not affected. Only the colors that fall outside of the destination gamut are changed. This render intent can cause two colors, which appear different in the source color space, to be the same in the target color space. This is called "clipping." Relative colorimetric is the default method of color conversion built into Photoshop 4.0 and earlier.

Absolute Colorimetric

Colors match exactly with no adjustment made for white point or black point that would alter the image's brightness. Absolute colorimetric is valuable for rendering "signature colors", those colors that are highly identified with a commercial product such as the yellow used by the Eastman Kodak Company™, or the red used by the Coca-Cola Company™

Customize your toolbar

On Apple® OS you can change the entire User Interface.

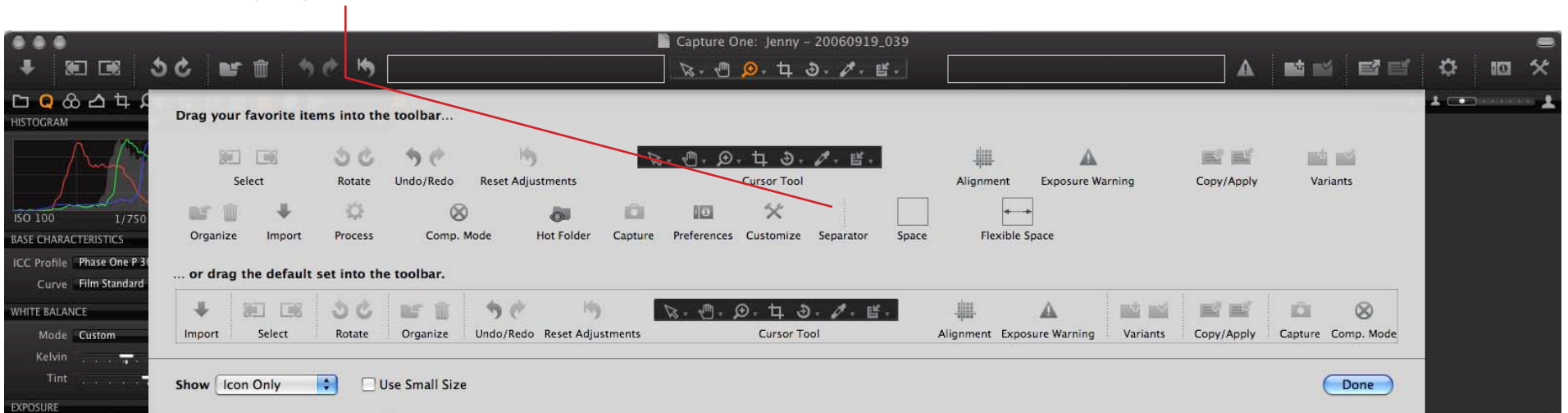
At the top right corner of your UI you find a tool icon giving you the opportunity of customizing the entire toolbar.

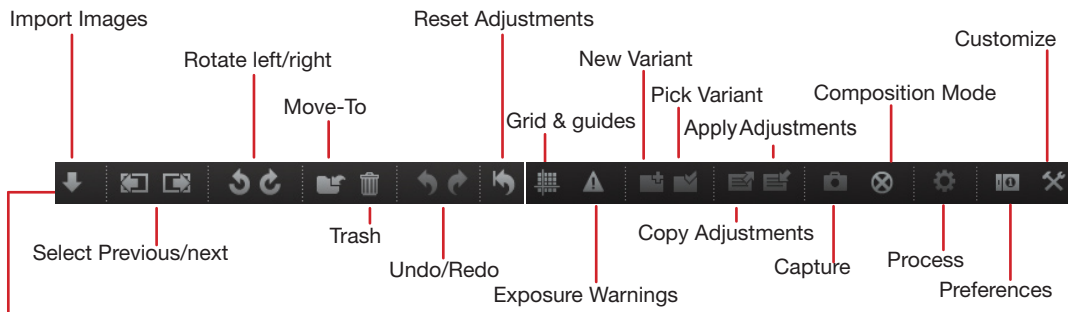
When you open the customize window, you can choose to add or remove parts of the user interface, you can also add more spacing customizing the user interface any way you like.

To add a part you simply drag a part from the customize window and drop it onto the toolbar.

To remove a part from the toolbar simply drag and drop the part from the toolbar to anywhere on the screen, this way you can directly and easily edit the toolbar.

Drag to get separated fields





2.0 The new interface

The interface is divided into a number of elements, all providing a set of tools. You should familiarize yourself with these elements and the terminology to make this guide clear in its meaning.

The image to the left provides an overview of the interface elements.

2.1 Interface explanation – what is what?

Menu

Similar to other applications, Capture One 4 has a menu structure, where key features are listed and can be operated from.

Toolbar

Below the Menu you find the Toolbar. The Toolbar contains buttons for the most common features in Capture One. The Toolbar can be customized to display only the controls you want. You can also choose simply to hide the Toolbar, which provides more room for images.

Cursor tools

Even though they are a part of the general Toolbar, the Cursor tools in Capture One are more than just that.

Cursor tool gives you access to key features right where you need them without having to move your mouse to a toolbar and press a button. With Cursor tools you don't lose focus.

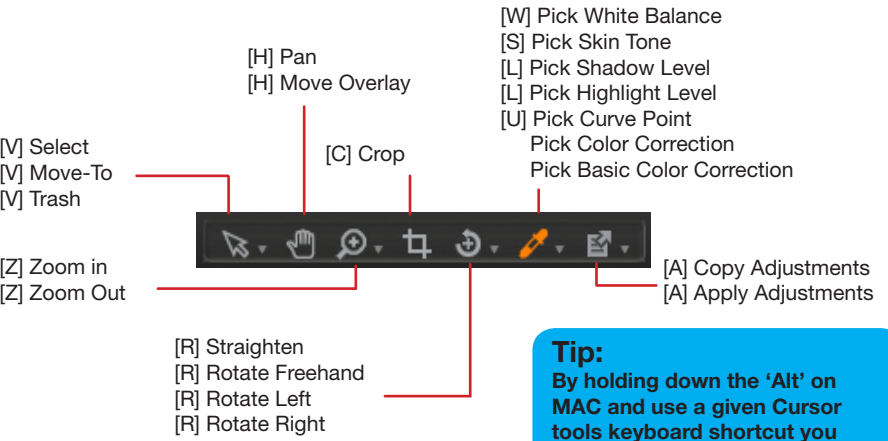
The Cursor tools gives access to a number of closely related sub-features (e.g. zoom in and zoom out). The Cursor tools can be activated by simple keyboard shortcuts. Read more on this in the Shortcuts section.

Holding down the 'Shift' button when you use a given Cursor tools keyboard shortcut allows you to cycle through the Cursor tool sub-features.

Trash

When deleting images, the RAW file will be placed in the OS trashcan from where it can be restored in case you have second thoughts about deleting the file.

If you installed Capture One 4 PRO the trash refers to the session trashcan and will be stored here until the session trashcan is emptied - if you want the files directly in the OS trash, hold down alt+delete

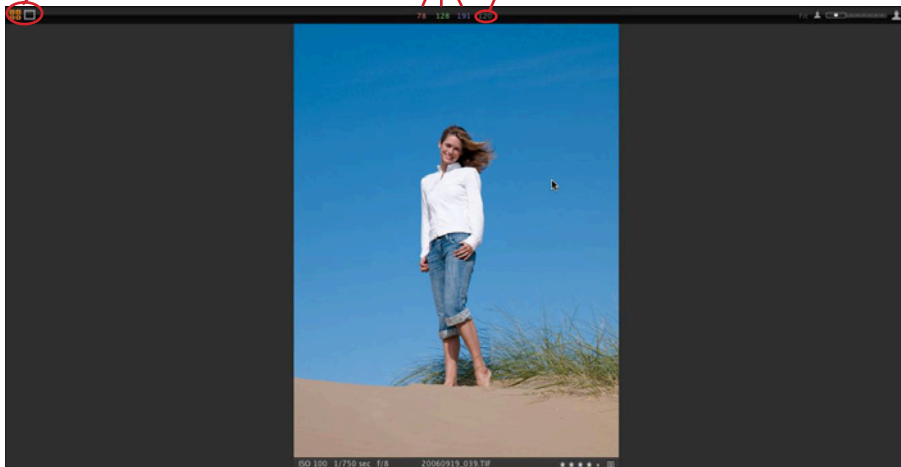


Tip:
By holding down the 'Alt' on MAC and use a given Cursor tools keyboard shortcut you activate the 'opposite' cursor tool once, without changing the Cursor tool feature permanently.

One or multiple image Viewer

Colorvalues

Lightness



Viewer toolbar

The Viewer toolbar is closely connected with the Viewer. Here you can toggle between 1-up and multiple-up viewing. You can also control the zoom level of the images. In the center of the Viewer toolbar the RGB and Lightness readout values are available.

Viewer

By size the biggest element in Capture One. The Viewer is used for viewing the images and checking the effect of the adjustments made.

You can see up to 12 images simultaneously in the Viewer. With tools such as Compare Item and shortcuts for synchronized zooming and panning, image comparisons can easily be done.

If you want more space for the Viewer you can hide the Tools and the Browser, which provides close to full screen viewing of the images. The ability to hide the Tools, Browser and the Viewer also can provide more room for other interface elements.

The top-left Icon of the Viewer allows you to choose between one or multiple image viewer.

What are the images exposure parameters?

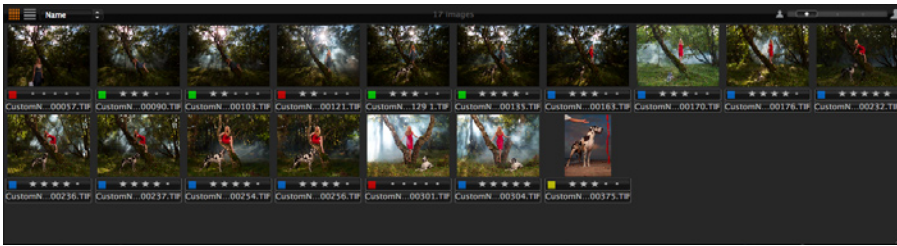
The parameters are right on top of the image, this indicates the values of RGB and the last digit is a Lightness or Luminance value, a value created to illustrate the dark/white ratio of the different colors, like in RGB the darkest will be 0, the clean white will be 255. This scale could also be compared to the HS scale.



Browser in Gridview

Sort options

Size of Thumbnails



Browser

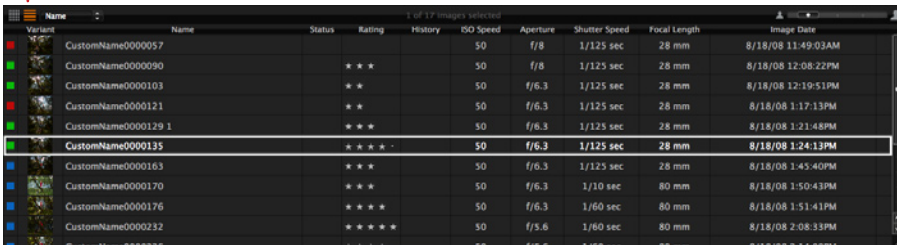
Thumbnails of all recognized images in a given folder or Album are shown in the Browser. The browser will show Thumbnails as they are corrected, and show the entire view and mask if the image is cropped. Use the Browser to navigate images in a collection and to select images. Many actions can be performed in the browser, such as rating images and use selected cursor tools on them directly.

By hiding the Browser there is more space for the Viewer. Place the Browser next to or below the Viewer, if desired. Play with the configurations to find out which suits you best.

Browser in Listview

Sort options

Size of Thumbnails

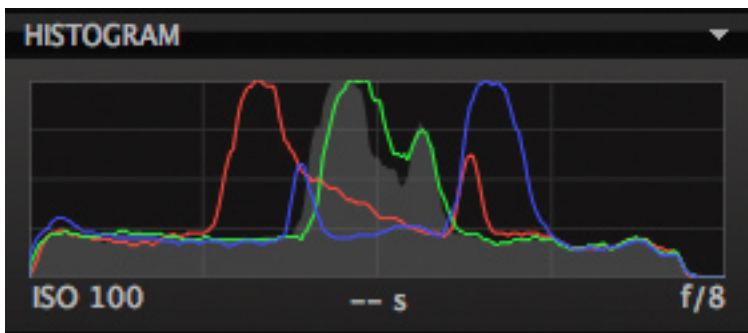
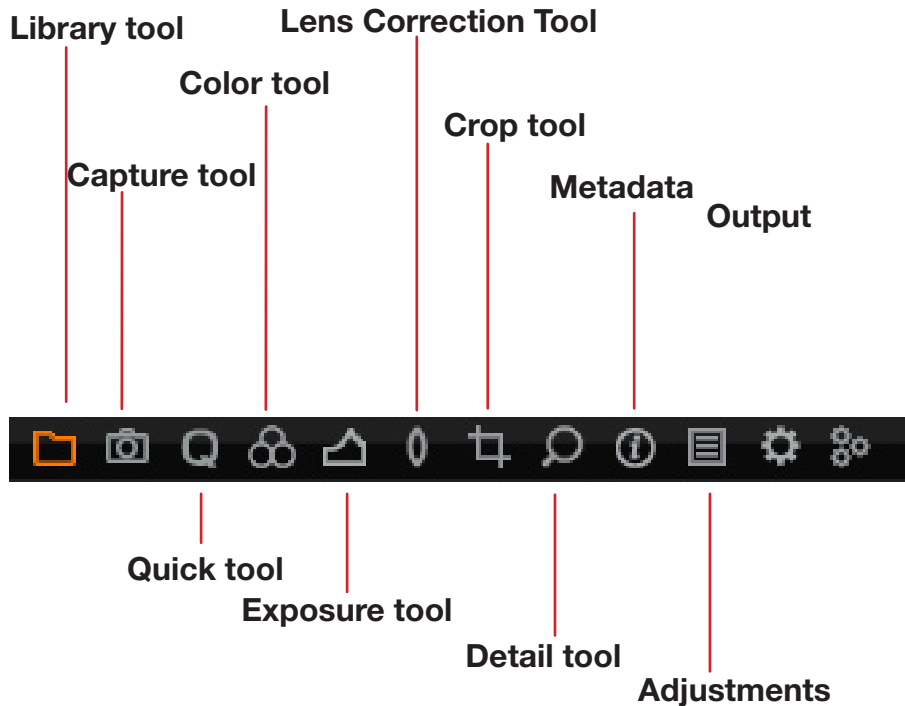


Browser toolbar

The Browser toolbar controls how you display the thumbnails in the Browser. Here you can choose to show the thumbnails in grid or list mode. Grid mode shows thumbnails, whereas list mode shows the images in a tabular format along with key exposure information.

You can also control the zoom level of your thumbnails in the Browser toolbar.

Cursor Tools



Tool Palette

Tool Palette is the common name for a group of tools forming an interface element. The tools found here give access to controls for adjusting your images. Here you can also browse through albums and process your adjusted raw files. In other words this is your image control center.

The Tool Palette consists of a number of Tool tabs, which, when read from left to right, outlines the most favored workflow sequence. The Palette can be placed to the left or right of the interface or hidden per your preference.

Tool Tab

There are many Tool Tabs, each giving access to features that will let you find, adjust and process images.

Each Tool Tab contains a number of tools. Most of the tools contain controls which are related to and influence the function of the tool.

What color space are the histograms shown in?

Placed at the top of several of the Tool Tabs you will find a guidance histogram. This histogram gives you an up to date visualization of the exposure in your image.

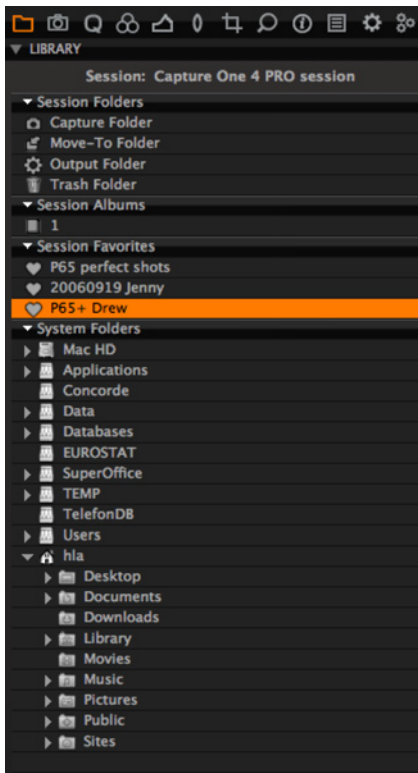
The Histogram reflects the output RGB color space.

If you have changed the image into BW, then the histogram displays monochrome. It is worth noticing that even though the Histogram displays monochrome, the processed image will still be RGB.

All tools in the Tool Tabs of Capture One have up to 3 automation shortcuts:

- Auto
- Reset
- Presets

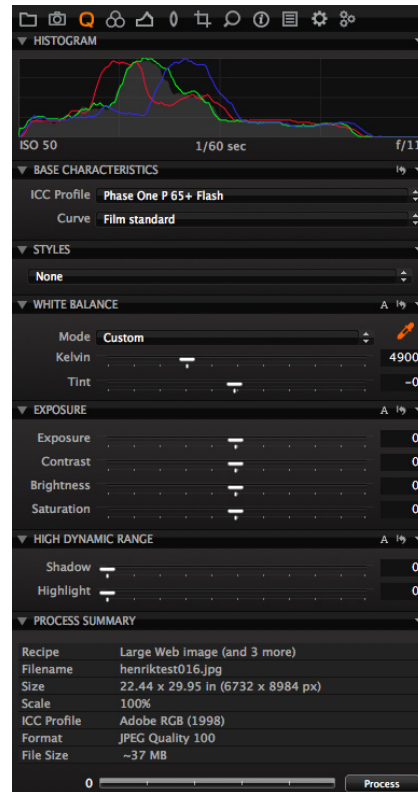
The Auto feature optimizes the image from the controls in the specific tool. Reset cancels all changes you have made to controls in a given tool. The Presets feature lets you define and save tool settings for later use.



Library

The Library tool allows access to the images within the Albums you have created as well as to any image collections you have stored in folders on a computer or networked resource. The Library is very similar to the file browser in the operating system (Finder on Mac, Explorer on Windows®) and is closely connected with the file browsers in the operating system. You can easily browse through the image collections due to the hierarchical tree structure of the library.

The Library tool allows you to designate an output folder, a move to folder, a Capture folder and a trash folder. More information on these folders will be discussed later on in this guide.



Quick

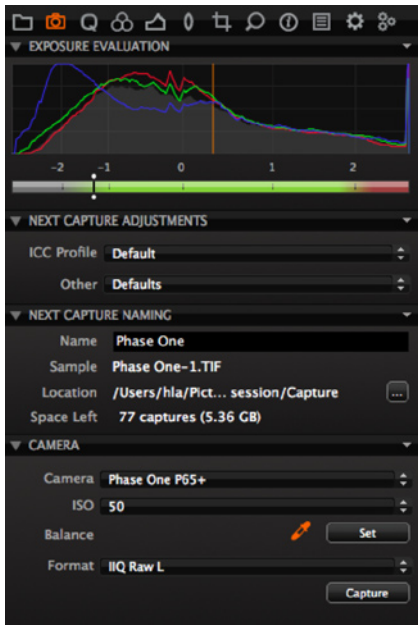
The Quick tool tab includes a selection of key tools which gives easy access to tools for fast image enhancement. In Base characteristics you can choose between different ICC camera profiles and film curves. An ICC profile is automatically applied according to the make and model of the selected RAW file, but check the ICC profiles, we have created several specialized ICC profiles to many cameramodels, to fit all needs.

Use curve to set the basic behavior of the pixels, standard/high/low contrast film or linear(especially for scientific photography).

After ICC profile adjust white balance and exposure, and process the selected images from here.

Tip:

The ICC file will follow the primary selected RAW file not all files in the folder. If you wish to apply an ICC profile to many RAW files at once, you should use Copy/Apply Adjustments.

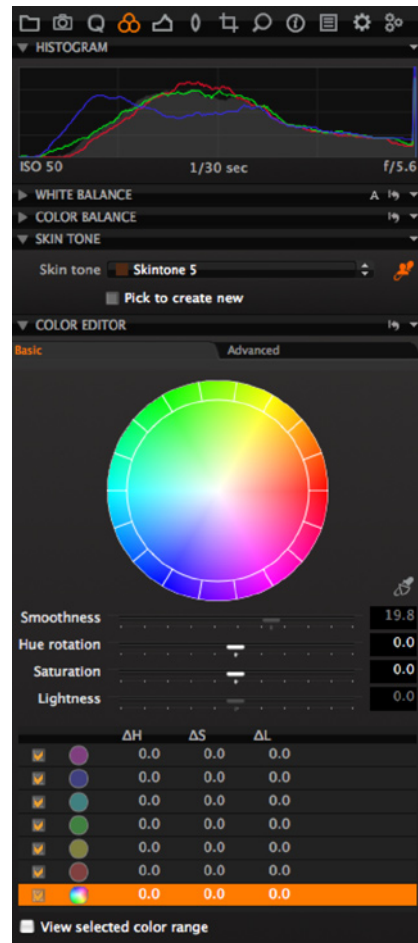


Capture

The Capture tool tab is your gateway to tethered shooting with Phase One digital back. You can control the ISO and white balance as well as copy your settings from one capture to the next captures. Here you can also decide the naming and location of the captures you are creating, the tool tab will automatically activate all controls once you have connected your Phase One digital back to the computer. If you have installed Capture One 4 PRO you can also shoot tethered with Canon DSLR cameras.

The Exposure Evaluation will show the values of the capture not only as a histogram, but also on the slider showing the under/over exposure in aperture values

Phase One digital back owners can apply ICC profiles in this tool tab to optimize color reproduction.



Color

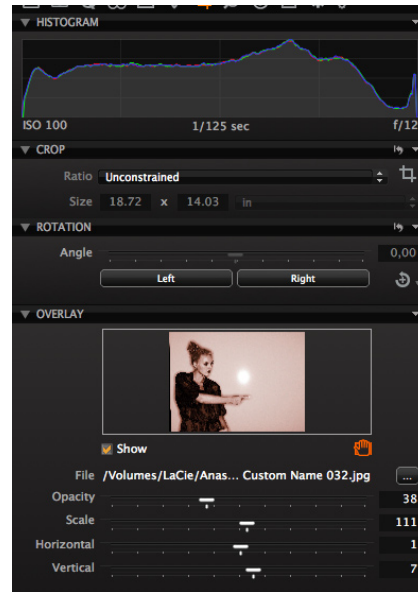
The Color tool control allows you to remove unrealistic color cast in your image caused by undesirable lighting conditions; this makes objects which appear white in real-life rendered white in your photo. In this tool tab you can also adjust hue and saturation for your colors, thereby changing the overall color balance.

The Color editor will let you work on specific colors, when a desired color scheme is achieved you can decide to save this color scheme for later work, or even use the ICC profile or style directly in a tethered session.



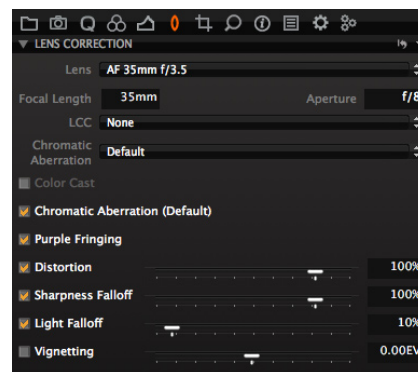
Exposure

The Exposure tool tab provides controls to adjust the exposure of images. There are basic controls (e.g. Exposure Compensation) which affect the whole image, and there are also advanced controls (e.g. Curves) which allow for fine-tune adjustments.



Composition

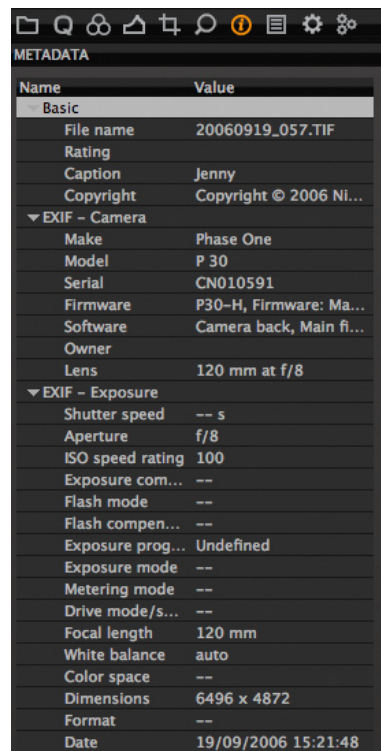
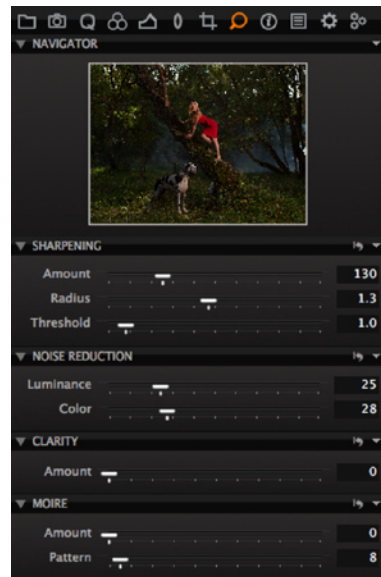
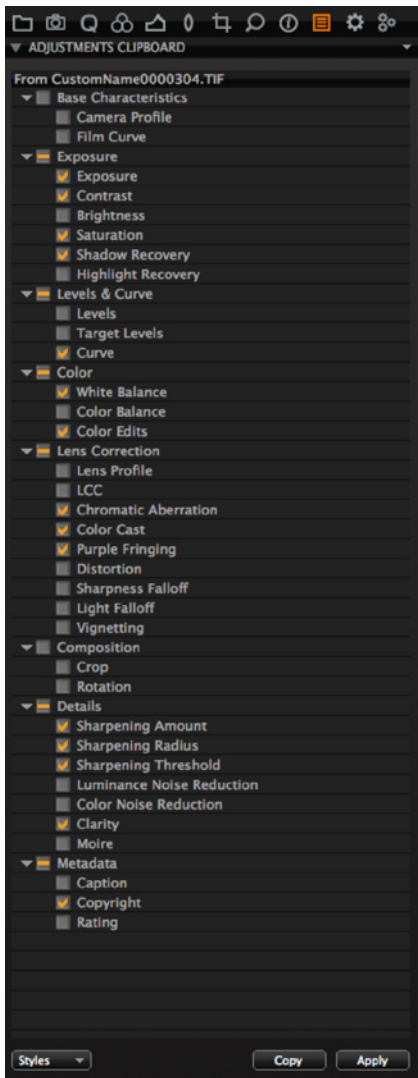
The Composition tool tab provides the crop feature which allows you to emphasize image elements. Here aspect ratios can be applied to images to meet output format needs. Rotate and Straighten tools are also available from this tool tab.



Lens correction

The Lens Correction tool tab provide various different lens correction options, either automatically using Phase One knowledge on the individual lens or manually correction of e.g. distortion

Also you will find features to reduce Chromatic Aberration and Purple Fringing. These filters are based not only on image analysis but also knowledge about the lenses.



Details

Image sharpness and noise reduction is controlled from the Details tool tab as well as the PRO features Moiré and Clarity.

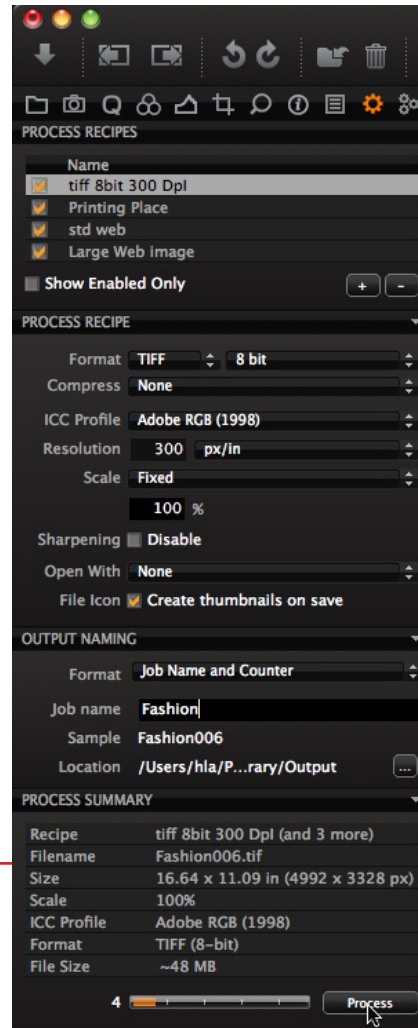
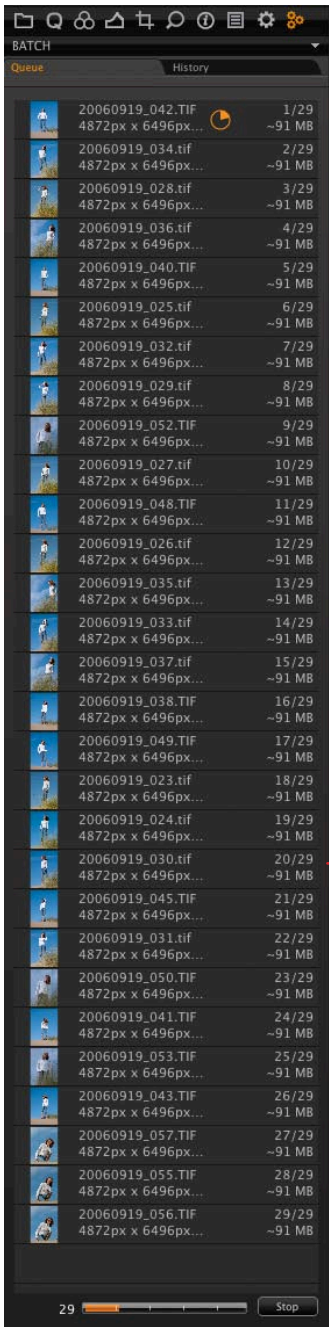
To make your expedite the editing process the Details tool tab includes a navigation tool which quickly allows you to check the details anywhere in the image at any zoom level.

Adjustments

The Adjustments tool tab provides a clipboard with image adjustments which can be copied from one image and applied to other images. The default copy contains only the parameters where actual adjustments are made to the settings of the source image.

Metadata

Any copyright and caption information you have added to an image are shown in the Metadata tool tab. Basic file information and basic EXIF information for the image, such as camera make, model and exposure data are also shown here.



Process Recipe

This tab allows the process parameters to be defined and for the images to be processed.

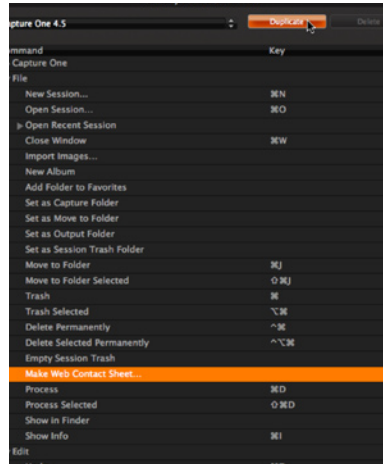
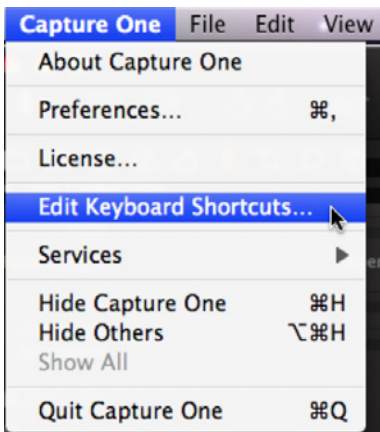
You can define a Process Recipe, Parameters such as file formats, quality, color space, resolution, and size can be configured.

It is also possible to systematically rename the output files, as desired.

If your version is Capture One 4 PRO you will have the possibility of saving your process recipe as well as processing for multiple formats at the same time.

Batch

You can see which images are in queue for processing and which images have been processed previously within the Batch tool tab. You can change the order of processing by drag-and-drop. Delete images from the batch queue by marking and pressing backspace. Batch will start automatically when you have pressed process.



How do I create my personal shortcuts?

If you have preferred shortcuts you may want to add them or change the default shortcuts.

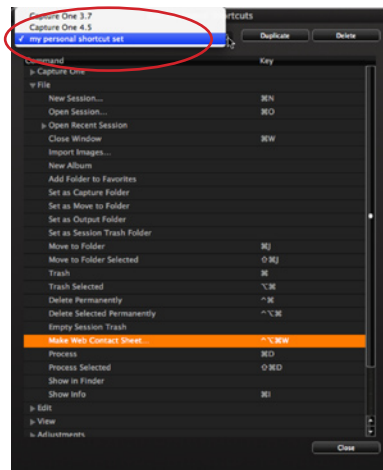
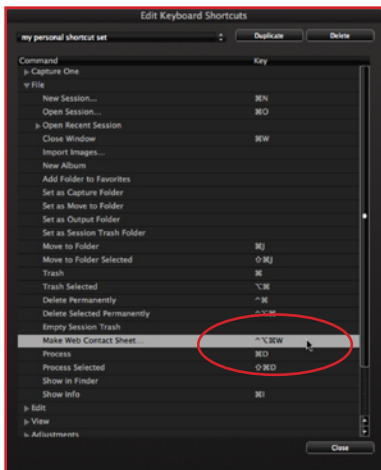
Select Capture One>Edit keyboard shortcuts (on PC Edit>Keyboard shortcuts will take you to preferences).

This window allows you to duplicate the entire set of shortcuts, rename the new set, and now you can start editing or adding short cuts.

We want to add a shortcut to create Web contact sheet, simply double-click on the shortcut, empty or not, and create your own new shortcut.

Now your new shortcut is automatically saved, and you can find your shortcuts in the list in the future.

- If you for some reason prefer the shortcuts from Capture One 3.7 – just select the shortcut set from the list.



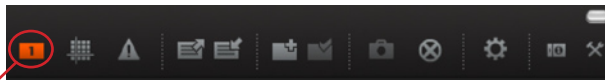
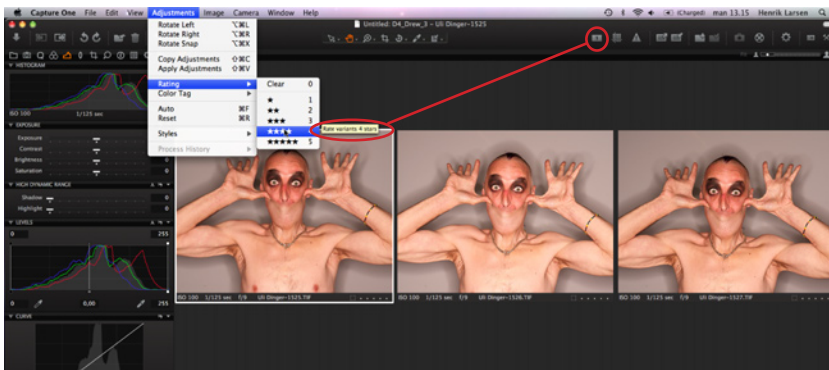
How can I edit more captures at once

Capture One now allows you to edit all selected without usage of Shift.

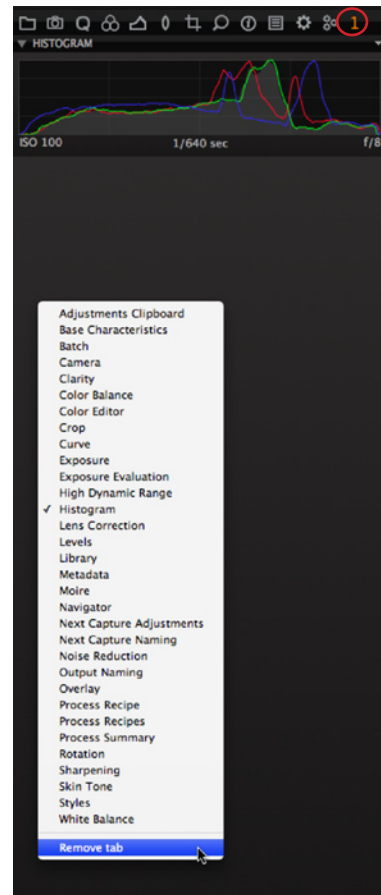
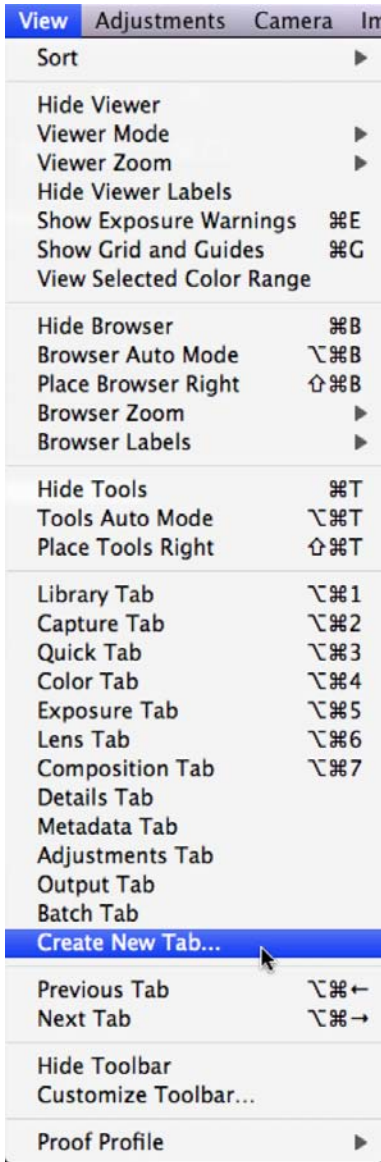
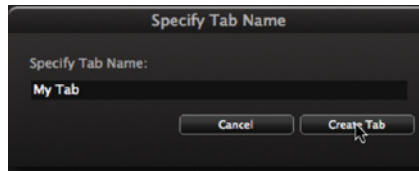
The “Edit Primary Variant Only Function”, now makes it possible for you to select more than one image and only work on the selected variant – the one with the white frame.

If the button is NOT activated you will automatically adjust all selected, when using the “A” function, Import, Rotate, Move-to, reset Adjustments, Trash, Rating, Process.

If you want to add a load of changes, then finish the changes one capture, copy the changes, and add them to many captures, this way you will save lots of working hours.



prevents working on all selected when using automatic adjustments



How can I create my own personal workflow?

For Apple® users that finds the recommended workflow awkward compared to your preferred tools, you can create your own tool tab. View>Create New Tab will open a dialogue box for you to name your new Tab, the Icon for the tab will be “1” for the first custom tab “2” for the second and so forth.

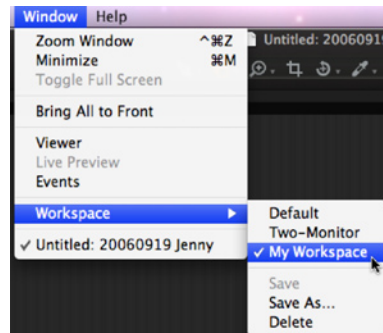
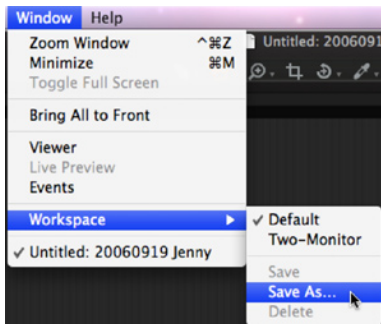
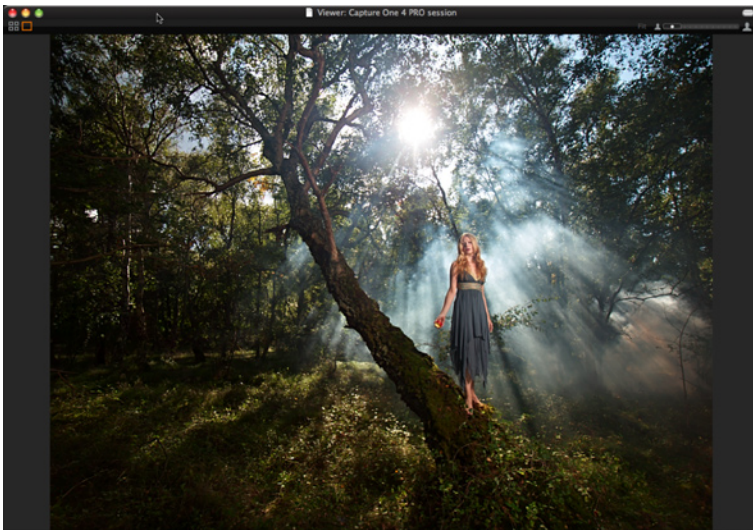
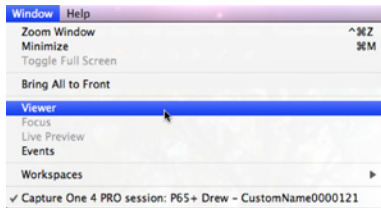
In principle you can continue filling more tools on the tab until all is there, when the area is packed the tools will automatically collapse to make more space, of course to save time in your workflow it is recommendable to not provide more tools than you can have the entire workflow open at one time.

Your new tab is empty when created, right-click on the empty area and select the tools you prefer from the entire tool palette, you can of course decide the placement of the single tool on the tab after selecting.

How can I arrange my desktop tools?

All tools can be removed from the tab or moved to float free (MAC only) or in groups if preferred.

You can even choose to move the individual tools to your second monitor, or if you prefer you can move the viewer image by itself – select Window>Viewer to release an extra viewer to be placed on the second monitor.



MAC ONLY: When you have created or edited your new personal workflow you can choose to save the workflow as your personal workflow, this feature allows storage of several workspaces, providing all users of Capture One their preferred workflow and setup.

Saving workspaces also covers two monitor setup.

3.0 Capture One, beneath the surface

What is RAW?

RAW is a term used to describe the unprocessed data generated by sensors from digital cameras and backs.

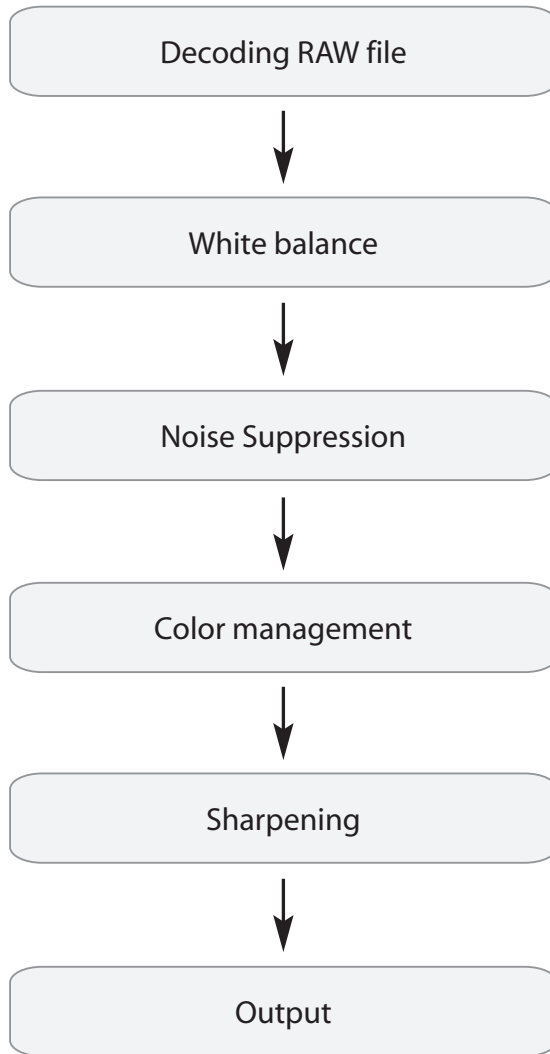
The data is generated when light is received by the photodiodes on the sensor. Depending on the intensity of the light a stronger or weaker signal is generated. This data is read off and stored as unprocessed data on the memory card. When shooting RAW+JPEG on a DSLR camera two images are stored. Basically the RAW data is stored and processed while simultaneously processing a JPEG by the camera's built-in computer.

A RAW file contains more than one set of data. A DSLR file contains calibrated RAW data plus the file header. A digital back file contains the actual raw data, calibration data for the digital back files and the file header information.

With digital back raw files the file header is kept separate from the image data. The file header contains what is described as metadata; data about data. Metadata is information recorded by the camera at the time of capture and consists of the following:

- Image Thumbnail (usually a TIF, but sometimes a JPEG)
- Time/Date
- ISO
- Exposure information
- White balance (that the image was shot at)
- Contrast curve
- Recorded pixel size
- Camera data (shutter speed/aperture/focal length etc)

Capture One 4 image engine processing



This scheme is simplified

More than 100 pieces of data are stored. We work with the details of the exposure, ISO and white balance.

The white balance determines how the file will look when Capture One creates the preview. The ISO, exposure data and camera model information are used to calculate the noise reduction used by Capture One.

How Capture One 4 reads an image

The process of reading and converting RAW data into an image is a complex one. Digital sensors contain pixel sites that are sensitive to three colors; red green and blue. Each pixel site can read only one color. Groups of four pixels make up each tile of the sensor mosaic; two green pixels, one red and one blue.

Capture One needs to “de-mosaic” the information to produce image files with three colors per pixel. This process uses an extremely sophisticated and patented algorithm, which is one of the fundamental reasons the quality of files produced by Capture One is superior.

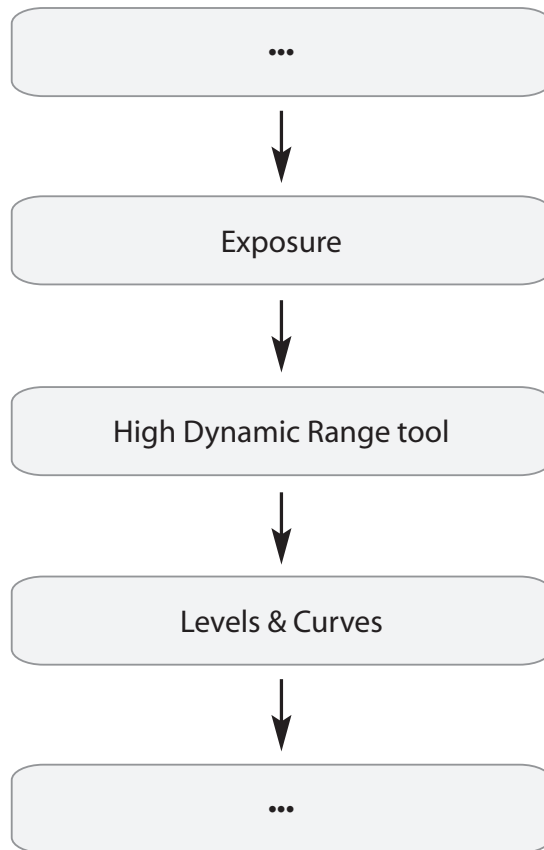
The in-camera settings ISO and white balance are applied to the image together with the formula developed for Capture One 4 when the preview is created and displayed in the Viewer.

Once a RAW file has been read, nearly all the variables can be changed such as contrast curves, sharpening and white balance e.g. all are applied to the image when the preview is created by Capture One and displayed in the Viewer.

The changes you make to the image in Capture One are applied to the preview and added to a settings file. No changes are made to the RAW data at any time.

Once the process button is pressed, RAW data is processed using the settings file. At this point the true pixel-based image is formed and output to specific dimensions.

Capture One 4 recommended user workflow

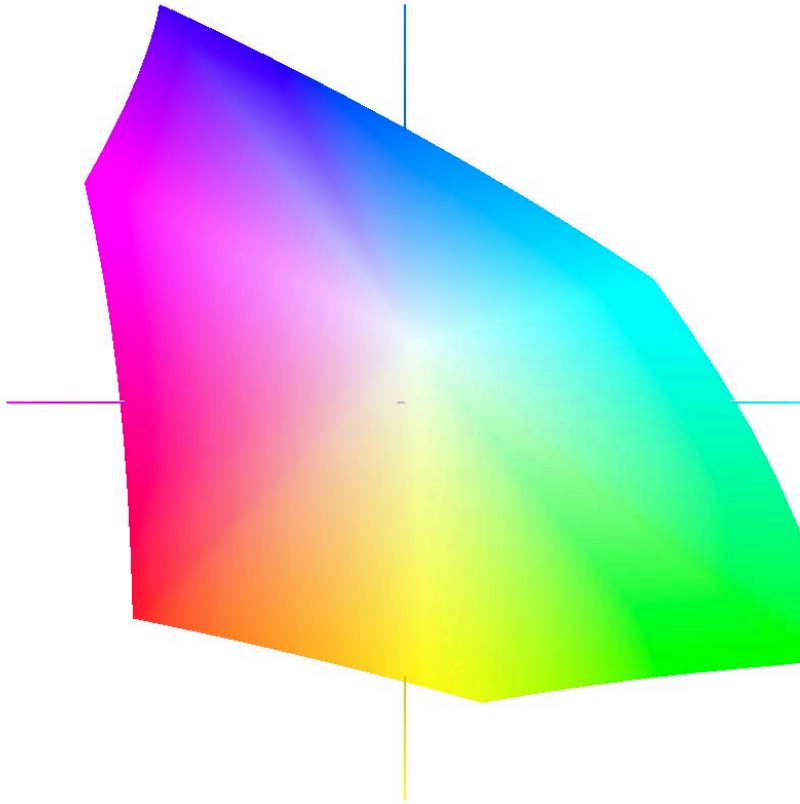


An important feature of Capture One 4 is the ability to create Variants. Each of these variants is a duplication of the settings file, not the RAW image data. Multiple variants can be created which provides a multiplicity of edits. Since they are only a few kilobytes each they take up very little space on the harddrive.

Capture One 4 workflow

Changes to images can be made in any order and little difference will result in the final file. However a structured approach to using the software leads to an efficient workflow and Phase One suggests that the following as the most efficient way of processing files:

Two-dimensional view of the Adobe RGB Color Space



3.1 Color in Capture One 4

Color is dealt with in two ways in Capture One; internally and for output.

Internally, Capture One works in a very large color space, similar to that captured by camera sensors. A large color space ensures that little clipping of the color data can occur. Clipping is the loss of image information in a region of an image. Clipping appears when one or more color values are larger than the histogram (color space of the output file).

At the end of the workflow, the RAW data has to be processed to pixel based image files, in defined color spaces. These spaces are smaller than the internal color space used by Capture One. When processing some color data will be discarded. This is why it is paramount to perform color corrections and optimizations to images before processing to a smaller color space.

How the color is handled

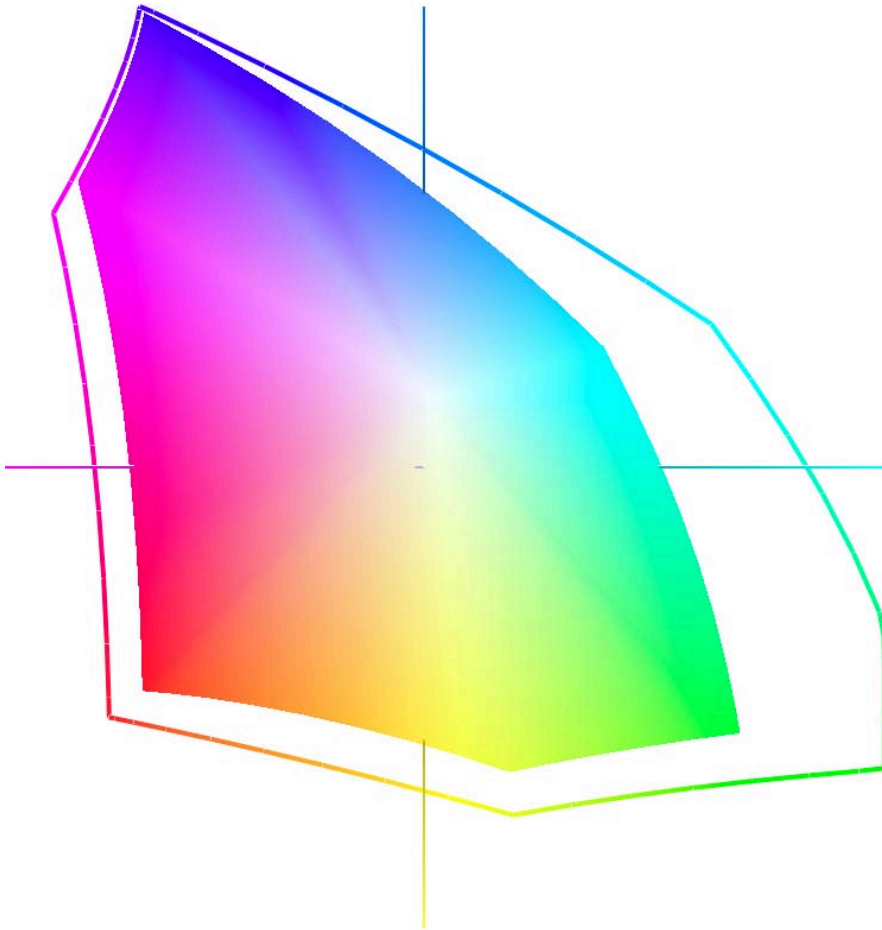
By reading the camera-generated RAW information, file header and settings file Capture One provides accurate color.

Each new camera model is subjected to many tests by Phase One R&D in order to generate a perfect color profile.

Once the camera model has been established by Capture One the RAW file is then assigned a color profile. The RAW data is then translated to the internal working color space of Capture One. It is here that the edits are made.

During processing stage, the image data is converted, by means of ICC profiles, to industry standard spaces, such as Adobe RGB or sRGB.

Adobe RGB space compared with the smaller sRGB Colour Space



Color output settings

Capture One 4 can output to any RGB color space and CMYK if Capture One 4 PRO. All that is necessary is the ICC profile is available on the local machine.

For Web

Images that will be published on web sites should be processed into the sRGB color space. This is because few web-browsers are capable of color management and the subtleties of images will not only be lost, but incorrectly displayed.

For Print

Images for print should be output to suit the requirements of the client or lab. Adobe RGB color space is a large colorspace, capable of expressing a wider gamut of colors than sRGB, making it the preferred choice for images that will be extensively processed or retouched.

Be sure to ask the client or lab which color space they prefer. This will depend on the type of reproduction or printing machine in use.

Camera Profiling

Embedding the ICC color profile into the processed file (ICC Profile> Embed Camera profile) ensures that no color changes are made to the image data, particularly important for creating camera profiles.

Retouching/Manipulation

When processing for retouching and manipulation it can be useful to output in 16 bit to ProPhoto RGB, an even larger color space than Adobe RGB. Be sure to ask the retoucher what is preferred.

CMYK Color spaces

Capture One 4 PRO provides a selection of the most common CMYK color spaces, many photographers prefers to do CMYK converting them; it secures the quality of the photo when this converting is performed by the artist and not in post production. CMYK is controlled on the output tab.

4.0 Organizing the workflow

The Library tool tab in Capture One is where all file import and file and folder organization takes place.

In the folders section of the Library Tool Tab, navigate through the folders to one that contains RAW files. When the folder is highlighted, previews of the RAW files will be created and displayed in the browser.

The Library Tool Tab provides an overview of all folders on the local machine and even on the network if sharing has been enabled.

4.1 Finding and importing files

How can I import images?

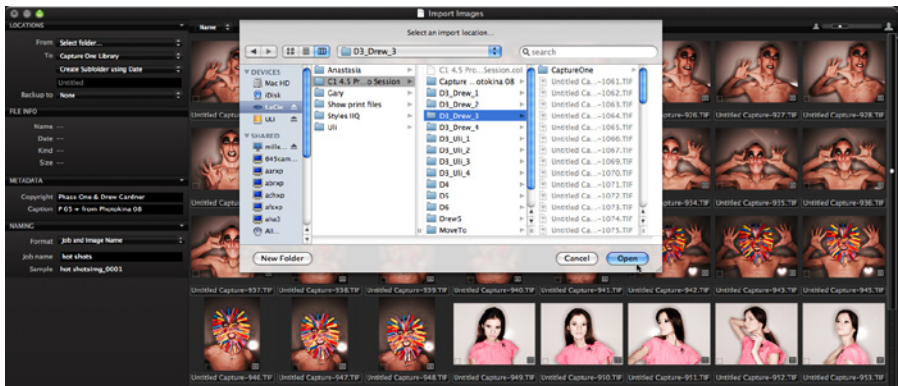
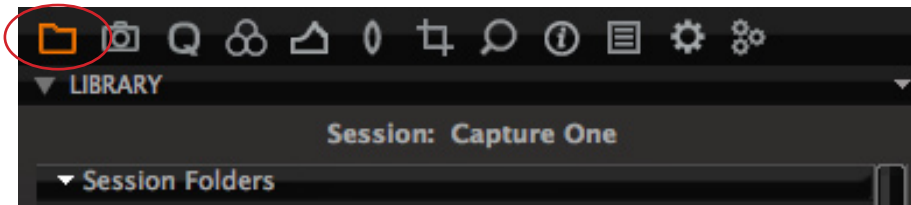
Browsing to a disk containing RAW images on a local or network computer or by importing directly from a memory card in a card reader.

Choose File > Import images or select the import images button to begin the import process. Immediately, a large dialogue box appears showing a preview of files to be imported. This dialogue box also provides a range of options from which to choose.

Inserting a memory card into a card reader will also bring up the import dialogue window. The Import window offers a range of options to make importing a quick and straightforward task.

It is important to remember that you are importing images from one location to another. You need to create or define a folder to which the files will be imported to. This can be done manually or through the Locations tab on the file importer window.

Capture One 4 can automatically create subfolders, named by date or userdefined. When importing you can also choose to rename the files, as they are imported from the camera or cd/memorycard, the file names can be changed by doubleclicking on the filename in the browser or when exporting the files.



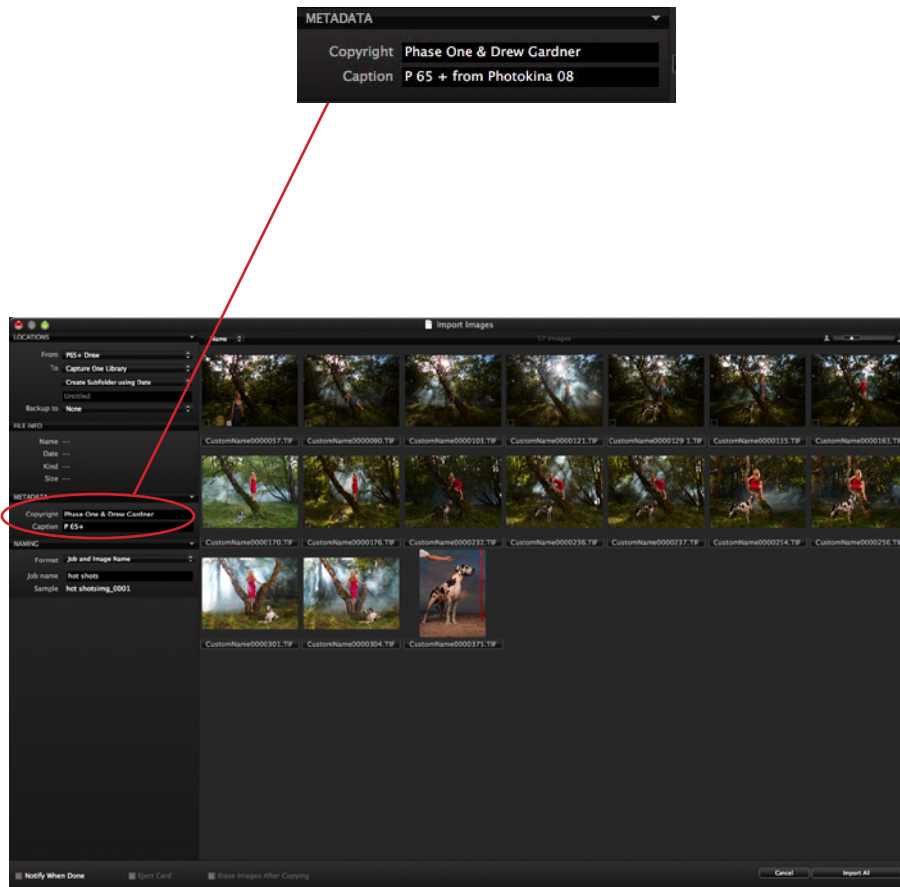
How can I export my files?

Files can be exported in several ways from Capture One 4. The original RAW files are never changed by the application, so they can be exported to another application or folder at any point.

It is important to emphasize that when you export files – you process the raw file meaning you create a new file based on the raw file containing the editing you have added. After process and export to another folder you will find the original raw file in the original folder.

Processed files can be exported in a range of formats that can be opened by industry standard imaging applications, read more on fileformats in the output chapter.

All files can be exported to any folder on the local machine or connected network, you can add Copyright and Captions already at Import.



How can I organize my images?

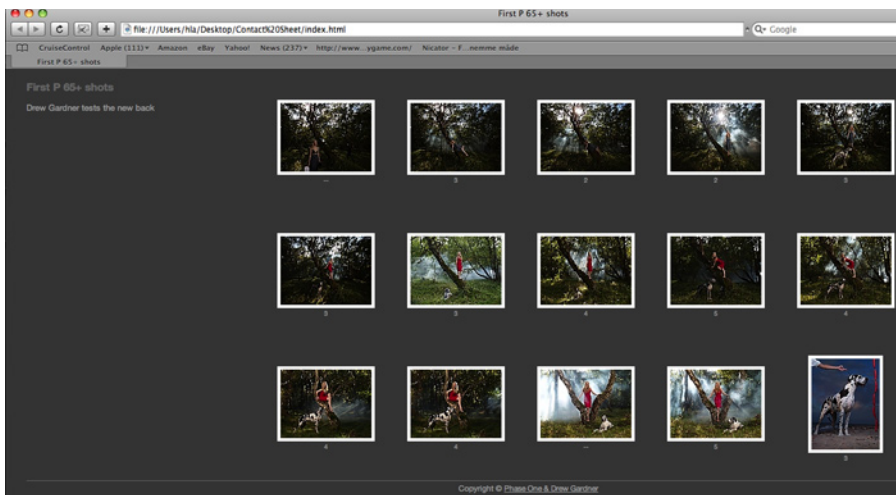
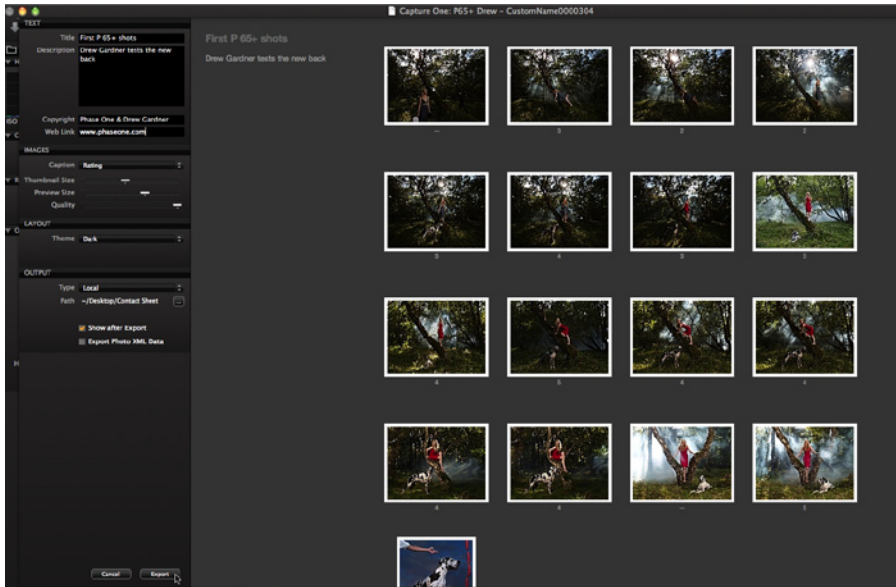
Capture One allows you to organize images in a variety of ways to suit your preference.

We recommend importing images to a folder on a main drive using the importer dialogue (File > Import Images). At the same time, the images can be copied to an archive or backup disk for greater data security.

The images should be edited. Move the best examples or those with the highest rating to a separate folder using the [Move To] function.

Once rated and moved, the best images can be quickly optimized before proofing to clients as JPEGs or creating web gallery. The web gallery function built-into Capture One 4 is extremely quick (File>Make Web Contact Sheet). The web contact sheet will, in addition to the images, show caption and copyright information, which can be added when importing files.

Once the client has approved or selected the best images, they can be further refined using the built in tools.



What are Move-To Folders?

Move-To folders help create an effective and extremely rapid workflow by moving great images to a separate folder, rather than rating, selecting and then moving the images.

How do I use the Move-To functionality?

Select the folder with RAW files, Right Click > Add New Folder.

Name it appropriately (Select, Best, Keepers) and then select it, Right Click > Set as Move To Folder.

When moving through images in the main image folder, any file can be selected and moved to the new folder by clicking on the Move-To button or using Cmd/Ctrl J

To see the images that have been transferred to the Move-To folder, go Library > Application Folders > Move-To Folder

An alternative way of working is to create a single folder that will always serve as the Move To for all images. Follow the same procedure or simply navigate to a chosen folder, highlight and Right Click > Set as Move-To.

Output Folder

In the same way that Move-To folders can be specific to a group of images or a nominated folder on the hard disk, the output or process folder can be set in the same way, depending on the preferred way of working.

To add it as a sub folder for a group of images, follow the procedure for Move-To above and when Right Clicking, choose 'Set as Output Folder'.

To create a single output folder on the hard disk, double click on Application Folders > Output Folder. A dialogue will appear, navigate to the folder you wish to use for your outputs or processed files.



4.2 Rating files

Rating the images offers a way to sort through the images in a meaningful way. Rating is available from 1 to 5.

How can I rate images?

Rating (marking images with stars based on preference) can be done in the Browser, either in list or thumbnail view. Simply select the image that will be given the same rating and use the number keys 1-5 on the keyboard to apply the rating.

Grid mode makes it easy to rate. Navigate using the arrow keys and press 1-5 as desired. This is an efficient way to rate images quickly.

Alternatively, select the image and then Adjustments > Rating from the menu.

To remove a rating, hit 0 choose Adjustments>Rating>Unrate.

Can I give the same rating to multiple images at once

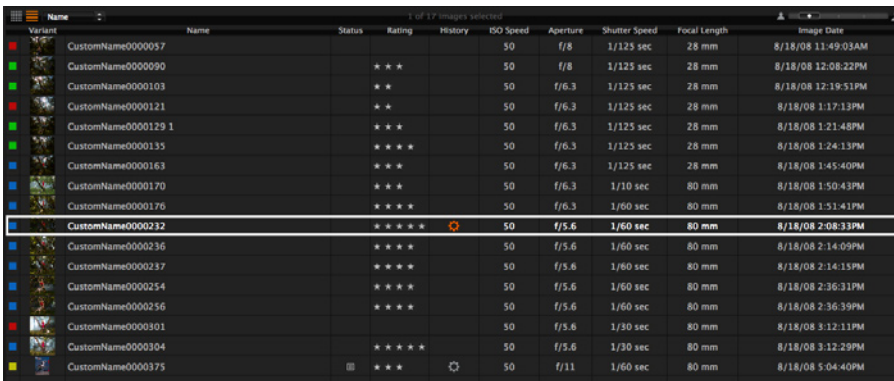
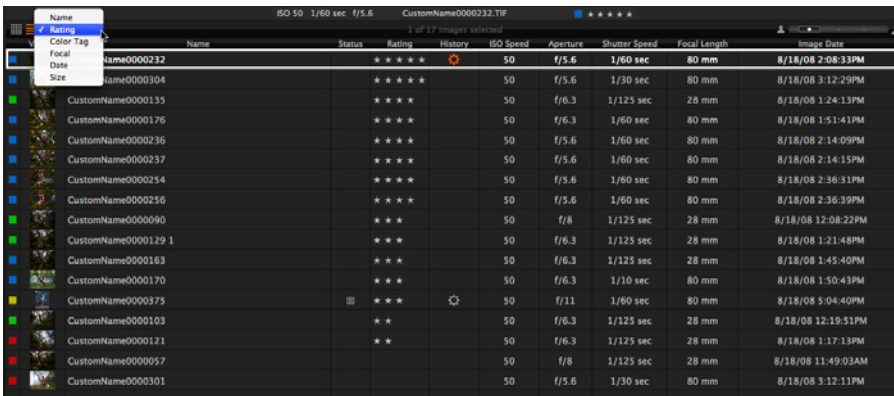
If you select more images you can rate them either by pressing [CTRL/mac] or [Shift/Win] and pressing 1-5 or Adjustments > Rating from the menu.

Can I sort my images by Rating?

Images can be sorted by rating. Go to the Browser Toolbar and select list view and then press sort. The images will be sorted in ascending order from 1-5. To reverse this sort order press sort again.

Can I select by rating?

Images can be selected by rating. Edit > Select by rating.



Colortag

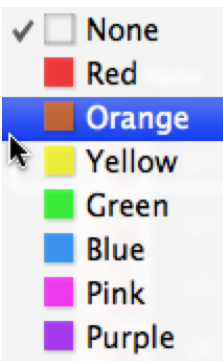
The PRO version provides color tagging as a rating and/or sorting possibility. Sort your capture in up to 7 different colors, this feature have been wanted from many professional photographers.

Color tagging is easier overviewed visually than rating.

Use colortag side-by-side as a sorting possibility with the rating system, this provides a possibility of a divided priority between you and your client, or assistant(s).

Right-click on the square next to the thumbnail and the color tag menu appears, or select Adjustments>Color Tag and choose the color.

After tagging the images, you can sort by colors.



Name	Status	Rating	History	ISO Speed	Aperture	Shutter Speed	Focal Length	Image Date
Name0000163		***		50	f/6.3	1/125 sec	28 mm	8/18/08 1:45:40PM
CustomName0000170		***		50	f/6.3	1/30 sec	80 mm	8/18/08 1:50:43PM
CustomName0000176		****		50	f/6.3	1/60 sec	80 mm	8/18/08 1:51:41PM
CustomName0000232		****		50	f/5.6	1/60 sec	80 mm	8/18/08 2:08:33PM
CustomName0000236		****		50	f/5.6	1/60 sec	80 mm	8/18/08 2:14:09PM
CustomName0000237		****		50	f/5.6	1/60 sec	80 mm	8/18/08 2:14:15PM
CustomName0000254		****		50	f/5.6	1/60 sec	80 mm	8/18/08 2:36:31PM
CustomName0000256		****		50	f/5.6	1/60 sec	80 mm	8/18/08 2:36:39PM
CustomName0000304		*****		50	f/5.6	1/30 sec	80 mm	8/18/08 3:12:29PM
CustomName0000090		***		50	f/8	1/125 sec	28 mm	8/18/08 12:08:22PM
CustomName0000103		**		50	f/6.3	1/125 sec	28 mm	8/18/08 12:19:51PM
CustomName0000129 1		**		50	f/6.3	1/125 sec	28 mm	8/18/08 1:21:48PM
CustomName0000135		****		50	f/6.3	1/125 sec	28 mm	8/18/08 1:24:13PM
CustomName0000375		***		50	f/11	1/60 sec	80 mm	8/18/08 5:04:40PM
CustomName0000057		**		50	f/8	1/125 sec	28 mm	8/18/08 11:49:03AM
CustomName0000121		**		50	f/6.3	1/125 sec	28 mm	8/18/08 1:17:13PM
CustomName0000301				50	f/5.6	1/30 sec	80 mm	8/18/08 3:12:11PM

4.3 Working with albums

Working with albums

Album folders are virtual collections. Albums is an easy way to compare images from different folders, without having to place the images in the same folder. In addition to this, Albums only references images from folders, it doesn't copy them. Making changes to images in Albums will however affect the source image.

How can I create a new album?

A new album can be created in several ways.

File > New Album or

Library Tool panel: Right click > Add New Album

How can I add images to an album?

Images can simply be dragged individually or as a group, to an album. When the images are moved a variant is created, so the original remains in its location.

How can I remove images from an album?

Select the image to be removed and hit the backspace/delete key or right click on the image and select delete. Only the variant in the Album is deleted, the original RAW file in its folder remains.

How can I move images between Capture One and my OS file browser?

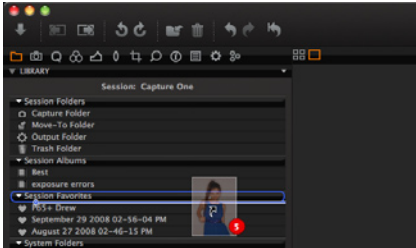
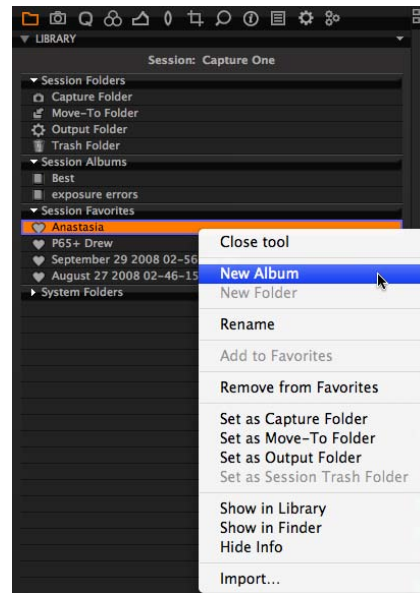
Images can be dragged and dropped from the Capture One 4 Browser into the OS file browser and vice versa. Using the Option key during the drag/drop operation allows you to switch between move and copy operations.

If the image movement is initiated from Capture One then the associated settings file will also be moved along with the image. Your image settings changes will not be lost.

If the image movement is initiated from the Finder then the associated settings file is not moved; unless you manually move the settings separately any changes will be lost when reading the image from the new location.

How can I remove an album?

Highlight the album and go Edit > Delete Album. Alternatively, right click > Delete.





How can I easily compare images?

The Compare Item feature is a tool that helps to compare one image with multiple others. This helps to progressively determine the best image from a similar group.

Hit the Enter button and the selected image is automatically set as a Compare Item and the Viewer switches to multiple up mode, comparing your image of choice to the next image in the sequence. This can also be a powerful tool when doing tethered sessions, compare the “best” shot with the incoming captures as they land on your computer. Your Compare Item image has a thin orange frame around it.

To set a new Compare Item you simply hit Enter on the image you have selected (either in the Viewer or the Browser).

To deselect a Compare Item altogether you hold down Cmd and hit Enter when having selected the Compare Item.

4.4 About Favorites

What is a favorite?

A favorite is a bookmark or a shortcut for a regularly used folder.

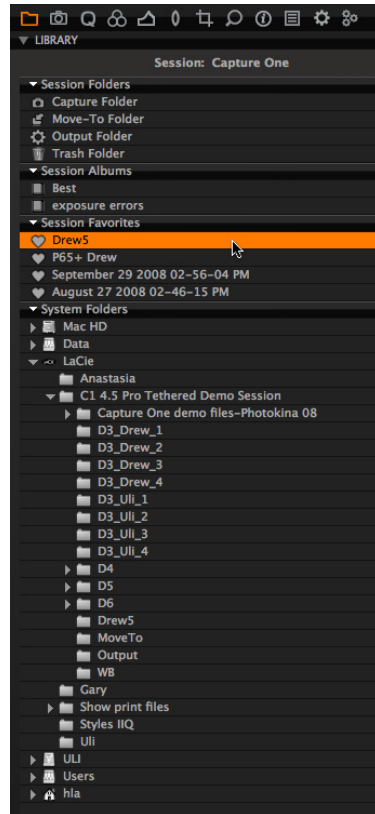
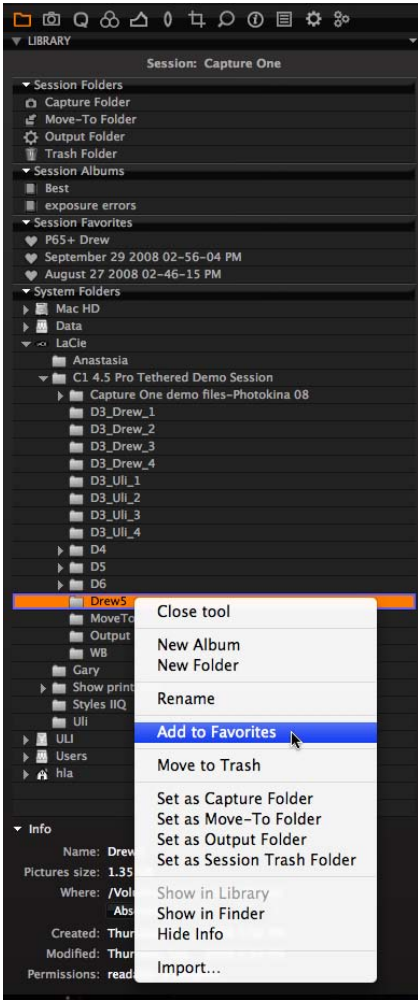
Favorite folders are cached, which means that it is faster to access images stored in these favorites over and over again.

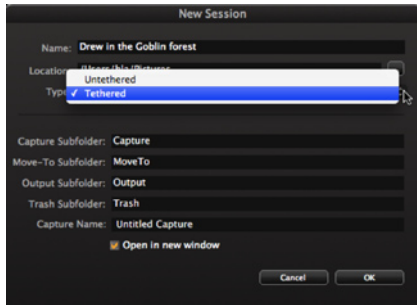
How can I make a folder a favorite?

Select a folder, so that it is highlighted and go File > Add folder to favorites. Alternatively, Right click on a folder in the file browser and chose “Add to Favorites”.

How can I remove a favorite?

Select the favorite and hit backspace/delete or Right click > Remove from Favorites





4.5 Sessions

Why work in sessions?

When working in projects as many photographers are doing, it is natural to store the project as a complete project instead of spreading the files, especially when your work often will consist of raw files, settings files, library files and output files. When saving a session you will also automatically create a session file, this file will re-open the session providing you an easy access to an already done project.

Many photographers prefer to split up a client's session in several sessions, to keep products apart, or images in a page-by-page system according to the page in a catalogue.

How do I create a new session?

Creating a new session is an easy task, which will save you loads of working hours.

Choose File>New Session

The New session box opens

Use a relevant name for the session, this will make it easier finding the session if needed later on.

Decide where to place the session folder; this folder contains the relevant sub-folders, which you can rename too.

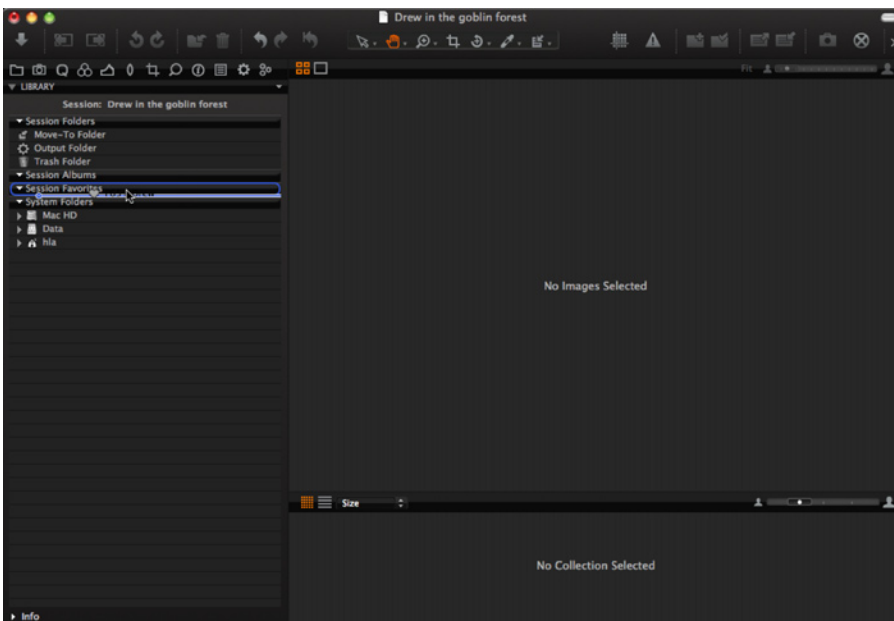
TETHERED/untethered: if you select tethered you have the possibility of shooting tethered directly in the session, you can change name of the Capture subfolder, and this folder will also be placed in the session main folder.

The Move-to folder provides a session based lightbox, in fact likewise the favorite folder, but use cmd+J to sort you the photos in your session in an easy way.

The out-put folder contains your processed files.

The Trash folder this does not refer to the OS trashcan, but is a session trash – only when the session trash can is emptied will the files go to the OS trash.

Let the session open in a new window and Capture One is ready for work. You will see the name of the session on top of the library tab.



Check the folders link by marking the individual folder in Library Tool Tab, if the link is set to be absolute, the link will not be automatically adapted when moving the session; to make the subfolder follow the sessionfile set this the link to "relative".

When the session is done, close the window, and you will later be able to open the session, and all files will be as you left them.

When you want to re-open a session you can either choose File>open session and browse you way to the session file SESSIONNAME.COL or browse to the file, double-click in your OS browser and Capture One will automatically open in the session.

Can I work with more than one session at the time?

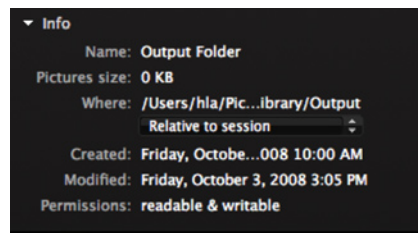
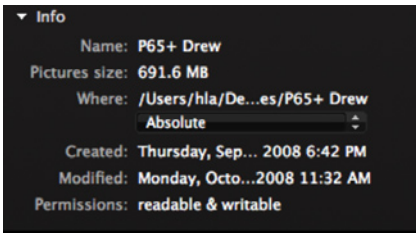
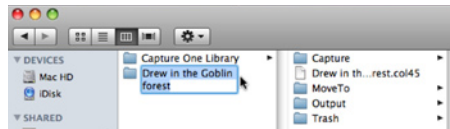
Open your sessions in new windows, this way you can have more than one running process, this enables you to keep shots or clients for themselves ...

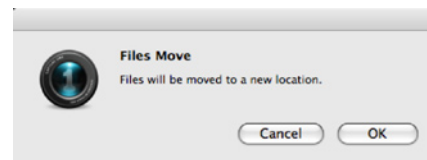
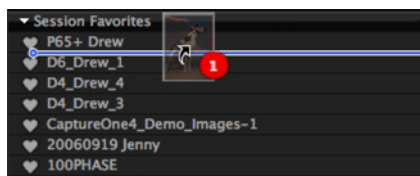
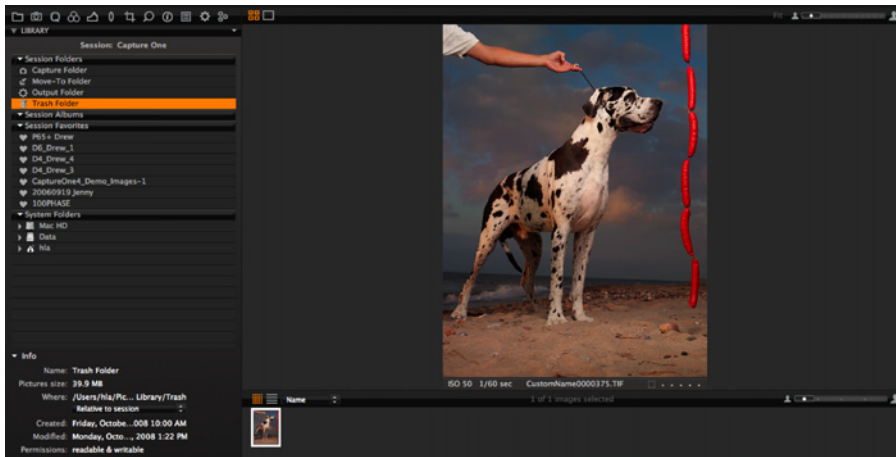
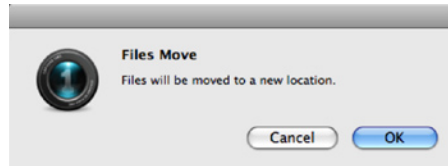
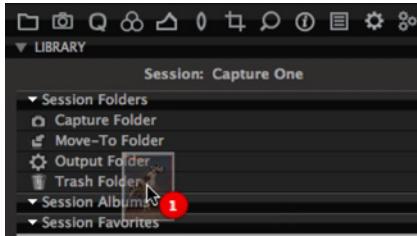
How do I move a session to another computer?

A sessions is movable, browse to the session's folder, and move all files in the folder.

This is created not only to make archiving easier, but also to make it possible to work on both platforms for the same client.

Please notice, when you move files, the session subfolders should be linked relative, to assure automatic update of the link. If the link is absolute, you will loose connection to the folders when changing location.



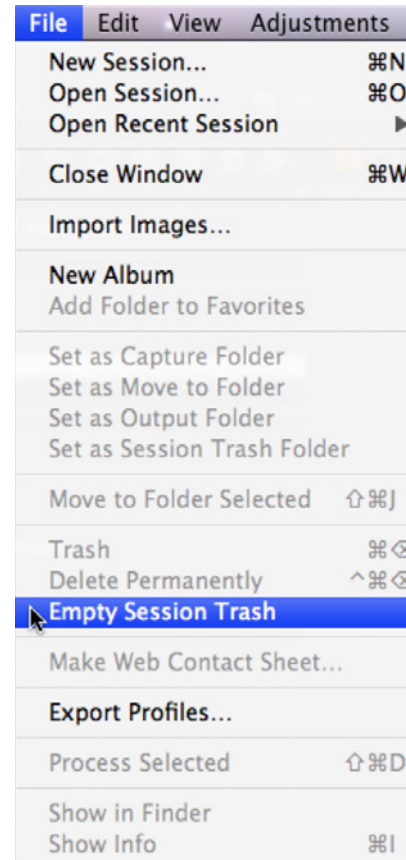


How can I find/recover files from the session trashcan?

Files deleted by clicking the trash can icon will be placed in the session's trashcan, also seen as the trash folder in the Library tool tab.

From this trash folder you can retrieve images very simply by going to the library tool tab select Trash Folder, now you can see the files in the Trash Folder and you can easily retrieve these by drag'n'drop back into the folder you want them – Capture One will automatically move the cache and settings files.

The session's trashcan is emptied by selecting File>Empty Session Trash.

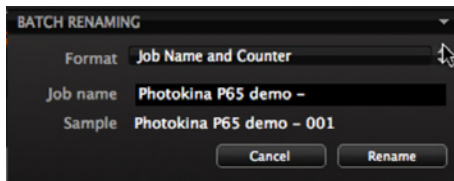
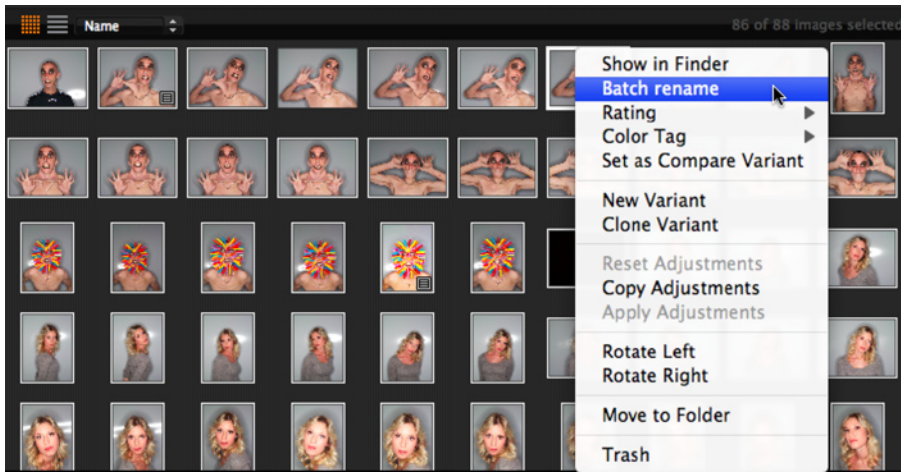


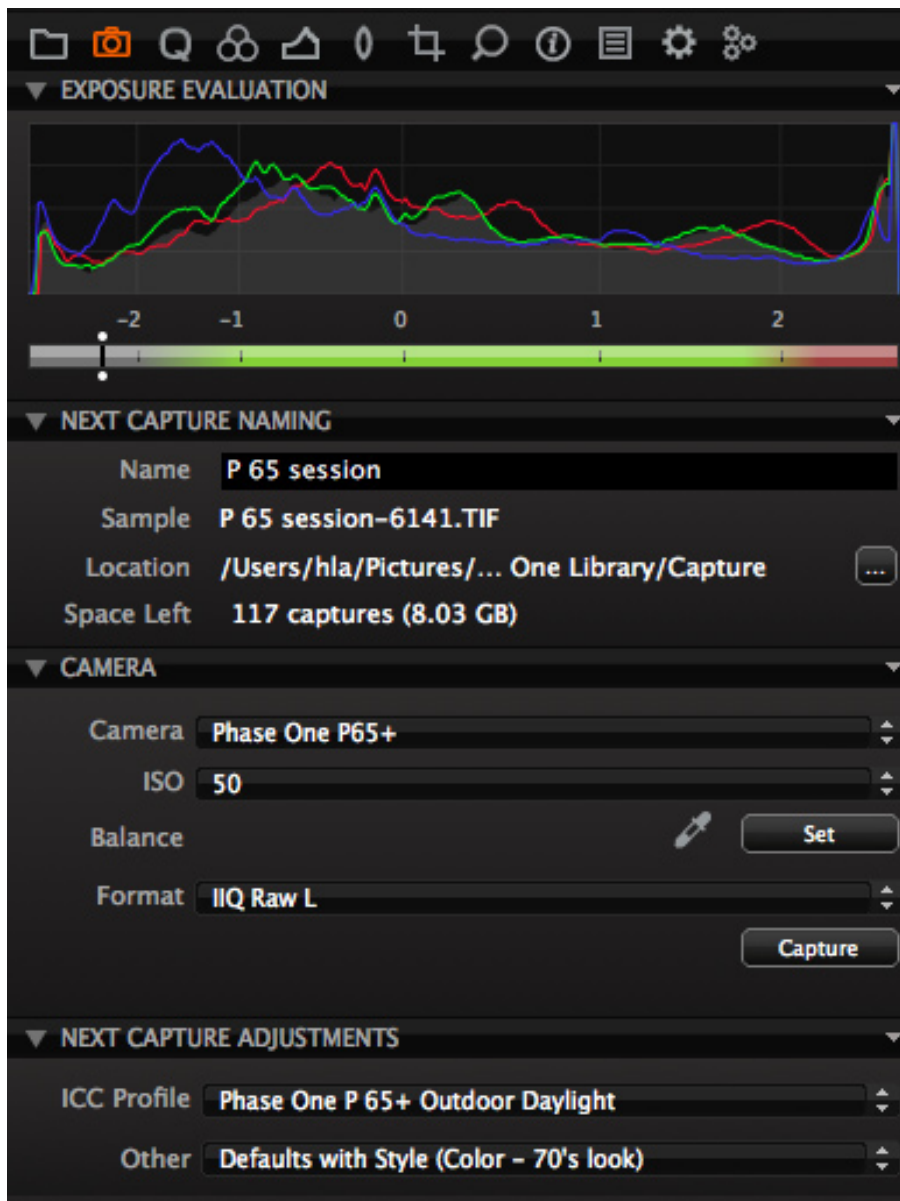
Can I change name of the capture after import?

If you wish to change the caption after import, this can be done easily. Select the images you want to change caption on, and right-click on one of the selected images in the browser.

Now you have the image browser menu, providing tagging, variant and rotation features amongst other options – but second from the top you will find Batch Rename; this feature allows you to rename many files at once.

A small Batch Rename window will open, you can choose between job name and counter, job and image(capture) name, image(capture) and job name, when the dialogue is filled out press Rename, and the files will instantly be renamed.





5.0 Capture

Introduction

With Capture One you can speed up the creative process by capturing images directly to the computer and have them appear almost instantly in the application.

5.1 Tethered capture

Capture One lets you shoot tethered with your Phase One digital back, Canon DSLR or Nikon DSLR which means you are shooting images directly onto your computer without any interim storage.

To shoot tethered connect your Phase One digital back or Canon DSLR to the computer using a FireWire cable, the digital back will automatically be recognized. USB can be used if necessary.

The Capture Tab is the control center for shooting tethered.

Capture Folder

When you are shooting tethered with a Phase One digital back, you can select the folder where you want to store the captured images. You can do this directly from the Capture Tab or alternatively in the Library tab.

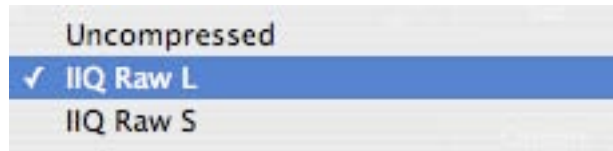
5.2 What controls should I check before capturing?

Capture naming will allow you to control the name and numbering of your captures, write the desired capture name, if you need custom numbering, choose between 2-6 digits as well as the camera counter.

Check if the ISO, white balance and file format is as you want, if they aren't you can change them directly in the Capture menu.

With the Next Capture Adjustments tools you have flexibility in setting capture presets (e.g. ICC profile, white balance, exposure adjustments etc.) for the images to come, thus creating a series of images with consistent looks already from the capture moment.

From the next adjustments tool "Other" you can recreate the look of either your primary selected image or the last capture. Any changes you have made to these captures will be applied to the next capture. Or you can simply stick by using the default settings.



5.3 What are IIQ RAW S and IIQ RAW L?

Phase One digital back users can choose between storing their tethered captures in 2 different types of compressed RAW files. The format for the captures can be set by using the camera tool in the capture tab.

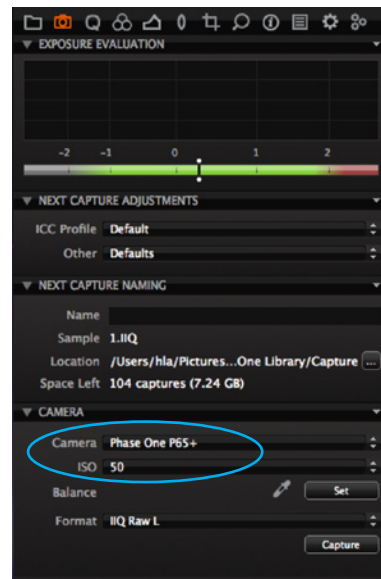
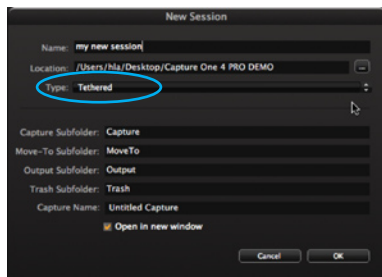
Intelligent Image Quality RAW, IIQ RAW, is an intelligent way of turning the full 16 bit image data captured by the camera into a compact RAW file format.

What makes the IIQ large RAW format unique is that it is completely lossless. IIQ RAW Large, can be processed in to a 16 bit TIFF even though it is only half the size of a traditional RAW file.

IIQ RAW Small format is based on the full 16 bit data captured by the CCD, but unlike IIQ RAW Large it is not 100% lossless. However if your capture is made on low ISO and well exposed, there will be no difference.

What is uncompressed Raw?

Uncompressed Raw is a Phase One legacy format supporting older digital backs.



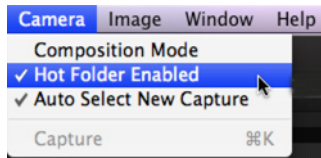
How do I start a tethered session?

Tethered photography is very straight forward on Capture One 4 PRO. Plug your Phase One digital back or supported Canon or Nikon camera to your computer, for perfect workflow check the hardware set-up compared to the recommendations.

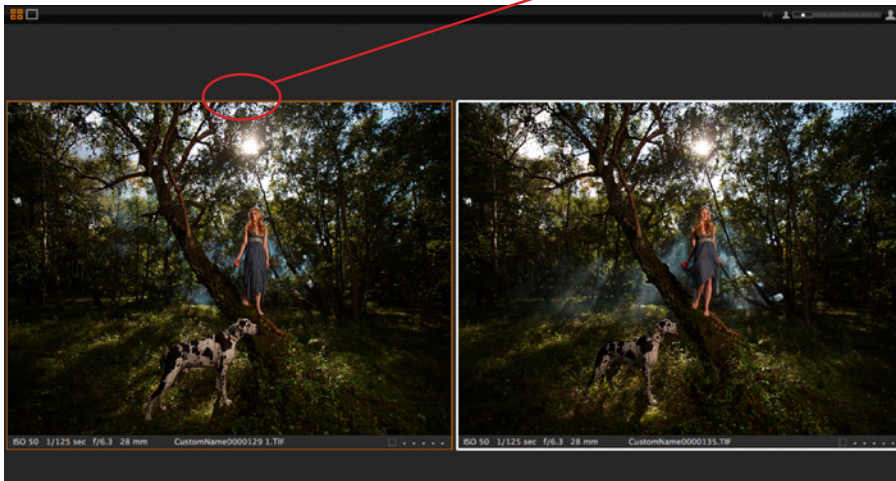
Turn on Capture One 4 PRO and create a new session, select tethered session.

Your camera will automatically be recognized by Capture One if supported and connected properly. It is recommended to use FireWire cable of max 4.5 meters, as longer cables from time to time can provide a less stable signal.

You are now ready to shoot, the capture will automatically pop-up in your viewer as you do the shots.



Orange=Compare variant



Tip:

To capture images from 3rd party cameras to Capture One using hotfolder functionality you typically need designated capture software provided by the camera manufacturer. This 3rd party software is not provided with Capture One.

5.4 Using Hot Folder

If you have installed remote capture and control software for your 3rd party camera (see tips box) you can use the Hotfolder functionality to have captures appear almost instantly in Capture One. To activate this feature enable it from the Camera menu. Capture One 4 will automatically show the latest image added to the folders

5.5 Can I compare images while shooting?

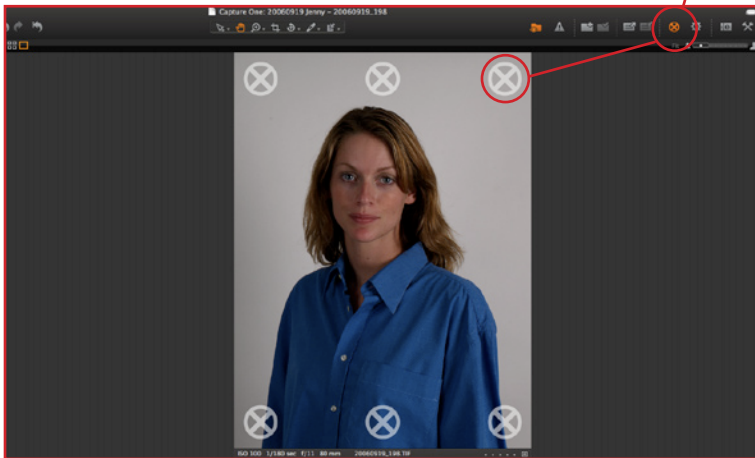
Combine tethered shooting or shooting using a Hotfolder with the Compare Item feature in Capture One and you can have two or more images appear side-by-side for comparison. On the one hand side you have your favorite (i.e. The Compare Item) and on the other hand side you have your incoming captures. This provides easy comparison between your selected preferred shot and your latest capture.

Can I change ICC profile during a tethered session?

You can change ICC profile at any given time. It is important to notice that some supported camera models does have more than one ICC profile designed to optimize the many different capture situations a professional photographer can experience.

If you select an ICC profile for another camera you might very well experience the captures turning out very wrong – as the various different cameras interpreters colors very differently.

Compositionmode



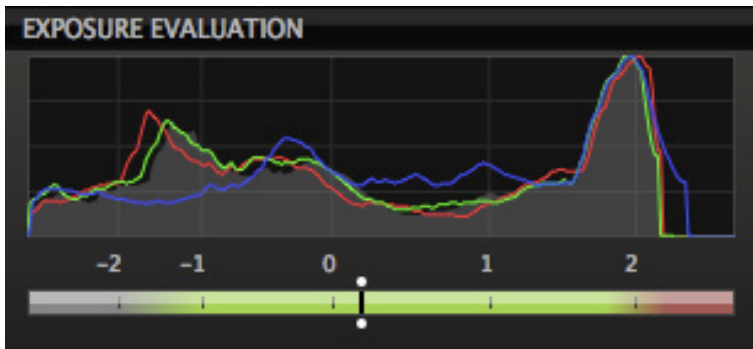
5.6 How can I do test shots?

A smart way of doing test shots, is by choosing Camera>Composition Mode; add a “V”checkmark here or by pressing the toggle composition button. When in composition mode the latest capture will always be saved on the previous capture erasing the previous, if you do a capture that is satisfying during your test shots, simply unclick the checkmark or the composition mode button, this way you can always decide to keep a great shot – this is a very simple and easy way of making test shots, without using valuable hard disk space.

What does exposure evaluation show?

Exposure evaluation is in fact the Histogram of the latest captured raw file. When editing the raw file after capture, you will see the changes made in the histograms in the different relevant tabs. But the Exposure Evaluation will stay as originally captured, as it is referring the exact capture.

Right below the Exposure evaluation you will find the Exposuremeter, this provides an indication on under/overexposure based on center weighted measuring and calculated in aperture values.



The marker is made to be viewed at a distance to make estimating the exposure easier when working tethered in studio or when shooting tethered on location.

What is the Auto Select capture function?

Auto select is by default ON but if set to off tethered capture will not automatically change the primary capture for each capture, though the thumbnails still will be continuously updated. This enables a calmer workflow if an assistant is assigned to the computer whilst the photographer can work uninterrupted.

How can I further edit my images after capture?

When your captures are created they are automatically stored in the folder chosen in Location in the naming part of the Capture Tab. From here you can do all editing just like if you had imported the file from a CF-Card.

Can I control my camera from Capture One?

Software control of camera for tethered sessions is the last tool in the Capture Tool Tab.

Camera controls allows you to take control of the most relevant functions of your Phase One camera; Program, Manual, Tv, Av, X, e.g besides programs you can take control of shutter speed and Aperture when possible.

You can at any time control the Exposure value Adjustment.

All the above menus are created as drop-down menus, and you can even control the steps of these; 1/3, 1/2 or 1/1 step compared to the traditional scale.

Read all regarding supported cameras and backs in the release notes.

5.7 After tethered capture

Your first shot of a session can very wisely be used to set white balance, use a greycard as a part of your image. When you have captured the raw file, you can set white balance easily, by using the tool in the camera section of the Capture tab, when this is satisfying, you can copy the settings to the next capture, by using the Next Capture Adjustments. This way you do not have to set white balance on all images afterwards. Also if youre a Phase One digital back user, you can choose to upload you White Balance directly to the back

5.8 PRO Capture

Can I shoot tethered “into” an existing composition provided by the art director?

The Crop Tool Tab provides the Overlay function, this allows you to load in a sketch drawing e.g. from an Art Director.

The sketch drawing should be in RAW, TIFF, JPEG or PDF. On PC you can use JPEG, TIFF, BMP, PNG, GIF. Browse your way to the file, and choose show. You can now see a transparent version of the selected image on your variant if you shoot tethered and want to check more than one image at the time, just select the images you want to see with the lay-out sketch drawing and it is on all at once.

You can control the opacity of the sketch drawing and also scale it up or down as well as moving it by using the sliders, this will save you time from cropping or scaling the images until you know you have the shot.

It is worth noticing that you can move the sketch drawing by using the handtool, while pressing alt and mouse click.

Will the overlay be seen on my output file?

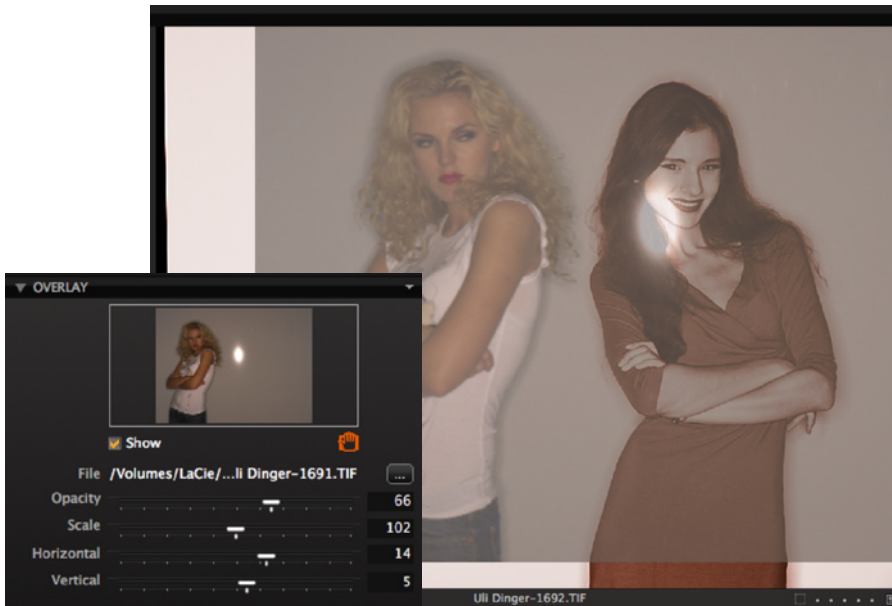
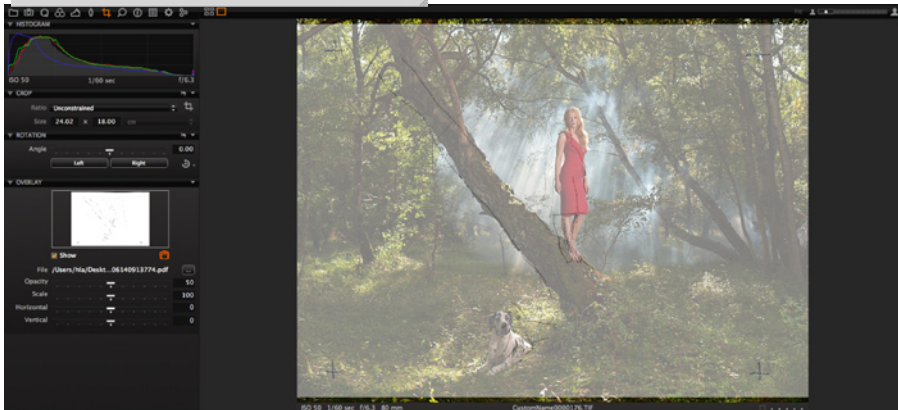
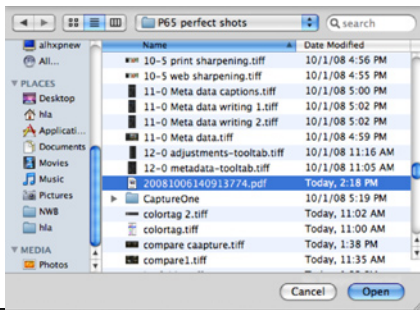
The overlay function is merely a possibility for you to check your capture against a given layout. When you output the file, you output the RAW that fits the sketch.

How can I make sure that my images matches for layer merging in post process?

When making captures that needs to fit each other, the overlay function will assist you in checking if the captures will match, this function can easily be used in situations where you have the client in the studio, this way you can easily illustrate the final result.

Use the same function when your client needs a photo matching an exact layout, the overlay function will read the different format, by using overlay function you can check or illustrate that your setup will match the task given.

Adapt the overlay file by using the sliders, to match your capture, or simply use the “move overlay” hand tool in the cursor tools.



5.9 Can I check focus and composition without looking in the camera?

Live Preview is fully integrated with the Capture One software. When the camera is attached and recognized, select Window>Live Preview to display the composition window. The composition window can be moved outside the Capture One application and ideally be placed on another monitor adjacent to the set. The composition window is scalable for long distance viewing and the color reproduction is the best in its class. To further improve the workflow, it is possible to load an overlay image (by using the settings from the overlay tool) and compose with this as a guide line. To ease composition it is possible to turn on the square grid by using the crop preferences.

Digital camera back support

Following digital backs support Live Preview out-of-the-box: P 20+, P 21+, P 25+, P 30+ and P 45+. The Live Preview functionality can be purchased for the following digital backs as a hardware upgrade: P 21, P 30 and P 45.

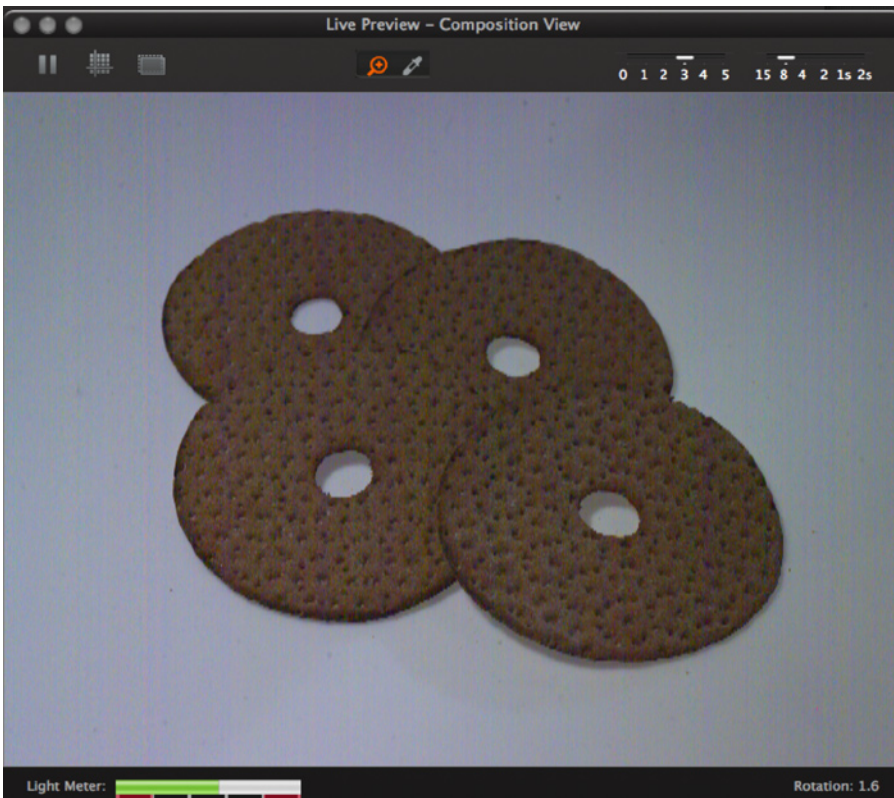
Camera body support. The following camera body support Live Preview functionality:

- Hasselblad H series
- Hasselblad V series
- Mamiya 645AFD and 645AFD II
- Mamiya RZ67 Pro II and Pro IID
- Contax 645

- Technical cameras (4x5):

- Arca Swiss, Cambo 4x5
- Rollei Xact
- Linhof M679/4x5
- Toyo
- Sinar
- Plaubel and Horseman.

- Wide angle: Horseman SWD, Cambo Wide DS and a range of adapters with 35 mm support.



Launch

When the Live Preview enabled back is connected, the Window>Live Preview menu item will be enabled. By default Live Preview is paused in composition mode.

Shutter

Technical and wide angle cameras: Use the camera on full open or in stopped down mode (with the shutter set on the preferred f-stop).

Medium format cameras: Open shutter and keep it in B or T mode depending on choice of camera system. Hasselblad H: T-mode. Hasselblad V: B-mode. Mamiya 645: B-mode. Mamiya RZ67 Pro II and Pro IID: T-mode. Contax 645: B-mode.

Press play

Start composition mode by pressing the play button.

Adjust the exposure

Notice the reading on the exposure meter. Since Live Preview works without a physical shutter, it is important to adjust light/aperture for optimum operating condition for the virtual shutter. Adjust until the exposure meter is in the green area. For long shutter speed stay in the lower half of the green area.

Adjust lightness

If the Live Preview image seems too dark or too bright, adjust the ISO gain and/or the shutter speed. Lower ISO gain means less noise in the image. Longer exposure time improves image quality at the expense of a slower frame rate.

White balance

If the white balance is not correct, a new white balance can be set using the white balance tool, and clicking on a gray area in the composition preview. Typically, a gray chart is temporarily placed in the setup for this purpose.

Set image scene

When the exposure is adjusted, the set can be composed. To ease composition it is possible to turn on a square grid. The amount of grid lines and their color are adjustable through the use of the preferences.

To further improve the workflow, it is possible to load an overlay image and compose with this as a guide line. Overlay opacity is configurable in the overlay panel.

Launch focus window

With the composition and pilot lighting in place, the focus window is launched by pressing the magnifier symbol, placing the magnifier symbol in the area of focus interest, and then left click.

Handling the focus window

In the composition window the focus area is indicated with a box. The focus window is launched and will be updated 1.5 to 3 times every second, depending on the size of the window. The window can be moved outside the Capture One application and ideally be placed on another monitor adjacent to the set.

The focus window can be resized and provides zoom function for easier viewing from long distance if needed Left-click with or without pressing ALT for zooming in or out.

Pause Live Preview

The focus is adjusted while viewing the focus window. When the focus has been adjusted and is considered to be perfect in all relevant areas, the Live Preview is paused by pressing the pause button.

Capture

Close camera shutter. Close the Live Preview window. Start capturing. The image is transferred to Capture One which immediately displays a high quality preview. Focus can again be verified through the use of the focus tool in Capture One.

6.0 Optimizing the colors

Introduction

To create a properly exposed image, the correct amount of light needs to reach the camera's imaging sensor.

Once the sensor transfers the information into the RAW file, Capture One allows the data to be edited by lightening or darkening the image. Capture One allows fine tuning of the images. With the tools it is possible to save an incorrectly exposed image. Bear in mind that these tools are not a substitute for correct exposure and good photographic technique.

If the image is too bright or over-exposed (the sensor has received too much light), the highlights may be 'blown out'. The sensor has received so much extra light and cannot differentiate tonal differences in the highlight areas.

Capture One has excellent new tools e.g. the 'High Dynamic Range' which recovers and expands detail in images with extreme contrast.

What is the best workflow for image optimization?

For most images, with correct exposure and white balance, few edits will be required. Achieving a white balance from the given light source can save you a great deal of work.

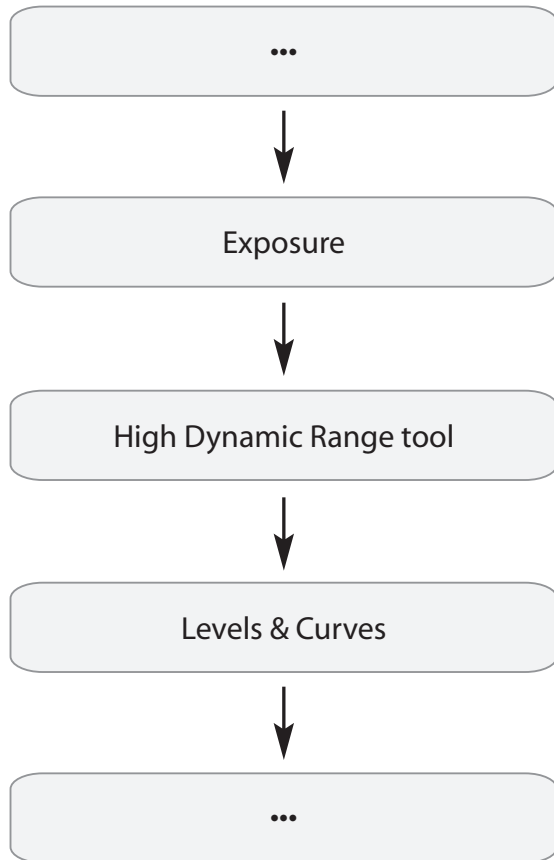
For images requiring optimization, the best workflow is as follows:

- Set the correct white balance and fine tune if necessary
- Color correct or enhance
- Adjust or fine tune exposure using exposure, brightness and/or contrast sliders

For users comfortable with more advanced controls, first optimize levels and then fine tune contrast with curves.



Recommended exposure adjustment sequence



The High Dynamic Range tool will help to recover loss of detail in highlights and shadow areas. Be aware, the Highlight as well as the Shadow slider will affect all colors and shades; first try carefully to recover the information (pixels) hidden in the highlight, then easily adjust the shadow tones.

What is the best sequence to combine exposure tools for image adjustments?

The diagram to the right suggests a sequence for how to perform exposure adjustments.

Prior to the exposure adjustments you should make initial white balance adjustments.

Subsequent to the exposure adjustments you should make any crop and sharpening adjustments you deem necessary

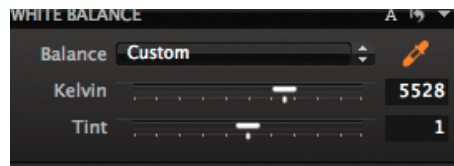
Tip:

Capture One 4 allows you to use your own camera profiles and third-party camera profiles for particular lighting conditions.

Load the profiles in the correct color profile folder for your OS, currently ColorSync on Mac OS X.

These profiles will be available in the profile menu, once the application has been re-started.

– Windows users may have to restart the OS for the profiles to be available.



6.1 White Balance

Why is there a wrong color balance in my images?

There are many variables that can cause incorrect color, but a good starting point is to set the white balance correctly. – Always bring a greycard on your shooting, if you want to make sure the images and camera can be controlled properly.

When should I apply white balance adjustments to my image?

The best practice is to set the white balance of an image or group of images before making other adjustments. When the White Balance is set, you have the right colors, and then you can choose to add a color tone to affect the look of the image.

What do the controls in the White Balance tool panel do?

Mode

Provides a list of different white balance presets e.g. daylight, tungsten, fluorescent and such but also camera custom and shot, which is the white balance used by the camera when the image was shot.

Advanced users may prefer to create their own or to choose alternative options.

Kelvin

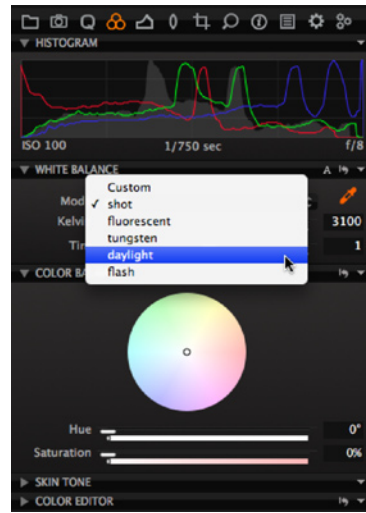
Changes the color temperature of the image within the range 800 to 14000 degrees Kelvin. By moving the slider to the right, the image will become warmer (yellowish) and to the left cooler (blueish).

To fine tune the green/magenta balance, it is necessary to use the tint slider.

Tint

Tint allows for fine tuning of the green and magenta balance.

The scale on the slider represents actual Kelvin value, subject to slight variations from camera to camera.



What parts of the image are best to use as a white balance source?

White balances should be created from a special white balance card, if unavailable, you can try to find an area that is neutral grey, this takes some practicing, as you have to remember the slightest color in the area you set as White Point will affect all colors in your image. Try to find a clean bright grey or neutral area, the darker the area is, the larger is the chance that there can be noise making it very hard to do a precise leveling of the colors.

How do I white balance my images with the pick white balance tool?

To do a 'click balance', select the white balance picker (w) in the tool menu bar, Quick or Cursor Tool bar. The button will go orange to confirm that it is active.

Select an area of the image that looks neutral (a grey or dark white area if possible). The color picker takes this value as neutral grey and uses that information to map all other colors.

Can I auto white balance my images?

Capture One has a built-in auto white balance. Select the image to be neutralized and then click the auto white balance picker the image will be automatically corrected by the software.

To apply auto white balance to a range of images, first select the images to be adjusted, hold down the shift key and then click the auto white balance button.

How do I get the 'as shot in camera' white balance?

Go to the Quick tool tab or the White Balance Tool Tab and select the 'Mode' pull-down menu. Choose the 'shot' setting and all selected images will revert to the white balance they were captured with.



How can I apply white balance from one image to others?

Select an image with the white balance and color balance settings you like. Copy them with Adjustments>Copy Adjustments in the menu bar. Select the images you want to modify and use the Apply settings button on the menu bar to paste the settings to the image.



Note:

Images that are too dark can be lightened by up to 2.5 stops (made 6 times brighter). Bright images can theoretically be made darker by the same amount.



How can I define a certain skin tone on my models?

Often it can be troublesome to achieve colors of skin, or an exact color of clothing, especially when photographing in different light conditions.

Skintone is working like the well-known White Balance, but applies to any color defined in advance.

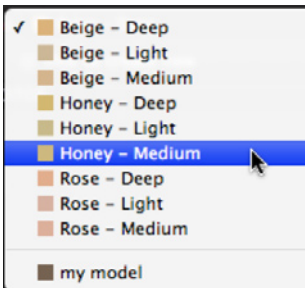
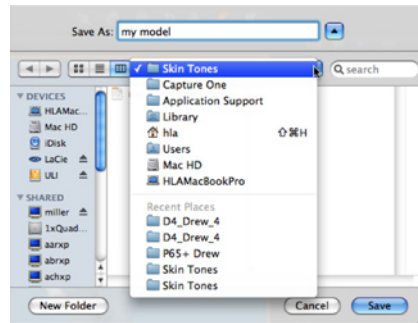
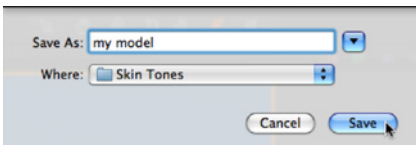
Mark up "Pick to create new" and select a picture showing the correct colors, pick the color using the Skin Tone picker, automatic you will see the save-as dialogue, then choose a relevant name for your new skin tone.

Skin Tones can be used to define all colors, e.g. the blue in a shirt can be defined by a dedicated studioshot before going out-door for the model shot, and when a Skin Tone is defined and saved you will be able to use the tone in any session.

What are the differences between defining skin tone and setting white balance?

White Balance is created to neutralize the color picked, to a perfect grey balance; this is why the grey-card is needed to exactly point out the grey tone.

The Skin Tone tool is created to adjust a selected color to an already defined color. by adjusting the white balance of the capture.





6.2 Color Balance

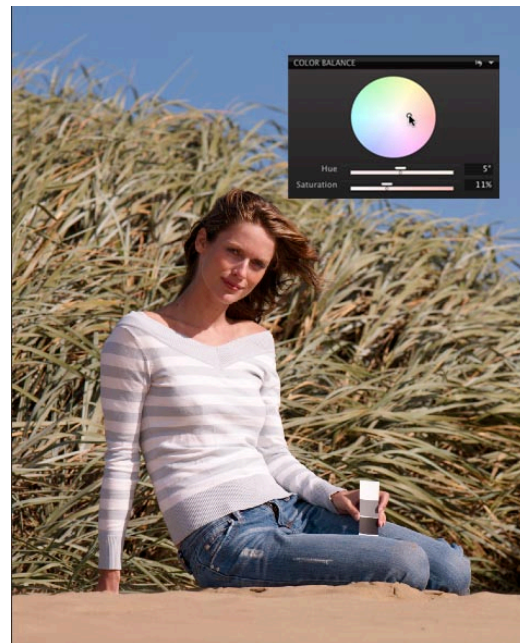
The Color Balance tool allows the opportunity to create a unique look.

How can I fine tune the color balance in my image?

Fine tuning of color to the highest standards is possible in Capture One, but the accuracy of the results is dependent on having a well calibrated monitor to accurately reflect the changes made to images.

First, an accurate white balance should be set. Then color adjustments can be made to create the desired mood for the image. Like other settings in Capture One, these changes can be saved as a preset and applied to additional images.

The advantage to setting the white balance first is because saved color adjustment presets are relative to the color values, created in whitebalance or at import. A group of images can be white balanced to a neutral value and then a preset can be applied. An example would be to use a preset to warm up the colors in a selected group of images.



What do the different controls in the color balance panel do?

The Color wheel

Changes the color balance of the image by moving the neutral point around the color wheel, you can drag it using the mouse but fine tuning should be done with the H and S sliders.

'H' Hue

Moves the color-tone point around the color wheel to provide subtle color changes.

'S' Saturation

Increases the saturation by moving in or out along the radius of the color wheel.

First image corrected



Correction applied to all



If I create a color balance that I like, how can I save it?

This point is discussed further in the points relating to white balance. Color adjustment can be saved and named by selecting the preset button and selecting 'Add preset'. Give it a meaningful name and select 'OK'.

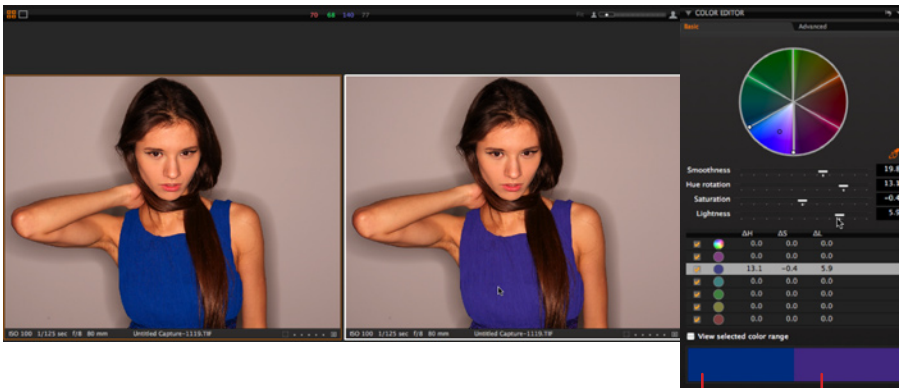
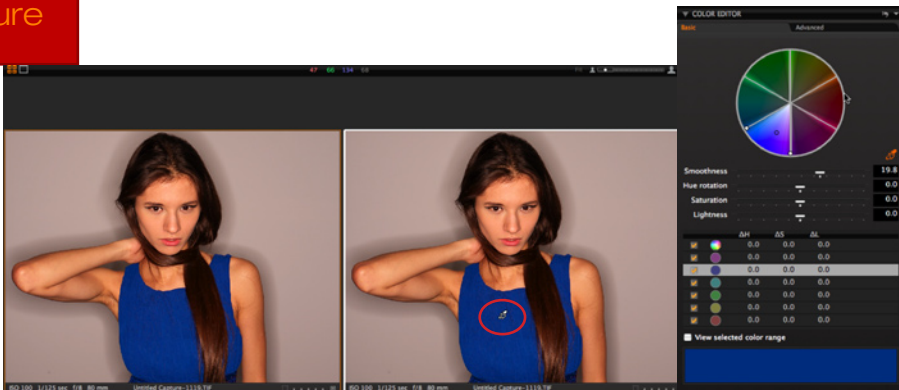
Color presets are relative to the image they are applied to, not absolute. This means that all values added are added to the values created in White Balance or at import.

Tip:

There are several presets covering different lenses, this will make you save time removing chromatic aberration

Note:

Wide angle and zoom lenses have the largest tendencies to create chromatic aberration as does high contrast photography, especially if overexposed.



Original color Target color

How can I edit defined colors only?

The Color Editor allows you to select a narrow color area, and adjust this area without affecting other colors in the capture.

The Color Editor tool is split in basic and advanced, Basic is created for standard editing, whereas Advanced are providing a much more specialized tool for editing defined shades of color in saturation, brightness, hue and smoothness.

Why work in slices?

Working in larger areas of color will avoid the image to appear unnatural. The slice will allow your adjustments to all shades of the selected color slice.

Select the color area which you want to adjust using the basic color correction picker, now only one "pie-slice" is highlighted. The black circle indicates you're the picked color value, and the thin black lines indicates the end of the smoothness effect; Smoothness indicates to you how far the mixture will be applied, this ensures a natural look to the selective changed colors, but images like the feathers, showing many colors in the relation with each other, you will have to keep smoothness on a lower level.

It is also possible to "just" select one color slice from the menu below the sliders. Or choose global if you want to affect all colors at once, this is however a more creative tool that shouldn't be used instead of colorbalance.

To help you determining the areas that actually changes, you can check-mark "View selected color range" this will remove color from all not selected colors.

Can I block entire color areas completely?

The Color editor can be used not only to change colors, but also to saturate or de-saturate specific colors or groups of colors. Saturation is created to adjust up to 80% in both directions, so repeat de-saturation 2-3 times and you will have black/white areas whilst preserving other colors than the selected.

Mark-up the "view selected color changes" will automatically desaturate all not-selected colors.

You can make up to 30 selective color changes in one image.

How narrow a color space can I work in?

Depending on your smoothing settings your area can be quite narrow; this is very useful when adjusting colors, as you often do not want to change the entire look on the image.

Area affected of the color change is partly controlled by smoothing, which determines how floating the transition from the selected area of the pie, to the neighboring area. Check this by check-marking the “View Selective Color Changes”

If you wish a tighter defined area of color, you should use the advanced tab of Selective color tool, this will make you work in smaller spaces instead of pies, but if the changes are not made carefully they will not necessarily look natural.

How can I see which areas of my image are affected by the color changes?

Check-mark in “View Selective Color range” this will desaturated all not affected areas of the image.

When working in Advanced Selective colors, you control the working area much more precisely; first pick the color you wish to adjust, this area can be enlarged or made smaller by adjusting the dots, smoothing is affecting all directions from the selected area, but will not affect cross the center of the color wheel.

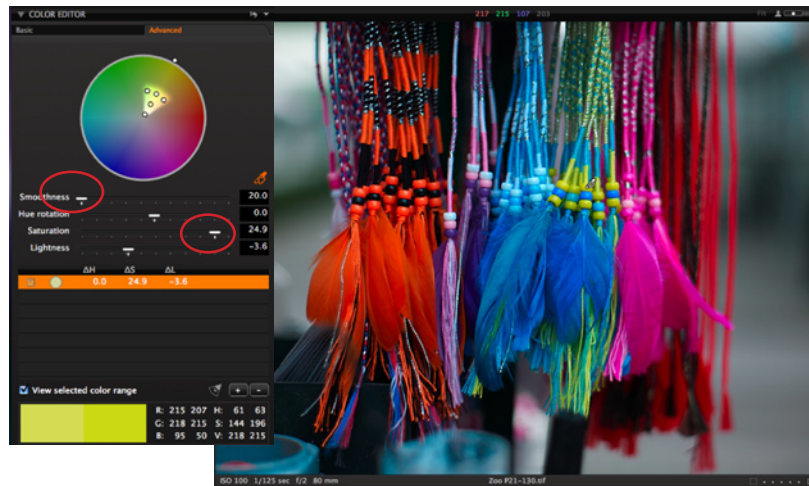
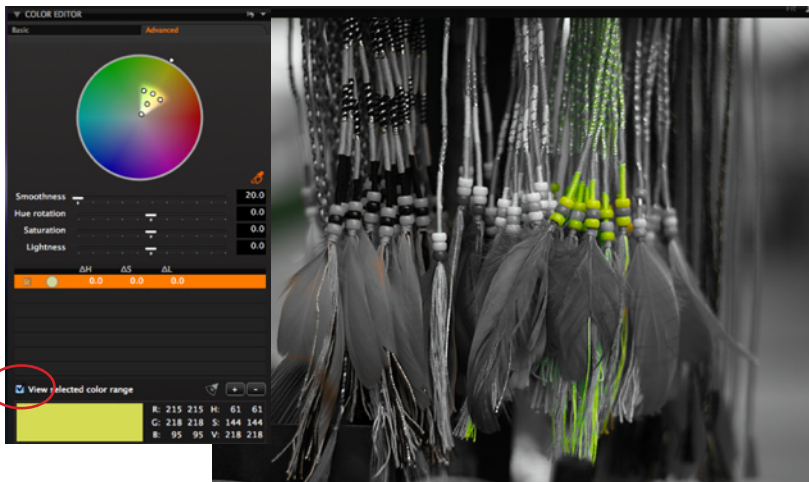
When “View Selective Color range” is selected it will work “live” constantly refreshing the view, try and change smoothness and you will instantly see the change of black&white area.

On the example you can notice the difficulty in working on selecting colors; firstly select the color you wish to edit, check for unwanted effects and if you are catching all shades of the selected color.

Not only is the color we selected here placed or the border between blue and purple, while the background shows some green-ish shades due to smoothness. After adjustments of color area and smoothness you have the color of the blue feather isolated, leaving all other colors remain out of influence.

On the final image we have a significant brighter and more saturated blue, the change of color is obvious on this example, but when working in small areas or moving between closely related shades, you may want to rely on the before/after color to check the actual difference.





How can I reuse a selective color set-up?

By saving the new color scheme either as a Selective Color Preset or as a ICC profile, the ICC profile will allow you to make the adjustments as you capture the photo tethered, saving you working hours in the editing.

A saved ICC will automatically appear in the ICC drop-down menu found in the menuitem "Other"

How can I adjust a narrow colorspace

Using Advanced tab of the Color Editor will allow you to work independently of the color pies. A much smaller area will be selected as your adjustment area of color shades.

The work area can be adjusted in all directions by pulling the white dots and by adjusting smoothness. Use the "View Selected Colors" to check your selection.

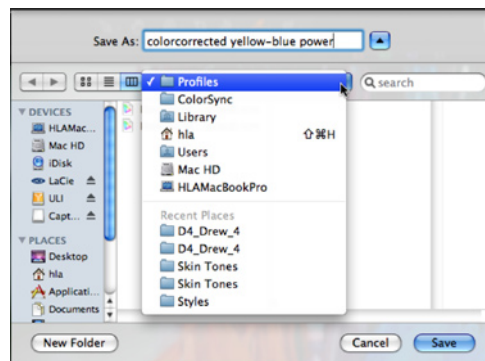
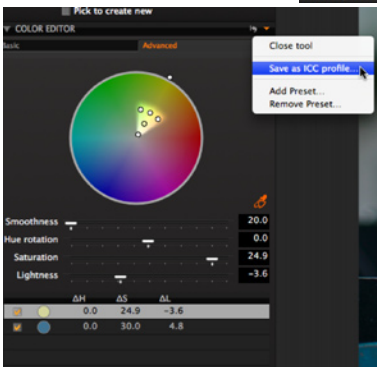
Now you can adjust the selected shades, in lightness, saturation and hue I the example we have saturated the yellow beds after saturating the blue feather in the basic editor.

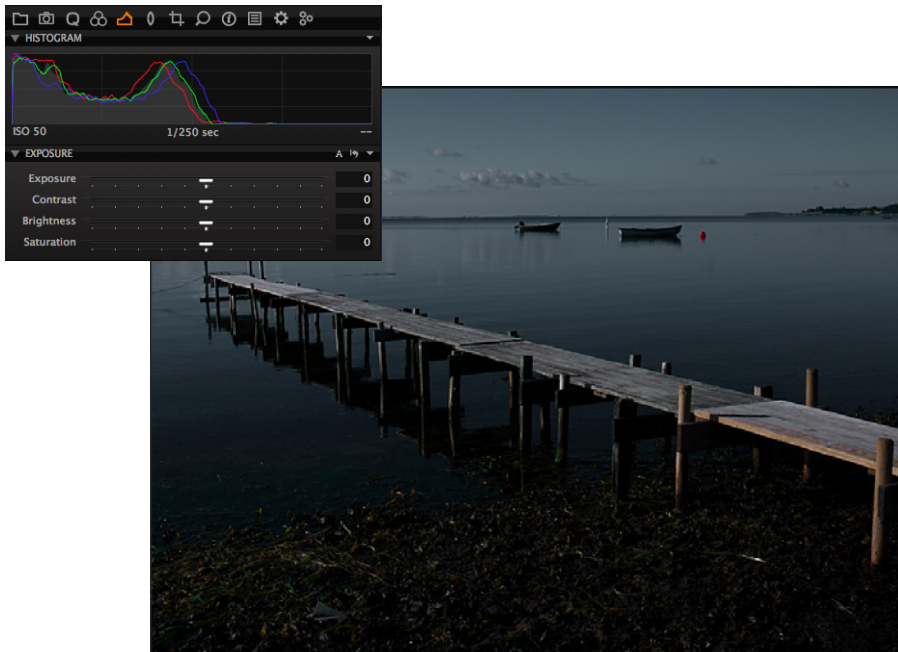
If you want to change the colors more than the sliders will allow – repeat the action, by re-selecting the color you wish to adjust.

When do I save as ICC profile and when do I save as preset?

ICC profiles can of course be used later on in your work, like presets. But ICC profiles created in Capture One can be transferred to 3rd party applications, to keep the color space exactly like you need it.

The example shows more saturated blue feathers and yellow pearls, being saved as ICC profile, to keep the colors of future session the in the same color work area.





7.0 Optimizing exposure

7.1 Basic controls

My image is too dark/bright. How do I adjust?

The best way to lighten or darken an image is to use the exposure slider.

For more precise and advanced control, the exposure slider should be used to centre the data within the histogram and define an initial exposure, ensuring that no highlight or shadow clipping occurs.

When this stage has been completed, use the levels controls to fine tune the lightness and darkness of the mid-tones of the image.

How do I use the image adjustment sliders?

Sliders provide the best way to adjust exposure and contrast. Use one tool at a time before moving onto the next tool.

Exposure

Adjusts the exposure in much the same way as the controls on the camera do. The slider is calibrated to provide a range of +/- 2.5 stops.

Contrast

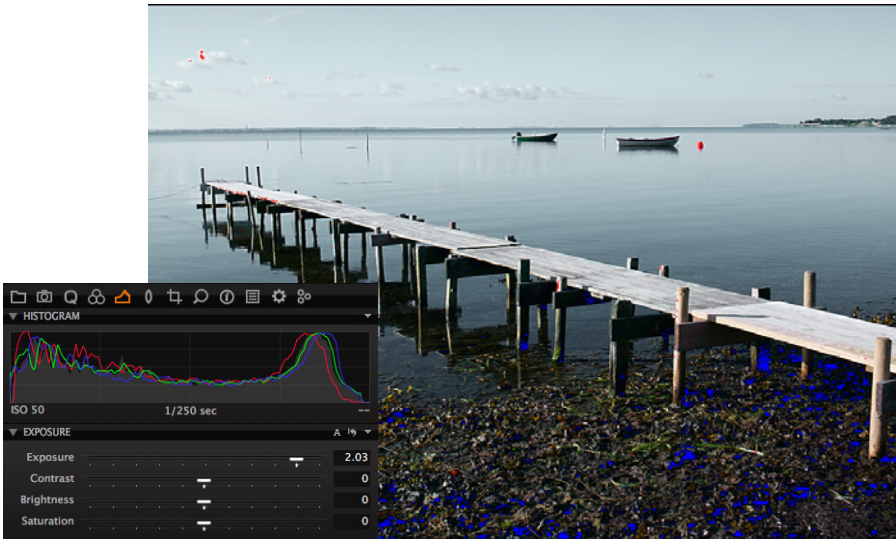
Moving the slider to the right increases contrast throughout the image. Moving to the left decreases.

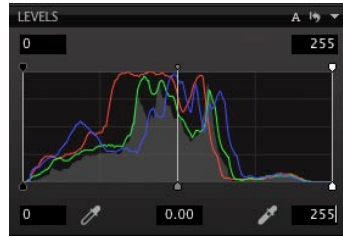
Brightness

Provides a tool to primarily brighten the mid-tones of the image; this tool has the effect of increasing mid-tone contrast. By contrast the gamma or centre slider of the levels tool works on the mid-tones, but has the effect of lightening shadow areas and reducing contrast.

Saturation

Increases or decreases saturation of the image. When saturation is decreased the image is Black and White. Then the histogram changes from RGB to monochrome though the image is still in a RGB color space chosen as out output color space. The saturation slider is not “just” saturation, it is intelligent saturation. The negative values represents regular saturation settings, the positive values are comparable to what 3rd party software would call “vibrance” – Vibrance is more gentle to the skintones, and will be able to enhance for instance blue sky without oversaturating the rest of the image.





7.2 Managing exposure – Levels

For advanced exposure adjustment, it is recommended that levels are adjusted first, followed by curves. The curves tool has been designed not to clip image information and will only operate on tones within the defined white and black points of the image.

What are correct settings for Levels?

In an ideal situation, levels should be adjusted to slightly clip the end points of the image histogram at the shadow end and to the maximum highlight level on the right side of the histogram.

The images below show before and after adjusting the levels for an image.

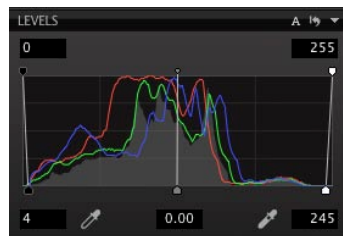
You can see that the black point and white point adjustments have been brought in very slightly. This has the effect of lightening the lighter tones and darkening the shadow tones in the image, at the same time increasing contrast slightly. The process has to be done very carefully in order to preserve the feeling that the image evokes.

The highlight warning function (view>enable exposure warnings, can be configured to provide visual feedback when adjusting the Levels.

Once the highlight and shadow points of the image have been fixed, the density or mid-tone values of the image can be adjusted using the centre or gamma slider on the levels tool.

Tip:

The fastest way to use levels is the auto tool as a starting point – this will not clip information – if the result is not desired you can fine tune the result manually.



Highlight warning shows where the levels should be set – here app 245



When do I use Highlight and Shadow picker?

The white point and black point pickers are best used in the context of 'controlled' studio images where, in conjunction with a quality color chart, they can be used to precisely set the black and white points of an image.

Custom Target Levels

Custom Target Levels extend the abilities of the levels tool, enabling the means to control the output values and to reduce contrast in the image. This is particularly useful where an image has data in the highlight area that is in danger of clipping. The theory is that you set the target level to the desired value and then use the picker tool to choose the area within the image that you wish to match that brightness level.

With conventional pixel based image tools, output levels are used to compress the tonal range of the image to fit in a smaller space, for example re-mapping highlight values of 255 to 245. Whilst this prevents clipping, it means that there is a sharp cut-off of image data, leading to an hard transition between data and no data when the image is re opened.

Capture One 4 Target Levels work in such a way that the tones are remapped, yet avoiding hard transitions in highlight areas and resulting in pleasant, more natural looking images.



How do I use custom target levels?

Set a desired value for an area in the highlight area of the image where it is important to retain detail; for instance 240.

Select the white point picker tool from the Levels Tool Tab and then 'pick' the highlight area within the image.

The same process can be repeated for shadow values and the black point picker.

ADVANCED USE ONLY:

Preferences allow these values to be set for every image in Pick Target Levels. Do not do this unless you really understand the implications.

7.3 Managing exposure – using curves

How do I work with curves?

Levels are used to control the overall tonal distribution of an image. Curves provide the ability to remap the area within the shadow and highlight limits set by the Levels tool areas to produce a desired image.

There are certain ‘classic’ curves that are used in image applications to achieve specific results in images. Best known is the “S” curve which is used to increase contrast in an image.

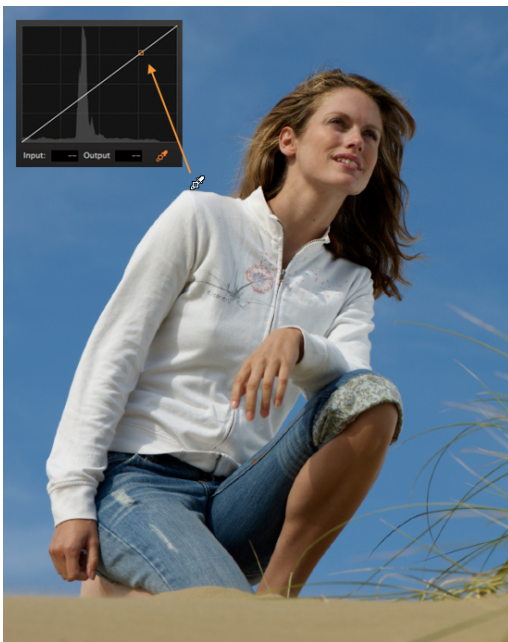
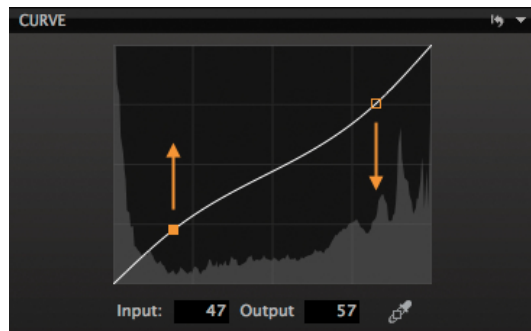
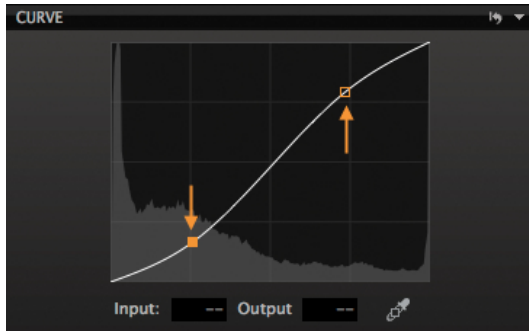
The S curve achieves the increase in contrast by pulling down the shadow values, normally on the quarter tones and increasing the values of the tones at the three-quarter tone mark as shown in the image.

The brightness values at the quarter tones, before applying the curve, are around 65 (with image tonal values from black 0 to white at 255). The curve darkens these tones to around 50, whilst the three-quarter tones at 190 are raised to 200, lightening them in the final image.

The inverse S curve has the opposite effect of lightening the shadows and darkening the highlight tones, causing a reduction in contrast.

For advanced use, the Pick Curve point picker tool (p) can be used to pick a specific tonal area within an image. This value is added to the curve to allow adjustment of the values for that part of the image.

The image below clearly shows how the value picked on the image translates to the image curve.



7.4 Managing exposure – using High Dynamic Range tool

The bulk of image adjustments can be done with the exposure slider and the levels/curves tools.

There are two scenarios where the High Dynamic Range tool may prove to be essential.

In certain situations, image contrast is such that clipping may occur at both ends of the histogram. In such cases the HDR tool provides a means of optimizing the image to deal with the extreme contrast and prevent the clipping of highlights and shadows.

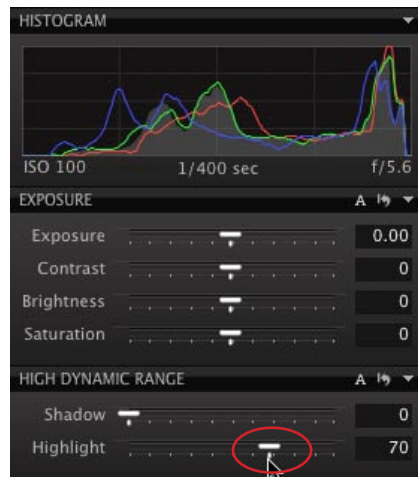
High Dynamic range also provides the means to make use of images that have been accidentally over or underexposed to an extent that render them unusable with conventional exposure tools.

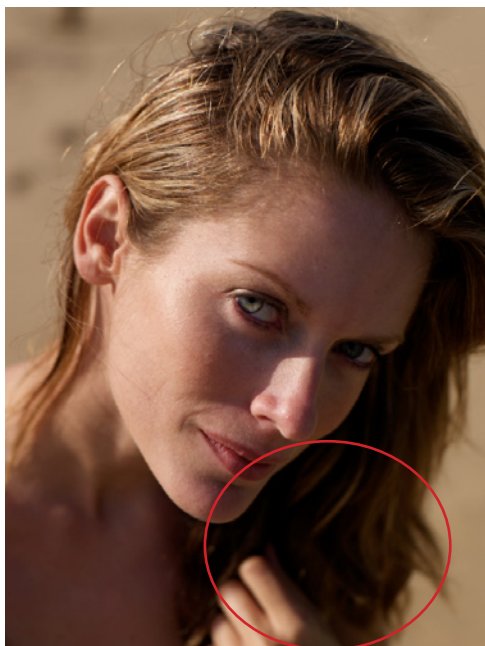
How can I optimize the dynamic range of an image?

The dynamic range of an image is optimized at the shooting stage by adjusting exposure to capture the maximum amount of data. This may result in an image that does not look optimal on the LCD display.

Bear in mind that around 1/2 - 1 stop of additional data can be recovered from overexposed highlights.

Once the image has been opened in Capture One, it is optimized by using the various tools within the software to adjust the data. The High Dynamic Range tools can help with 'difficult' images, where contrast is extreme. Applying a soft-proof profile for the output device should be configured in order to edit for this output device.





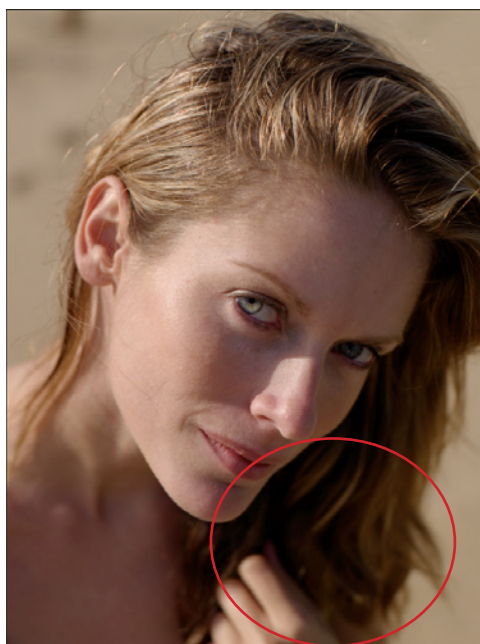
How can I lighten shadow areas in an image & how can I darken highlight areas in an image?

A good way to adjust the shadows and highlights in your image is with the curves tool.

Use the Pick Curve Point tool (u) to click in the area of the image to be adjusted. A point will be put on the curve and this allows very precise adjustment of the exact tonal area of the image that you prefer. To fine tune this, use the arrow keys on the keyboard. This practice is much more accurate as compared to relying on the sliders in levels to achieve an overall result.

How can I prevent highlight and shadow detail loss?

Correct exposure in combination with the dynamic range tool, where necessary, prevents highlight and shadow detail loss.



7.5 Styles

Besides creating instant “looks” styles is a true money-maker.

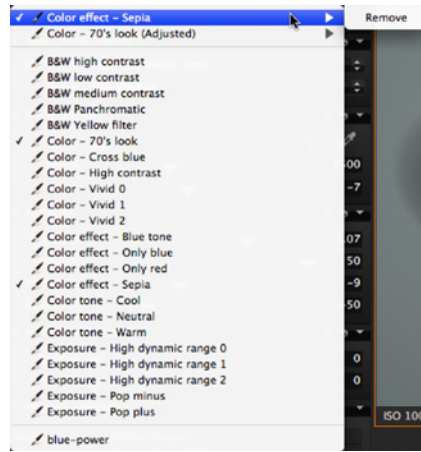
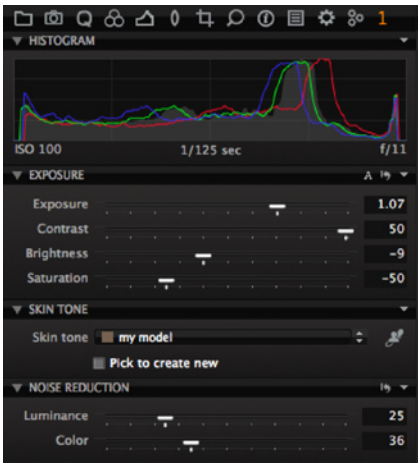
How do styles work on my image?

Styles is a combination of presets added at once to provide your photo a certain look, this will save loads of working hours in post process. The changes will be seen as soon as you mouse-over the style, but will only be applied as you click on the style.

Styles do not add or change your image in any way you couldn't have done on the various sliders. But by adding the style, you only have to polish the photo afterwards.

If you apply more than one style it is important to keep in mind, that the latest applied style will override the previous applied style, if the values exceed the previous style. -If the values do not exceed the values of the former applied style, the former style will still be partly visible on the photo.

The values of the style are not placed “on top” of the previous values – the highest value replaces the lower value. Remove a style by entering the style drop-down-menu, the top area of this will show a list of added styles and the possibility of removing these as you mouse-over these menu items the photo will be live updated to show the changes.



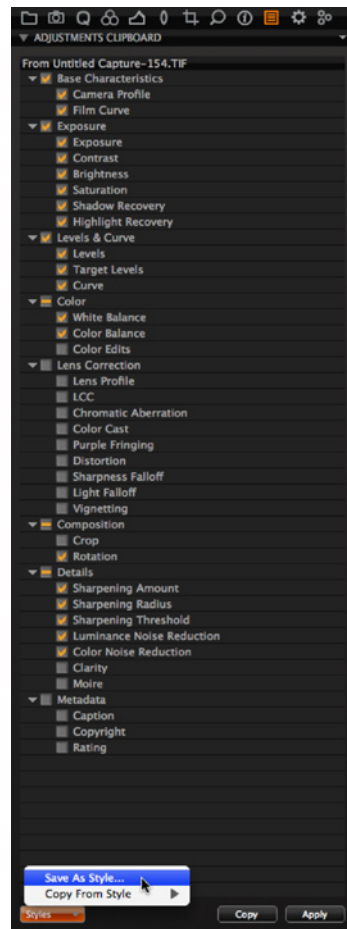
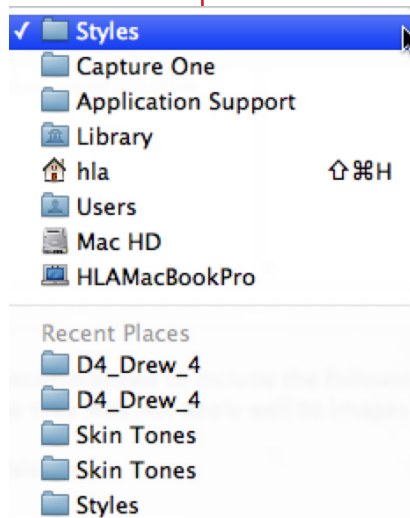
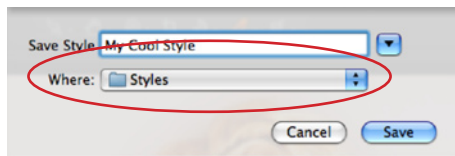
	Exposure	Brightness	Contrast	Saturation
Adjustments	10		-10	7
Result	10		-10	7



	Exposure	Brightness	Contrast	Saturation
Style 1	8	-5	9	
Adjustments	10		-10	7
Result	8	-5	9	7



	Exposure	Brightness	Contrast	Saturation
Style 2			6	10
Style 1	8	-5	9	
Adjustments	10		-10	7
Result	8	-5	6	10



Can I create and save my own style?

When you have created a look to your photo that you want to keep, copy the adjustments, and decide which changes to keep in the style, it is recommendable to not e.g. include White balance in a style.

When you have check-marked the adjustments you prefer to keep in your new style, press on the Styles button and choose “Save As Style” the Save Style window will allow you to save the style where you want, but the Styles folder will let Capture One find the style, all styles work across sessions and platforms.

Name your style a recognizable name and you will find the style in the Styles Drop-down menu, below the default styles.

How can I transfer and share styles?

Styles saved, will be stored in the Styles folder, commonly placed on the Mac path Library>Application Support>Capture One>Styles; the Style file will be a “.costyle”, this file can be copied to other computers, and works cross-platform.

How can I modify a style?

When you have applied a style, and still want to change to attain the effect you want, polish the image until perfect – and copy the settings, save the style, save using a new name, to not over-write already made style.

How can I see if a style is applied to an image?

The applied style will do no “hidden action” on your raw-file, it is merely a set of adjustments, hence you can see the changes, and modify these on the regular tools such as saturation.

Easier is checking the Styles drop-down menu, above the Default styles you will find the applied styles on the primary variant. The styles is listed with the last one applied on top of the rest, the bracket indicates if the previously applied style is Adjusted or partially or fully overridden.

8.0 Image settings

How do I copy settings from one image to a group of images?

Choose an image and make all the necessary adjustments to it. When finished click the Copy button and check the Adjustments Clipboard Tool Tab. Choose “Select Adjusted” There will be a list of settings that have been applied to the image.

Next to each setting, there is an orange check or tick. If you wish to apply all changes to other images, leave all the boxes checked. If you prefer to apply only a subset of the changes, deselect the options not required.

Go to the browser and select the group of images that you want to apply changes to. Click on the Apply button and paste the settings into the selected image. To apply settings to multiple images, hold down the shift key.

How can I ensure the same look between images?

First of all your of course have to have the approximately same exposure values, then make changes to one and then use Copy Adjustments and Apply Adjustments to paste the settings to the other RAW files as described above. If you are Capture One 4 PRO user, you can also use styles.

Preset is a clever way of creating shortcuts in the daily work, instead of repeating your corrections again and again, save the preset, and get a precise and easy adjustment.

If the images have different white balance or exposure – Will a settings copy be absolute or relative?

Any settings copied from other images are absolute. For instance if your white balance is currently tungsten, 3500K and you paste a daylight balance from another image, the setting will be an absolute one; it will not be halfway between tungsten and daylight.

Can I save the settings with the RAW files?

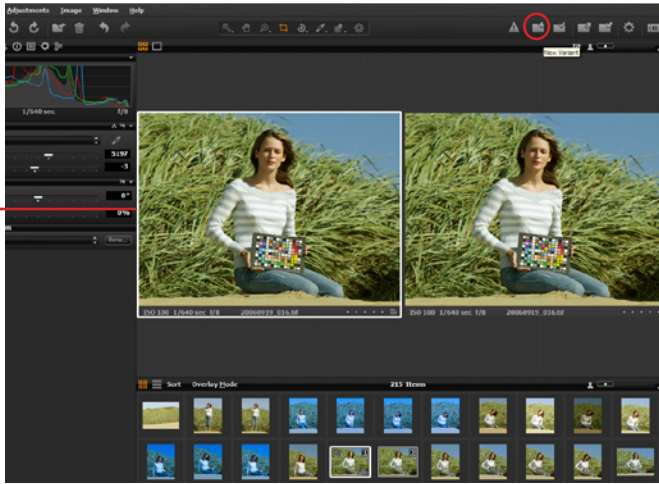
Capture One saves all settings in a subfolder called “Capture One” in the same folder as the RAWs.

All changes made to a RAW file are saved in a .COS settings file. This file is located in the Capture One folder with the RAW files. This file contains all the information regarding edits made to the RAW file.

The Cache folder is also found here. Within this folder is a Proxies folder. In the Proxies folder there are .COP files. These are the previews viewed in Capture One.

Settings files from previous versions cannot be read by Capture One 4.

Tip:
The white frame of one image in the Viewer shows you which image you are working on in this case you work on the original NOT the Variant.



Tip:
You have adjusted the exposure, stopped the highlight clipping and fine tuned the shadows when you want to make a BW copy black and white image:
No problem: Create a clone variant, go to Quick Tool tab > Saturation and set saturation to -100.
- Alternatively, choose a Black and White profile in Profile pull-down.

Note:
When you change an image to BW the Histogram and Levels automatically switches to monochrome



9.0 Variants

Introduction

A variant is actually a copy of the settings used to create an image preview; it is not a duplicate of the original file. This means that it is possible to create multiple image variants without using any significant disk space.

Variants provide an easy way to try different settings or modify the work you have done on an image without risk. Original RAW data is untouched by any changes made.

How can I create different expressions from one image?

Variants provide an easy way to try different settings or modify the work you have done on an image without risk and without copying large RAW files.

New Variant creates a duplicate of the image using default settings. The image is created as it came out of the camera or DNG file except rotation.

Clone Variant creates an exact duplicate of the image you are working on; complete with any changes you have made.

How do I delete Variants?

The easiest way to delete a Variant is marking the variant in the Viewer or browser and press Delete or on PC press Backspace. You can also right-click and choose Delete from the menu.

When a Variant is deleted, only the settings file for the Variant is deleted. The original image file is untouched.

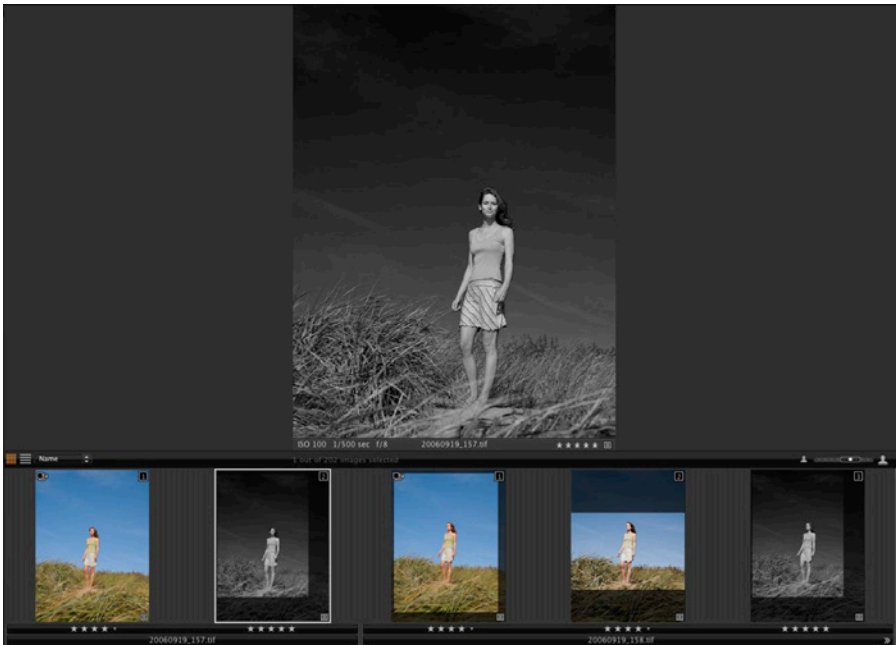
What settings does a Variant inherit from the original image?

Normal Variants inherit the raw default settings from the original image + metadata and Lens Cast corrections (where appropriate with Digital Back files).

Clone Variants inherit all settings from the original image, including white balance, color, exposure and other changes that have been made in Capture One.

With the exception of Lens Cast correction (Digital Backs only) and Metadata, any changes made to an original image can also be applied to a variant. Lens Cast is a special case, as it is regarded as a correction of the original image. That correction is applied to the original and automatically applied to any variant.

When creating a variant, metadata information is not changed because the content and the creator of the image have not changed.





Automatic corrected

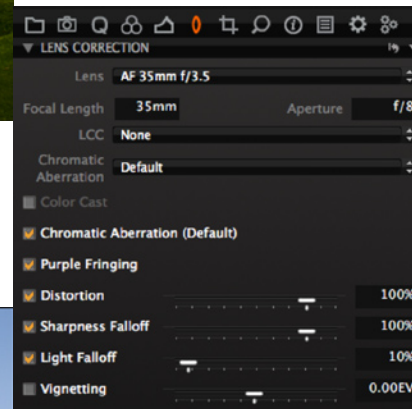


9.5 Lens Correction Tool

The Lens correction tool is a brand new way of working on classic optical issues, like distortion, light fall off and purple fringing.

As light travels through any lens it will be bend, there are several ways of trying to avoid the bending lines or loss of sharpness; Apo chromatic lens elements, highly sophisticated coating and advanced lens groups can “only” lower the effects of the bended light.

Phase One R&D have created special profiles for a series of lenses from studying the light, this evolved into the Lens correction tool.

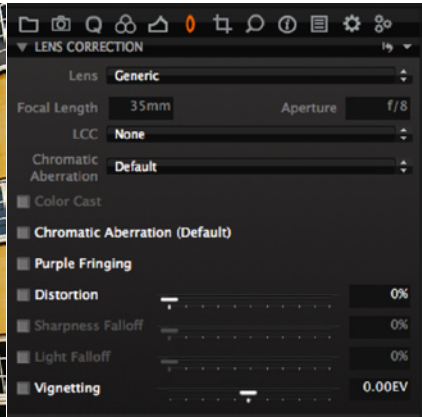


How can I correct bended lines?

It is not unusual experiencing bending lines especially when photographing architecture, there are large differences in the capabilities of lenses, but it is natural to experience bending lines.

If your lens is already known by Capture One 4 PRO, corrections will automatically be added as the image is loaded, you decide however, if you want to edit the corrections or you can remove them completely by removing the check-mark.

If Capture One already knows your lens, it should not be necessary to do further corrections, still it is possible to edit the applications preset manually by using the sliders.



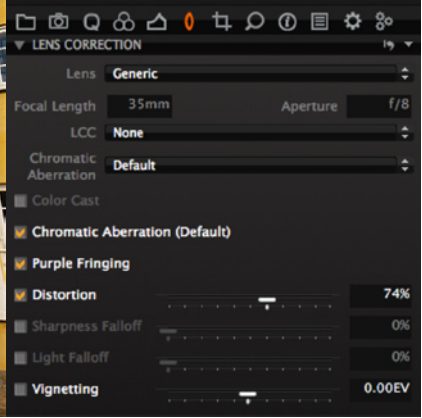
Why are the sliders not active?

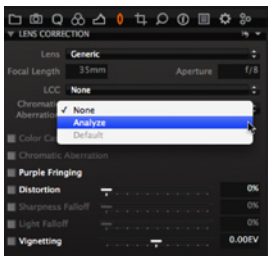
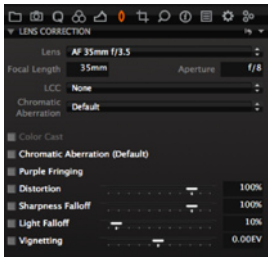
Sharpness and light fall off will only work if Capture one already knows the lens used, this is due to the fact that these tools are created upon optical knowledge about specific lenses.

If the light fall off is not active try the vignetting tool in very small doses or the high dynamic range tool.

Can I correct the image if my lens is not yet known by Capture One?

If your lens is not recognized by Capture One, you can create your own correction based on distortion and Chromatic Aberration analysis and purple fringing. For each focal length you work with you can choose to save these changes as a style, and thereby create your own lens correction, you should however be aware that a change in aperture values can make a difference in how the light is travelling through the lens.





What is Chromatic aberration, and can I avoid it?

Photographers will from time to time experience different light and lens related flaws, like chromatic aberration, Capture One includes features to reduce such undesired effects.

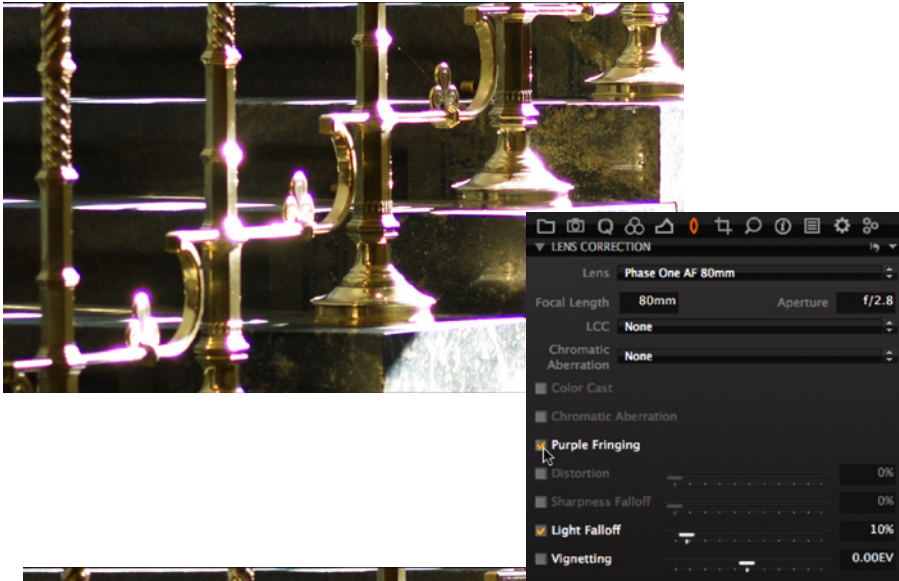
Chromatic aberration occurs because light is divided in many wavelengths. The light waves will react slightly differently when passing through the lens, therefore the light will have slightly different exact focus points, as the light is enlarged slightly different by the parts of the lens. The light will often pass perfectly through the midst of the lens, but the further to the edge of the lens, the larger difference of the enlargement when the light waves enters the chip or film.

As chromatic aberration is different from lens to lens, the lens correction is not “just” removing color appearing to mismatch, the chromatic aberration feature is created to act according to the combination of our knowledge on the single lens and an analysis of the image thereby the software will surgically remove the chromatic aberration where possible without affecting the surrounding pixels.

The Chromatic Aberration ‘filter’ currently supports Mamiya and Phase One lenses in combination with the Phase One camera (or the Mamiya AFD) and a Phase One digital back.

If you want to minimize the chromatic aberration zoom to 400% on your image to check the effect, and press Auto-button and shortly after the chromatic aberration is minimized.

Purple Fringing is an effect which looks similar to the chromatic aberration and is also caused by the different exact focuspoints in the red wavelengths compared to the rest; this feature automatically, checks for the effect in high contrast areas, like when using the Chromatic Aberration feature.

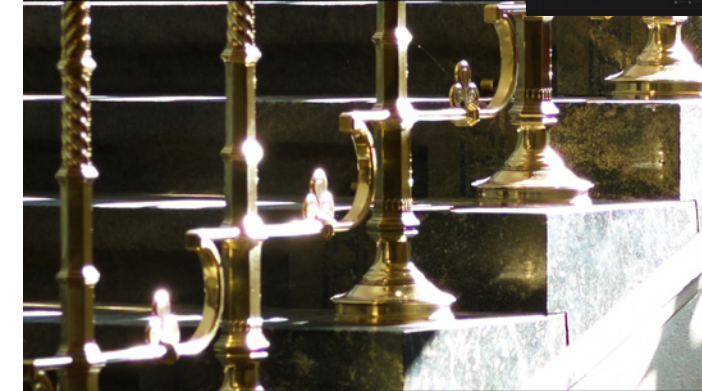


How can I avoid color errors when photographing shining or high contrast motives?

Brass, Chrome and many metallic products can provide purple fringing, this happens as the wavelengths of the light have slightly different focus points; Purple Fringing is related to Chromatic aberration and both are seen when you have high contrast motives.

Purple fringing is very clear on this image, you should go in 100% to check the result, and simply check-mark purple fringing and this will get rid of the issue.

Chromatic aberration will often be seen on both sides of the white pixels on black background as purple/pink and green on the other side, to avoid Chromatic Aberration, check-mark in the box, and Capture One will automatically find the pixels showing chromatic aberration and neutralize the colors of these.



9.6 Lens Cast Correction

What is Lens Cast?

Lens cast is a commonly known lens issue, creating darker areas towards the edge of the lens, this occurs as the light are entering the individual glass in your lens, the more glass and groups the higher risk of visible lens cast.

What is Lens Cast Calibration?

Capture One 4 is equipped with one of the most powerful core engines in the market, by an analysis of the Lens Cast shot Capture One will determine the need of correction, keeping the correction smooth and natural.

What Lens types are supported?

A large variety of lenses needing correction is already supported; these analyses have been made by Phase One R&D and covers different Carl Zeiss and Hasselblad lenses. More lenses will come in time, but it is very easy conducting your own analysis. see the list in lens correct - all lenses supported are found in presets of Lens Correction tool tab

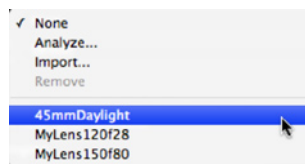
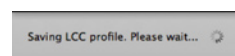
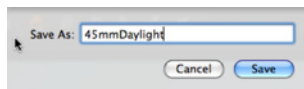
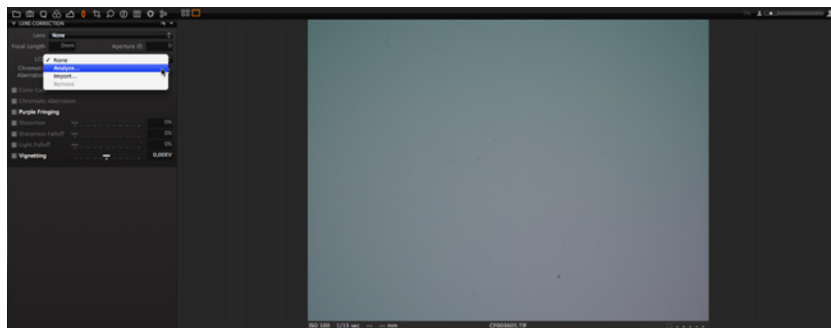
How do I create my own Lens Cast Correction?

Lens Cast is a well-known issue especially on large format and on wide-angle lenses. Capture One is providing an easy 2-step lens cast correction tool placed in the Lens Tool Tab.

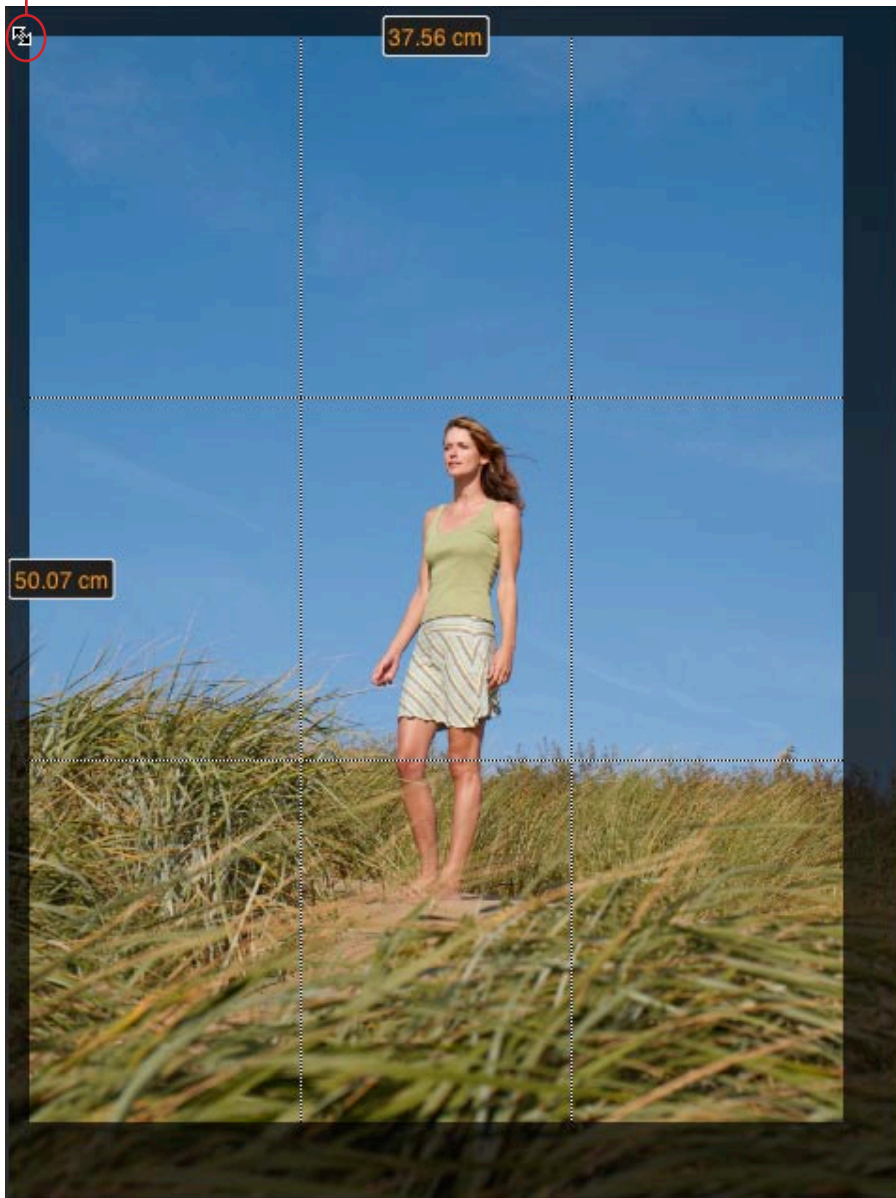
First do a lens cast correction shot, using a OPAL PLAIDE, import the image to Capture One 4 and choose analyze in the LCC drop-down menu.

You will automatically be asked to name your new LCC profile, used a recognizable name, reference to the lens, focal length and aperture, as you will need LCC filters for all Apertures and focal lengths if possible.

When the analysis is done the LCC profile will be saved and you will find your personal LCC profiles in the LCC drop-down menu.



Use cursor arrows to move or edit crop area



10.0 Compose your image

Introduction

Image Composition in Capture One is the area where images can be straightened or rotated and then cropped precisely to fit layouts and prints.

Cropping of an image can be done freehand or with the constraints of specific ratios such as popular photographic paper sizes. A grid is provided to facilitate alignment and there is the option to display labels, with dimensions related to the selected output destination. Controls for this are available in the preferences (Preferences > Crop > Show labels).

In combination with the output tool, images can be cropped to specific sizes for output.

The rotation function is geared towards straightening of images where object or horizons are not as vertical or horizontal as was intended. As the rotation is applied, the image is automatically cropped to the maximum usable dimensions.

10.1 Crop tool

How do I crop an image?

To crop an image, select the crop button in the Composition tool panel or the cursor tool selector.

To quickly free crop an image, make sure that 'Unconstrained' is selected and simply drag a crop frame in the image area. Depending on the preferences that have been set, there will be a semi-transparent mask hiding the area that is being cropped. The dimensions will indicate the size of the cropped image.

To view the cropped image, select another cursor tool and the image will be shown in its final form. You can still see the original image with the cropping mask in the thumbnails. Re-selecting the crop tool at any time will allow adjustment of the crop settings.

The best practice is to drag the edges of the preview inwards (the cursor will turn into a two-way arrow) until the desired crop has been achieved. To reposition the cropped area, click in the middle and the button will turn into a cross. Move the cropped area. When the desired result has been achieved, select any other button from the cursor tool selector. The crop will be applied and the updated preview will fill the viewer.

How can I reuse a crop setting from an image to other images?

Once an image has been cropped the settings can be copied and pasted to multiple images in the same way that other settings can be. Adjustments > Copy Adjustments and then select other image and Adjustments > Apply Adjustments. Hold down the shift key to paste to multiple images.

How can I set a crop aspect ratio?

Select one of the predetermined Aspect Ratios from the drop-down menu. Your crop will automatically be constrained to these aspect proportions. When you make a crop in an image the crop orientation (landscape vs. portrait) will automatically switch to maximize the crop area staying within the aspect ration constraints.



How do I switch crop sizes on and off?

The crop size can be switched off by going to

Crop > Ratio > Unconstrained

Alternatively, it can be turned on by selecting a crop ratio.

How can I change the crop masking?

The crop masking can be changed in preferences. Preferences > Crop

Here it is possible to change both the opacity and the brightness of the mask being used.

How do I revert to the uncropped image?

If you click Adjustments>Reset or Reset adjustments button the cropmask disappears.

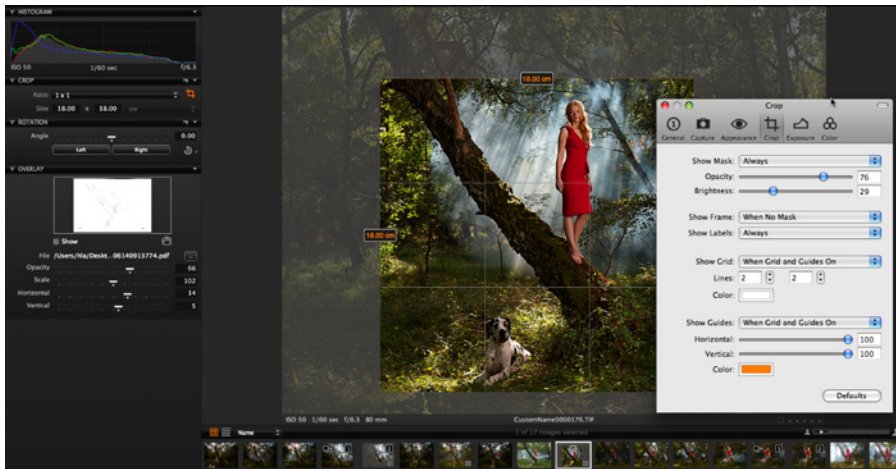
10.2 Crop Settings

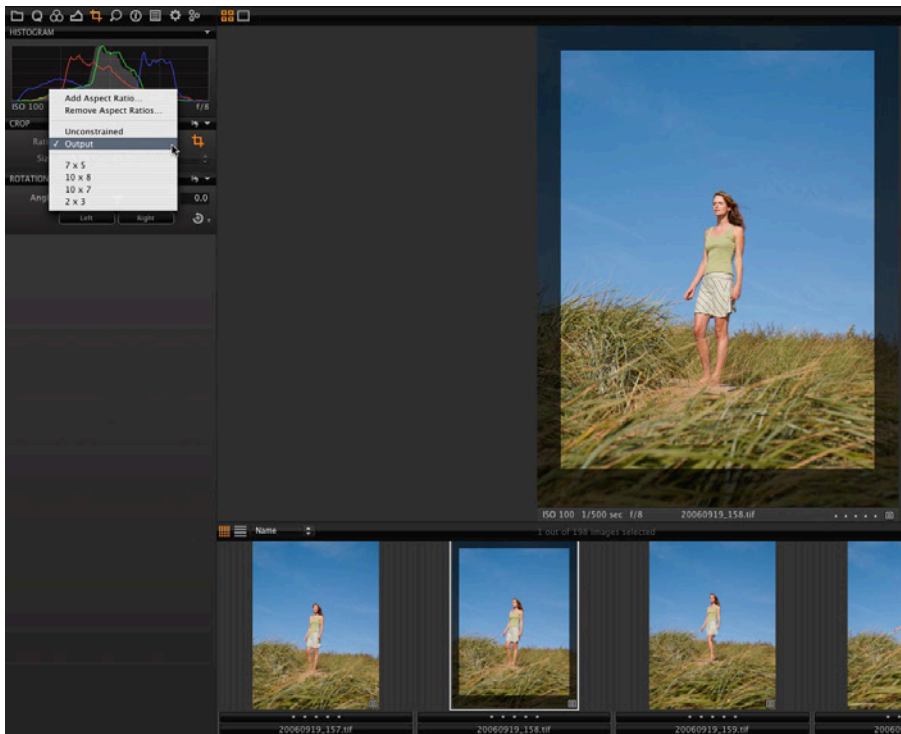
To create new crop settings:

Select Ratio > Add Aspect ratio. Name the crop in a meaningful way and then type in the ratio. For example new ratio – ‘10x8’, Ratio 10 x 8. Another might be called ‘Square’. By setting the ratio to 1 x 1, every image would be cropped to a square shape.

Can I save a crop aspect ration and reuse it?

Select Ratio > Add Aspect ratio. Name the crop in a meaningful way and then type in the ratio. For example new ratio – ‘10x8’, Ratio 10 X 8. Another might be called ‘Square’. By setting the ratio to 1 x 1, every image would be cropped to a square shape.





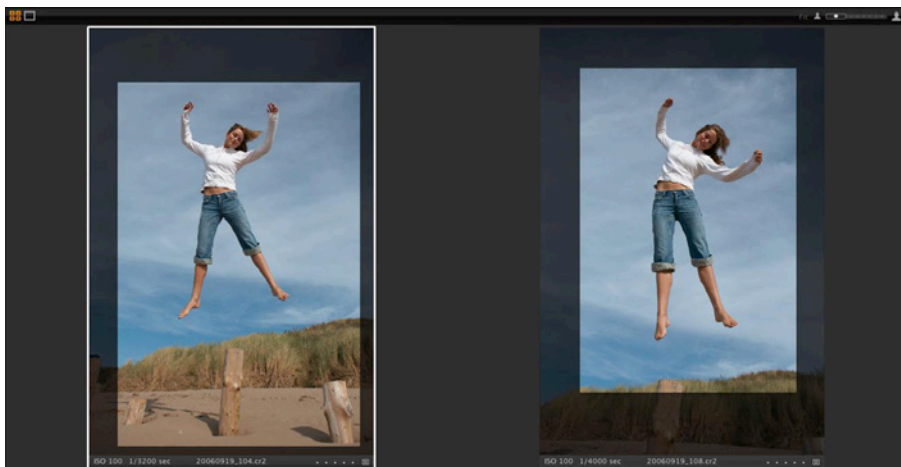
10.3 Crop to output

How does Crop > Ratio > Output work?

This gives a similar result to using a crop ratio with a fixed destination as above.

Go to the output tool and select an output size, let's say 5x4"

Select the crop ratio as output and everything that you crop will now fit within 5 x 4". One of the neat features about this setting is that the crop automatically swaps between horizontal and vertical as you drag in the image. This allows the option to crop to a horizontal or vertical shape according to what works the best.



How does the crop settings work with outputting to fixed dimensions?

The most precise way to crop an image to an exact size is to set process recipe to, the output desired, i.e. 10x10. Create an aspect ratio that is the same dimensions of the desired print size. For example, an 8 x 10 print is desired. I will create an aspect ratio that is 8 x10. Consequently when I apply a crop, the crop will fit an 8x10 sheet of paper regardless of image orientation.

10.4 Straightening

How can I straighten images?

Nothing is more irritating than an image where the horizon is just a few degrees away from horizontal or a vertical building that is crooked. Capture One was the first RAW workflow software to allow rotation. Capture One 4 now offers an even more sophisticated straightening tool.

How do I straighten an image?

Select the Rotation/Straighten button in the cursor tool palette or in the composition tool and drag along a straight edge that should be vertical or horizontal. Fine tune the straightening or rotating by mouse scroll over the slider, this way you will change the degree of rotation by 0.1 at the time if carefully scrolled.

If I need to straighten an image, when should I crop?

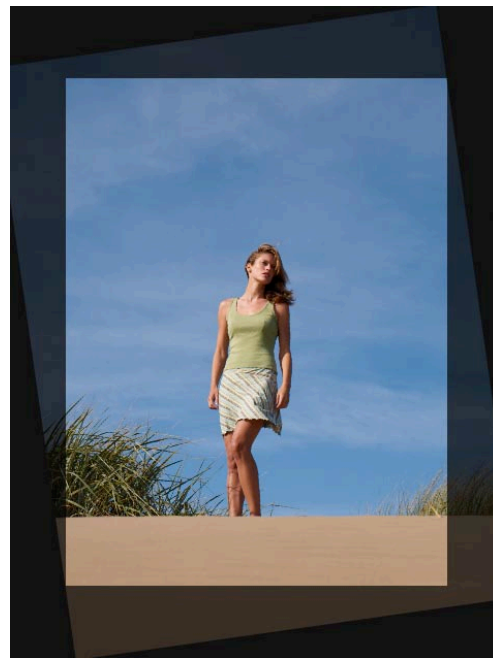
It is easier to rotate the image first, as the software automatically crops the rotated image to the maximum usable dimensions. Following this, the crop can be fine tuned by the user, perhaps to fit to a specific aspect ratio such as 6x4 inches/10x15cm.

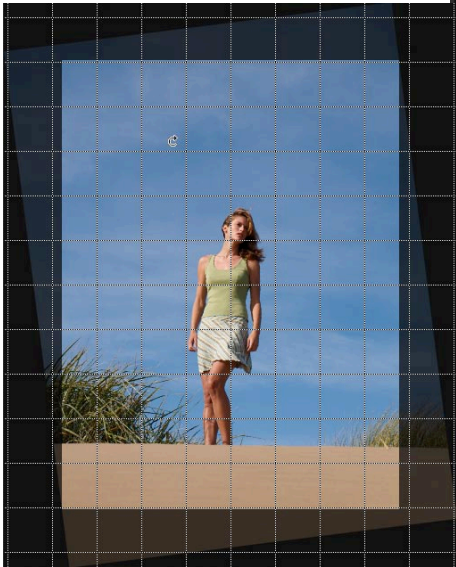
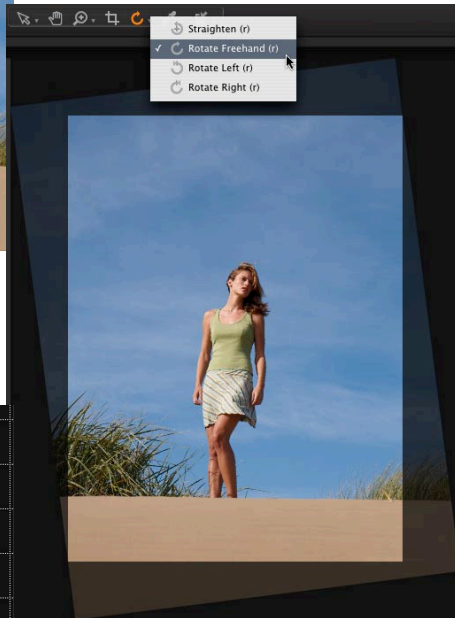
Can I apply straighten or crop settings to a group of images?

Straighten the image as required, optimize the crop and then copy the settings using the Copy/Apply buttons on the menu bar.

Select the next image/group of images that you want to apply the same settings to and click the Apply button. Remember to hold down the shift key to apply to a group of images. Identical crop and rotations will be applied to all images.

To enhance the functionality of the copy and paste settings, it is possible to select which of the settings are pasted – see the Settings chapter for a full explanation of this feature.





Rotate Freehand

To adjust the image by eye, move the slider on the angle tool to left or right. A grid appears, making it easy to align vertical or horizontal lines. If you wish to freehand rotate more images at once, firstly freehand rotate one image, then use Copy/Apply Adjustments.

Capture One allows adjustments up of to 45 degrees. For adjustments greater than this, use:

Rotate Left/Right

Allows rotation of 90 degree to the left or right. By pressing shift while rotating Left/Right you will rotate all selected RAWs. Fine tune the rotation or rotating by mouse scroll over the slider, this way you will change the degree of rotation by 0.1 at the time if carefully scrolled. Rotate more than one image at the time, by first selecting the images, hold down shift while pressing Rotate icon.

How do I revert to the uncropped image?

Undoing any change in Capture One is performed by using Edit>Undo or of course the Undo button. In the rotation tool, it is possible to select the reset button or you can use Preset drop-down menu > Rotate snap 90°.

10.5 Sharpening

Sharpening is an essential process when working with images created by digital cameras. The Capture One 4 sharpening is a newly designed and enhanced unsharp mask. The purpose is to compensate for the effect of internal filters in all DSLRs that soften the image and to compensate for the softening effect that occurs when the images are printed.

By default, Capture One 4 sharpening settings have been configured to provide a good looking image on screen. Additionally, the software comes with a number of presets that are accessed from the pull-down menu. Any of these presets can be activated and set as a default for all images.

When an image is destined for post-production or retouching in other software, it is recommend processing the image without sharpening applied.

How do I sharpen an image?

Capture One has a range of presets, formulated to provide good starting points for sharpening images for most purposes.

If the concept of sharpening is unfamiliar to you, take a little time to look at how the settings change the appearance of images on screen at 100%, and compare these to final prints.

Typically, an image that is sharpened, for print or press, will look overly sharp on screen but produce a pleasing result when printed.

What settings are needed for Inkjet printing?

Inkjet printers vary, from small desktop models, to ultra-wide, large format machines.

Start with the supplied inkjet setting, check the result and if desired, adjust. If you modify the settings, then the new settings may be named uniquely and saved as a preset.



Tip:
When using Pan[H] –
doubleclick anywhere
on the image an the
area you click on will
go to 100%



What settings are needed for printing in a magazine or brochure?

If your images are processed for later printing it varies how much Sharpening is needed, a good starting point would be:

Amount: 350

Radius: 0.9

Threshold: 2

Fine tune this to suit your needs and the recommendation from the printing place and save as preset.

How can I see the effects of the sharpening?

The effects of sharpening and noise reduction are shown as they will appear in the final image, in the viewer.

Zoom to 100% either by using the Zoom tool – or if you are using the hand cursor just double-click where you want to check details.

When you at 100% it is easy to see the changes as you work with the detail tools.

How can I determine what's the right amount of sharpening?

A rule of thumb for sharpening used to be that the image should look over-sharp on screen to look correct in print. These ideas have been superseded.

The current thinking is that a 2 stage workflow is better. First sharpen the fine detail in the image.

Use the capture or raw pre-sharpening setting.

Secondly, a more aggressive sharpening affect can be used. This should be applied when the image has been sized according to printing dimensions.

There is no accurate measure of 'what is the right amount'. Sharpening is a skill that is learned over time.

If you feel insecure on the right amounts of sharpening, try out one of the many Sharpening presets, after selecting the preset, you can always edit the parameters further

Can I turn off image sharpening?

Turn sharpening off by selecting 'Disable Sharpening'.

There is no sharpening applied behind the scenes.



10.6 Noise Reduction

Luminance noise exists in every digital image. This noise is caused by the light sensitive chip, regardless of ISO. Normally this noise is more visible at high ISO values.

Higher Noise levels at high ISO values are caused because the signal has been amplified.

Luminance

Removes the pattern-like noise often present in shadow areas. Best practice is to set Luminance to 25, even for low ISO images. Ideally it should be left on a low setting, such as 25, even for low ISO images. Images with noise that is displeasing increase the setting value and check the effect in the Viewer at 100% magnification.

Color

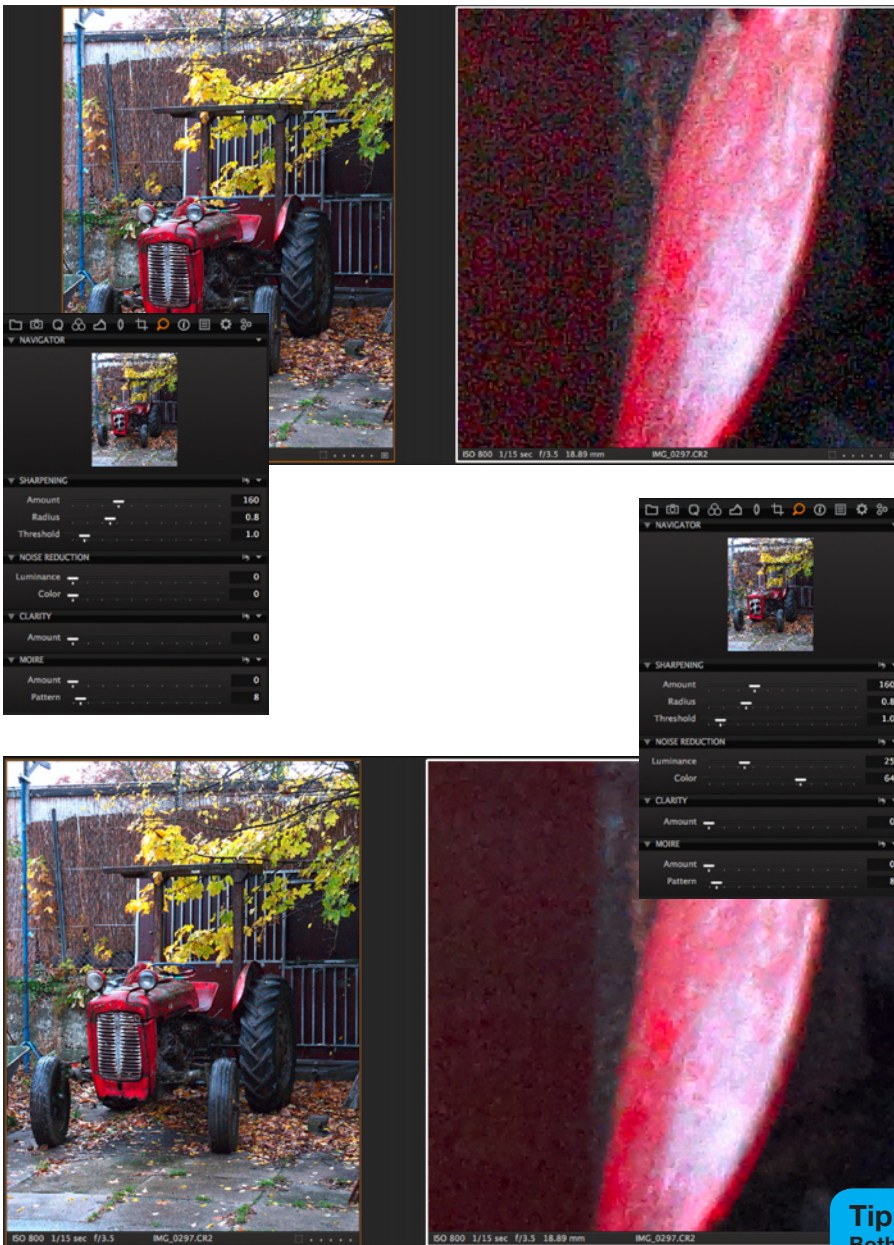
Removes color noise from images, typically noticeable as subtle green/magenta patterns. It is very difficult to recommend specific settings as noise varies from camera to camera, but the program defaults provide a good starting point. The viewer provides a clear view of the effect of filters on image noise.

How can I remove noise from images?

Noise should be removed from the images using a combination of the above tools. Capture One automatically applies some noise reduction to images, based on the ISO and exposure data from the camera that is contained in the image metadata. The default settings provide a good starting point for further adjustments.

What kind of noise can I remove in Capture One?

Capture One allows the removal of luminance and color noise from images using the color and luminance noise reduction sliders.

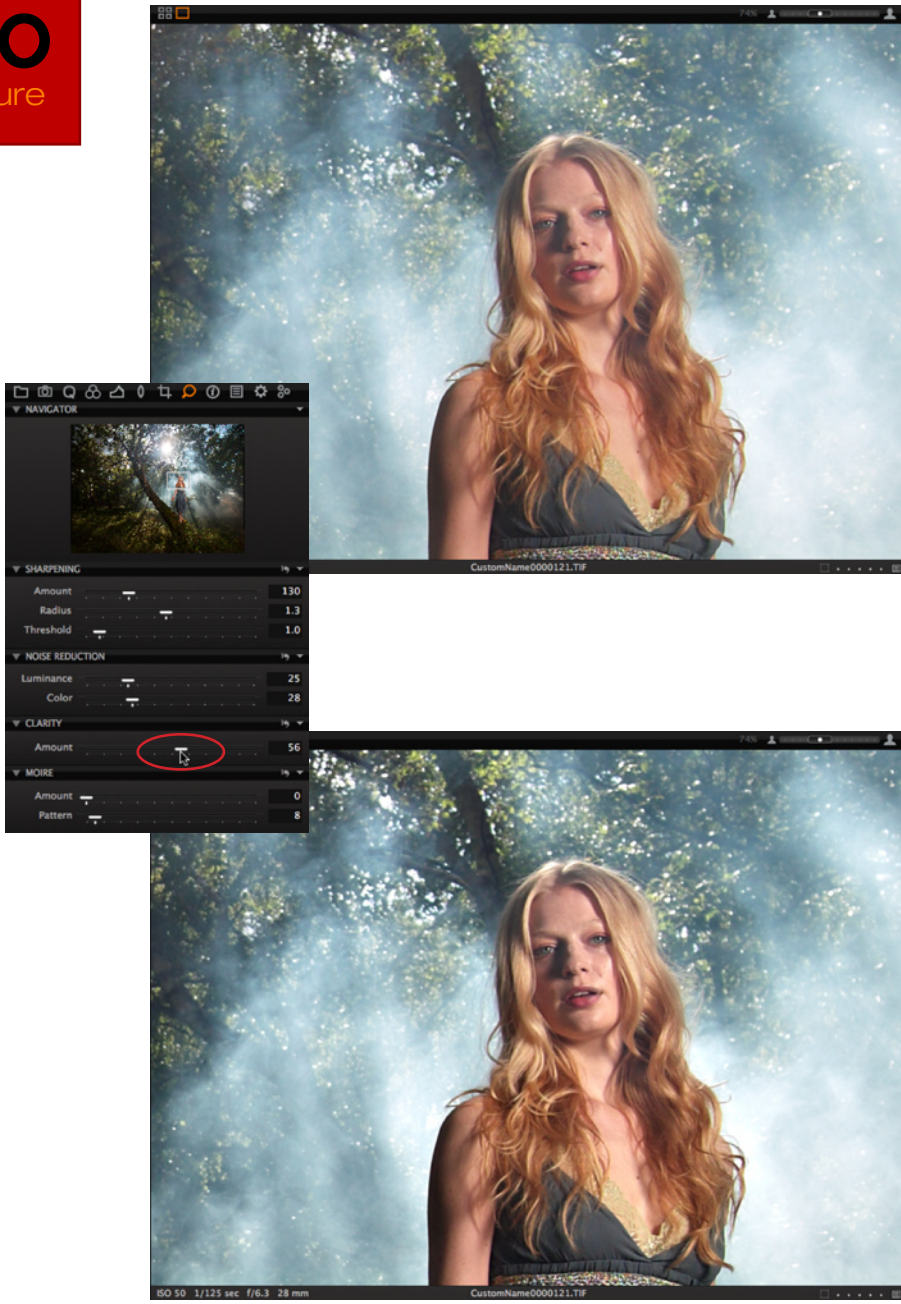


Tip:

Both sharpening and noise reduction tools allow the user to create presets, making it extremely easy to create regular settings for a specific camera or type of image. Simply click the preset button and select 'add preset' to create a new preset.

Tip:

Use the default setting (applied automatically by the software) and then zoom into 200% to fine tune settings for an image – if you have a group of similar images, apply the resulting setting to all images or create a new preset.



How can I raise contrast in hazy or low contrast images?

Contrast is one of the variables to be used when adjusting hazy images, but the new PRO tool Clarity has proven to be an extremely effective tool.

Clarity is adjusting contrast and slightly also sharpness on basis of pixel frequency. This is done in relation to an analysis of the image made by Capture One 4PRO.

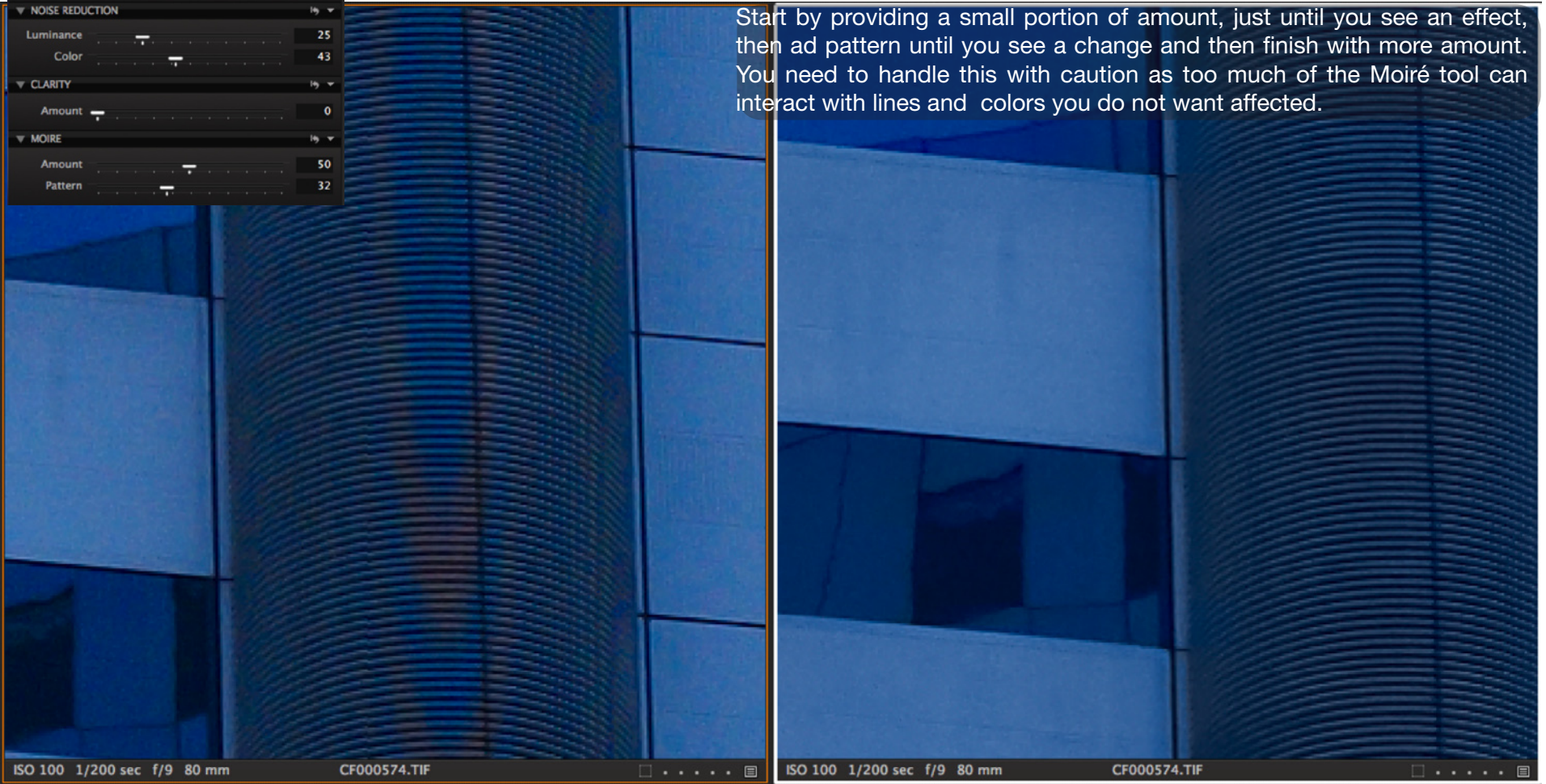
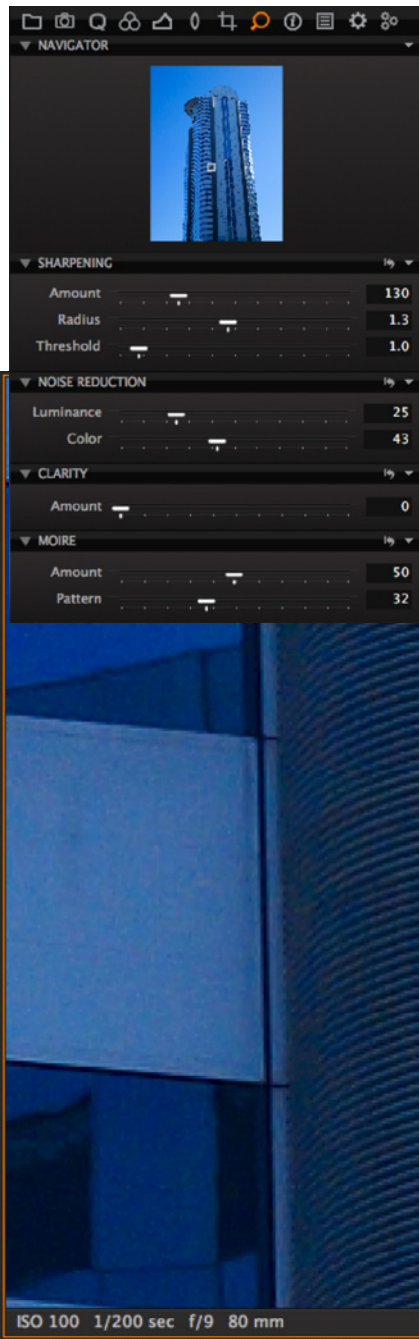
How can I avoid Moiré?

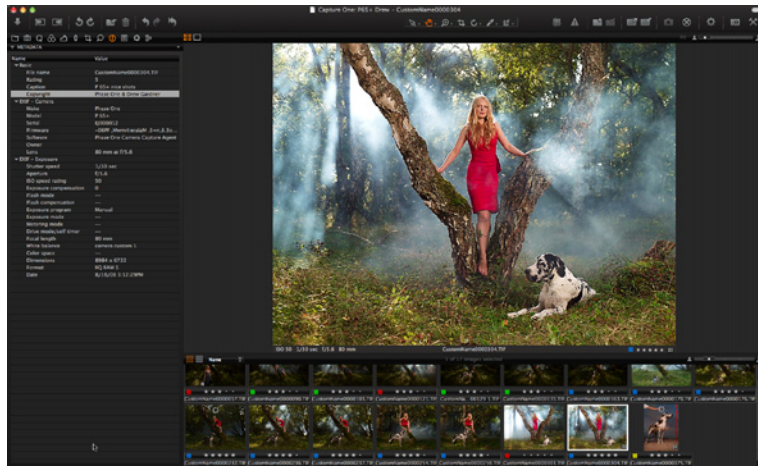
In very simple terms Moiré can occur, when you are capturing a motive with fine pattern details, which the sensor lack resolution to reproduce.

Moiré can be an issue when photographing clothes and with architecture photography.

Often the simplest way to avoid Moiré is to moving back/forward a bit while photographing and/or changing aperture.

Start by providing a small portion of amount, just until you see an effect, then ad pattern until you see a change and then finish with more amount. You need to handle this with caution as too much of the Moiré tool can interact with lines and colors you do not want affected.





Name	Value
▼ METADATA	
▼ Basic	
File name	CustomName0000304.TIF
Rating	5
Caption	P 65+ nice shots
Copyright	Phase One & Drew Gardner
▼ EXIF - Camera	
Make	Phase One
Model	P 65+
Serial	EJ000012
Firmware	-06PF ,Mwmrl:eralaM .3=n,8...
Software	Phase One Camera Capture ...
Owner	
Lens	80 mm at f/5.6
▼ EXIF - Exposure	
Shutter speed	1/30 sec
Aperture	f/5.6
ISO speed rating	50
Exposure compensation	0
Flash mode	--
Flash compensation	--
Exposure program	Manual
Exposure mode	--
Metering mode	--
Drive mode/self timer	--
Focal length	80 mm
White balance	camera custom 1
Color space	--
Dimensions	8984 x 6732
Format	IIQ RAW S
Date	8/18/08 3:12:29PM

11.0 Metadata

Introduction

Metadata is a term that means data about data. In photographic terms it refers to data that describes your image and how it was taken.

Metadata in Capture One can be broken down into two types:

Basic

Basic is a subset of IPTC, data that is regularly used by photographers to add captions. This area provides the ability for the user to add Copyright and Caption information to the image. In the browser it is also possible to rate the image and this will be shown in the metadata window.

EXIF

EXIF information is data that is embedded into the file by the camera and is not editable by the user. Capture One shows two types of EXIF data.

EXIF Exposure data includes shutter speed, ISO, aperture and all other user configurable settings.

Importantly, it includes white balance information according to the camera at the point of capture. This directly affects how the thumbnail and preview are displayed in Capture One EXIF Camera data provides comprehensive details of the hardware used, detailing the body (or digital back), lens and serial number.

Name	Value
▼ METADATA	
▼ Basic	
File name	CustomName0000304.TIF
Rating	5
Caption	P 65+ nice sH
Copyright	Phase One & Drew Gardner
▼ EXIF - Camera	
Make	Phase One
Model	P 65+
Serial	EJ000012
Firmware	-06PF ,Mwmri:eraiaM .3=n,8...
Software	Phase One Camera Capture ...
Owner	
Lens	80 mm at f/5.6
▼ EXIF - Exposure	
Shutter speed	1/30 sec
Aperture	f/5.6
ISO speed rating	50
Exposure compensation	0
Flash mode	--
Flash compensation	--
Exposure program	Manual
Exposure mode	--
Metering mode	--
Drive mode/self timer	--
Focal length	80 mm
White balance	camera custom 1
Color space	--
Dimensions	8984 x 6732
Format	IIQ RAW S
Date	8/18/08 3:12:29PM

Name	Value
▼ METADATA	
▼ Basic	
File name	CustomName0000304.TIF
Rating	5
Caption	P 65+ nice shots
Copyright	Phase One & Drew G
▼ EXIF - Camera	
Make	Phase One
Model	P 65+
Serial	EJ000012
Firmware	-06PF ,Mwmri:eraiaM .3=n,8...
Software	Phase One Camera Capture ...
Owner	
Lens	80 mm at f/5.6
▼ EXIF - Exposure	
Shutter speed	1/30 sec
Aperture	f/5.6
ISO speed rating	50
Exposure compensation	0
Flash mode	--
Flash compensation	--
Exposure program	Manual
Exposure mode	--
Metering mode	--
Drive mode/self timer	--
Focal length	80 mm
White balance	camera custom 1
Color space	--
Dimensions	8984 x 6732
Format	IIQ RAW S
Date	8/18/08 3:12:29PM

What Meta data can I enter/change?

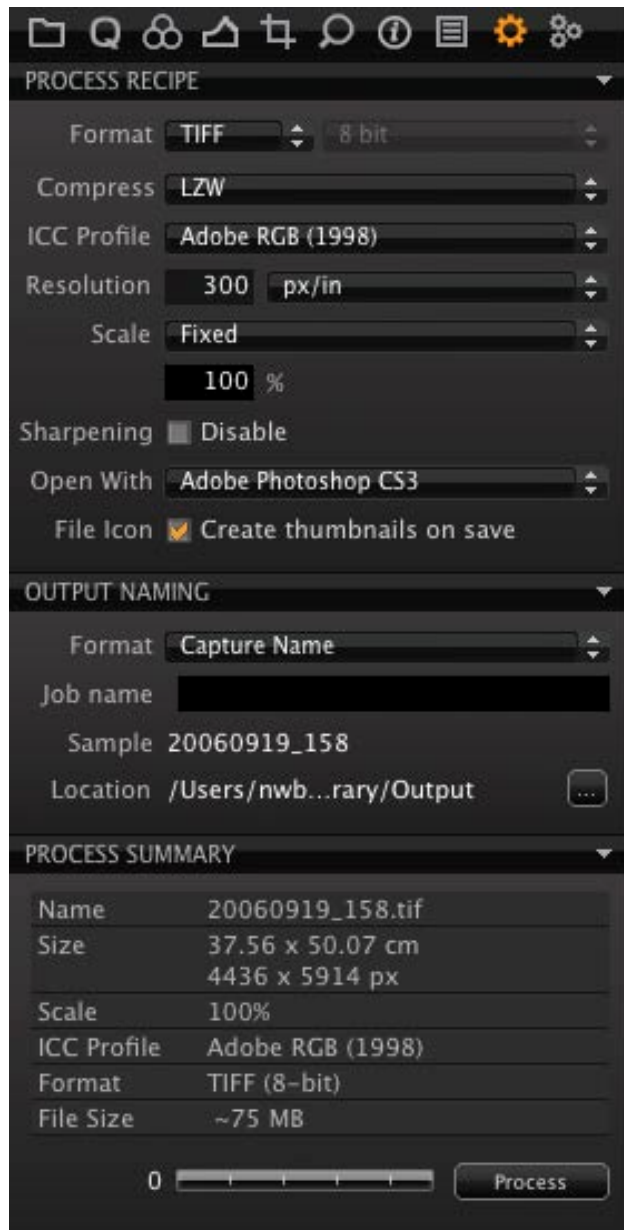
You can change the Basic metadata, filename, rating caption and copyright. You can set Caption & Copyright information when you import the images, this can later come handy, when producing Web Contact Sheets.

After import of the image you can change the metadata on the Metadata tab doubleclick on the line, to activate Caption and/or Copyright. If you choose to rate your images this rating will also be a part of your metadata, this will help the future users of the image when they need to sort.

How can I search for images with specific metadata/Exiff data?

Within the Browser Toolbar, there is the option to show image thumbnails or to view images as a list.

First, choose to view thumbnails as a list. This is the best way to sort images. From the View pull-down menu choose sort. The sort pull-down menu offers various metadata and Exif data to choose from. Sorting method is ascending. If descending values is desired simply click no the header title and the order is reversed.



Example of output recipe for compressed TIFF

12.0 Get the right output

Introduction

Images can be processed from Capture One as TIFF or JPEG files, with options for file compression, bit depth and color space, in addition to the normal options for resolution and size.

There is also the option to create contact sheets for web use.

For archival use, Capture One can export images to the open standard Digital Negative, .DNG files.

Images intended for manipulation or post production in other software should be exported as 16-bit TIFF files in the Adobe RGB or ProPhoto RGB color spaces.

16-bit output increases the color graduations from black to white in each of the three color channels from 256 in 8 bit output, to 65,536 per channel in 16-bit. This makes a huge difference in the way that an image can be adjusted without visible damage. It also prevents banding on gradients, such as skies.

12.1 How can I create a process recipe?

Process Settings consist of a selection of options to create and output images as required. The Process Settings Tool tab provides many choices for the output of your images.

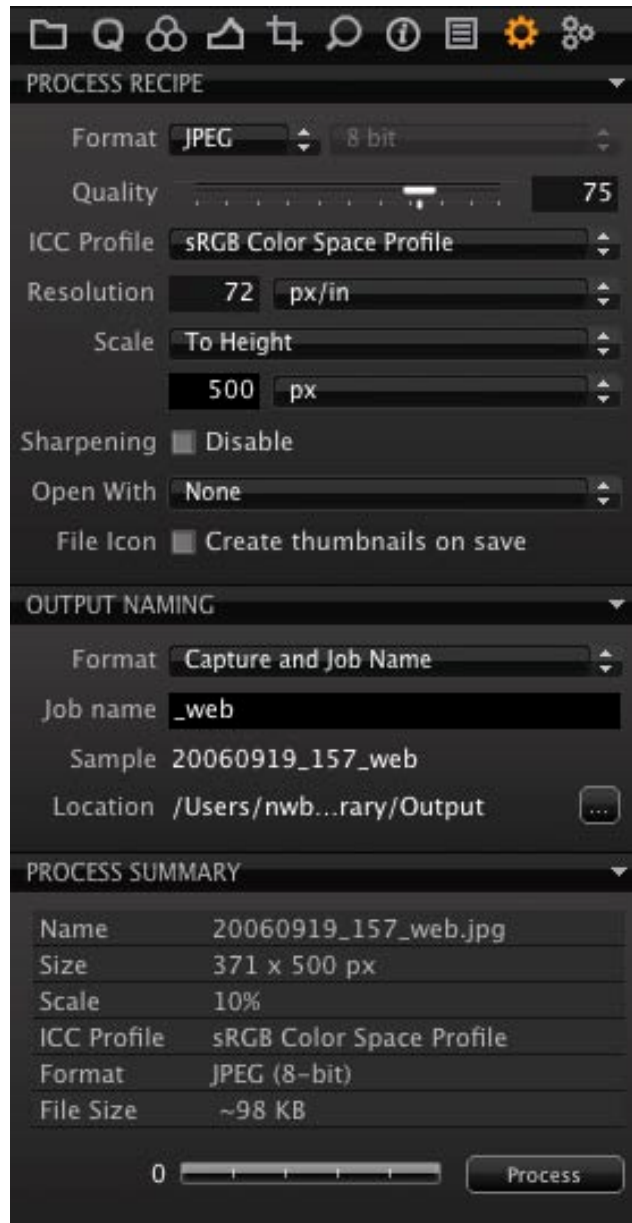
Here is a summary of what each setting does:

Format

Choose the output file format, depending on the determined use of the file.

TIFF for maximum quality or JPEG for size and convenience.

TIFF files provide the option of 16 bit output.



Example of output recipe for web

Compression

Both TIFF and JPEG files may be compressed.

TIFF is lossless format, as are both forms of TIFF compression; LZW and ZIP. This is the best choice for pixel based image archiving.

JPEG is a compressed file, the higher the compression, the smaller the file. However, the higher the compression, the greater the loss of information from the file. JPEG compression also adds noise to an image.

The following settings are recommended for JPEG Quality Image Options. Choose 90 or above for glossy magazines. Choose 80 or above for any other printed form.

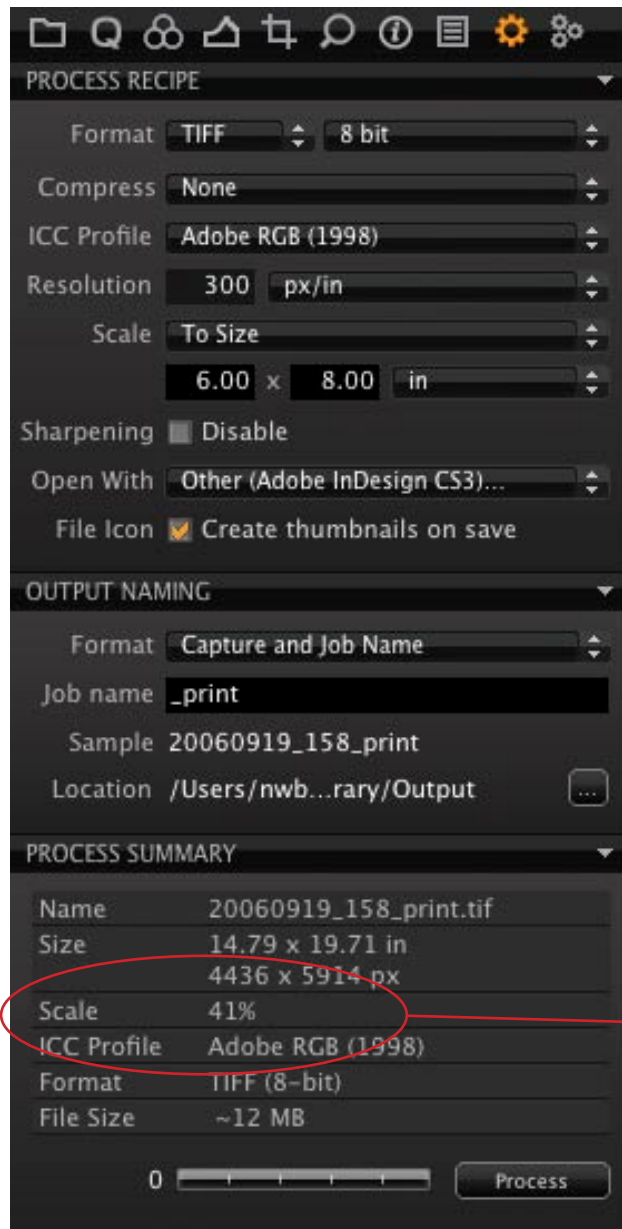
Colorspace

Choice of Color space depends on the final purpose of the file.

For web use, the only choice is sRGB, for other uses check with your client or lab. Adobe RGB is often recommended.

Resolution

Resolution is typically 300 px/in, but again, for web this will be 72 px/in and many processing labs will have different requirements.



Example of output recipe for print

Size

The default setting for scale is Fixed, 100%. This setting can be changed as required.

The options “To Width” and “To Height” are self-explanatory. “To size” option is not so.

The best way to understand the “To size” option is by example. For instance you have a group of images to be processed for the web. The area that the image must fit is 500 x 500 pixels.

The best way to accomplish this request is to choose “To size” and set the dimensions 500 x 500 pixels. Navigate through the images and crop them as desired.

When these files are processed the dimensions will be 500 x 500 pixels and will satisfy the specific processing request.

The “To size” option is available when the crop tool is set to output. For example the output size is set to 10 x 8”. Navigate through the images and crop to output. The images will have a 10 x 8” crop applied.

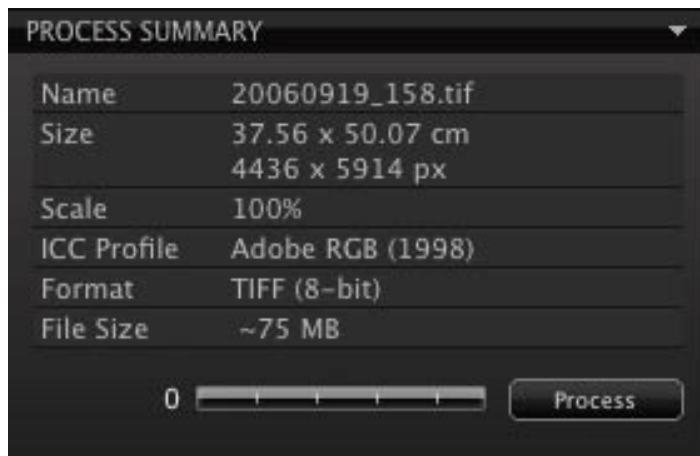
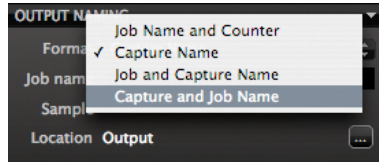
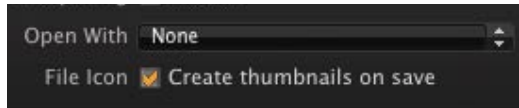
This technique can also be applied when cropping with the crop tool set to fixed ratio.

All of these examples will give accurate output and quicken the rate at which you work.

Output Scaling

New to capture One 4 is the ability to scale images on output from 10-250%.

Previously only available in the Pro version of the software, this means that upsizing images is as simple as selecting the output size required. Because the scaling is carried out on the RAW data, the scaling is of the highest quality and suitable for any type of use.



Open with

Allows Capture One to automatically opening the processed file in an application. Most users choose Adobe Photoshop™ to open the file immediately after processing.

The best practice when processing a batch of files is to set “Open with...” to None. This will prevent computer related resources from being depleted.

Naming

Output naming provides a range of options for naming the processed files. Adding a job name in the blank field increases these options and the helpful sample panel provides a preview of how the chosen convention will work.

Process destination

Beneath naming, is the heading ‘Location’. This is where you choose the output destination for processed files. Click on the button and navigate to a suitable folder. This can be on a local or networked drive. This can also be set on the output location on the Library Tool tab.

Process Summary

The Process Summary window provides an overview of all the settings chosen for an image before processing.

This includes the actual and final processed size, name, format and file size.

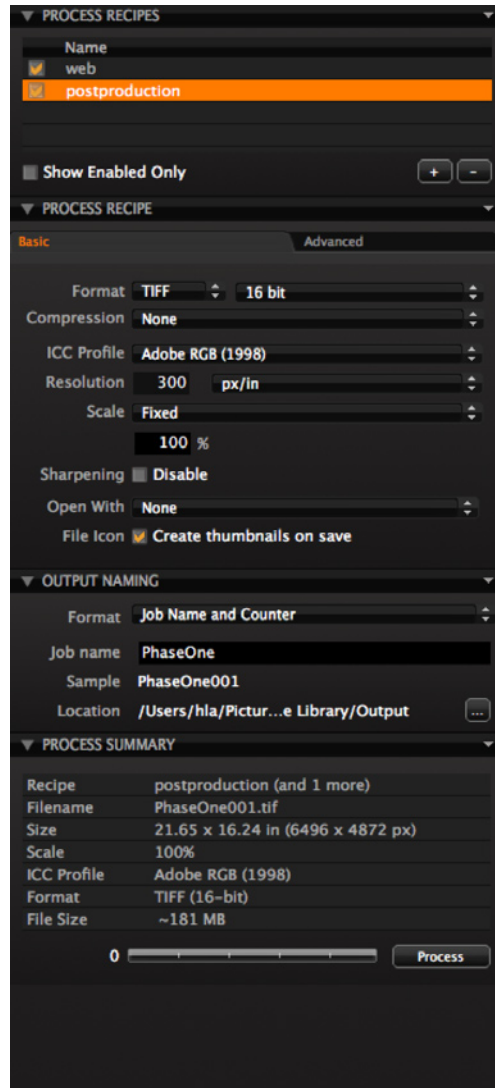
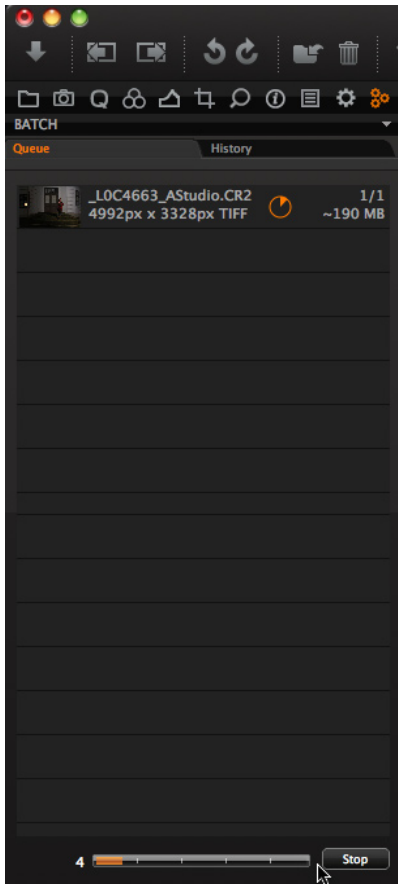
Clicking Presets provides a choice to process the primary or variant image.

When you press the Process button, the file or files will start processing the Primary Capture automatically. If you press SHIFT whilst activating the processing, you will start processing all selected instead of just the Primary.

Output to DNG

Many see a benefit of using DNG for archival purposes.

Outputting to DNG format in Capture One 4 in essence creates a new RAW file. There are no options for size or compression with this format. All changes made to the image will be discarded when creating the DNG file.



12.1 Multiple Recipes

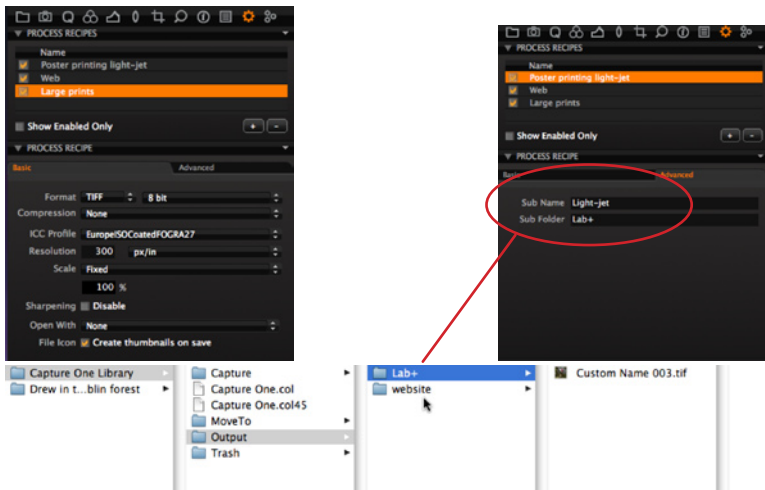
Often you will need the same image in different variations, an editable and printable 300Dpi, a web version 72Dpi created to match with etc. This can be done very easily as your process recipe is automatically saved in the recipe profiles on top of the tab.

When you are done creating your output recipe you can name it and then press “+” to add the next recipe. Each new recipe is based on the previous settings. This way you can create more than 1000 of different process recipes, which should be sufficient for most photographers.

It is important to notice, you do not have to save changes in the process recipe, the changes you make, are automatically added to the process recipe that is high-lighted.

Through time you will find it practical to create many different recipes, a clever system could be naming after client name, or purpose... you can choose to only view the selected recipes, this makes it easier to verify that the right recipes are selected. The images created in the batch appears as one image referring to the rawfile, but if you, as this example have chosen to create several images from one rawfile, the images will simply be placed in the chosen output folder

Name	Date Modified	Size	Kind
Fashion008 1.jpg	Today, 2:58 PM	9.2 MB	JPEG image
Fashion008.dng	Today, 2:58 PM	32.7 MB	Digital Negative file
Fashion008.jpg	Today, 2:58 PM	560 KB	JPEG image
Fashion008.tif	Today, 2:58 PM	51.4 MB	TIFF image



Can I output to different folders?

By using advanced tab in the process recipe you can decide how the files of the individual recipe should be stored. The folder will be created automatically when process button is pressed.

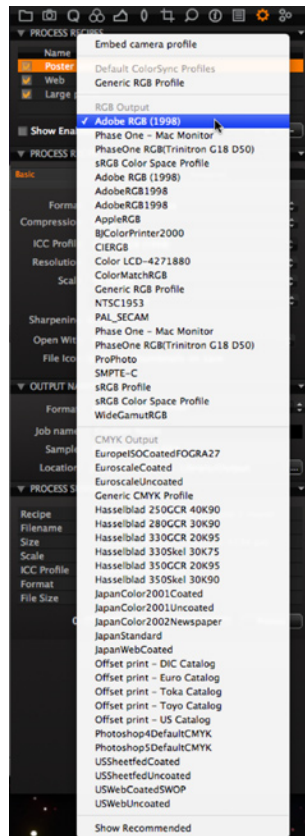
You can even decide to have the individual process recipes stores in their own specific subfolders, using the advanced tab on the process recipe.

This way you avoid having to sort and split up files from the job before shipping them to your client, or to the different post process places.

Can I convert to other than RGB profiles?

You can convert to various different RGB and CMYK workspaces by deciding in the process recipe, it is of course always recommendable to convert and check the colors thoroughly before processing.

You can also change to CMYK in View>Proof Profile, in this menu you will find the same colorspace as in the process recipe. This way you can do your adjustments in the CMYK image keeping an eye on the final result



12.2 Create Web-Contact sheet

To output a group of images to a web based contact sheet, select the images and choose File > Make Web Contact Sheet.

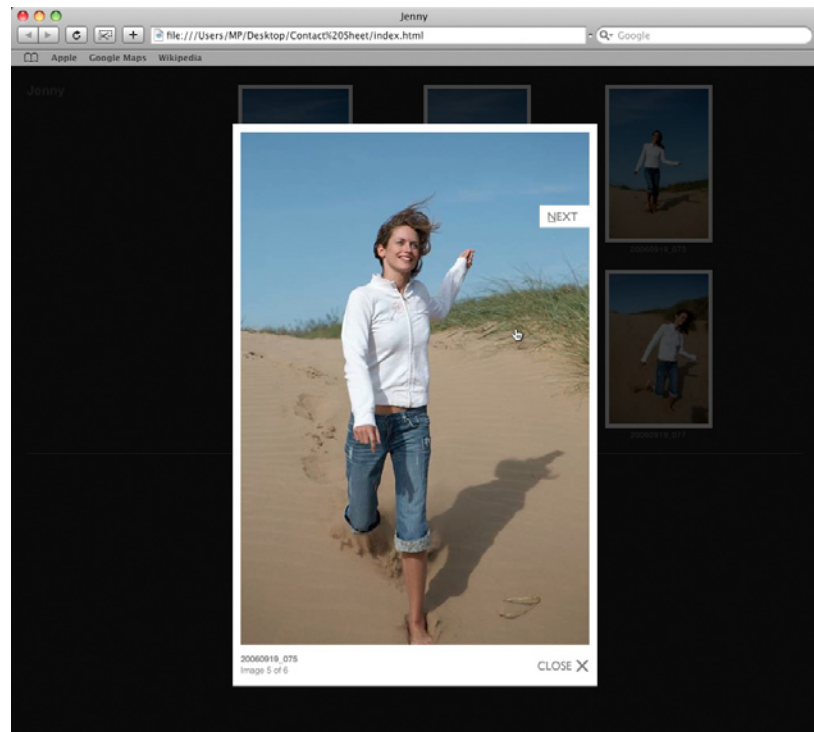
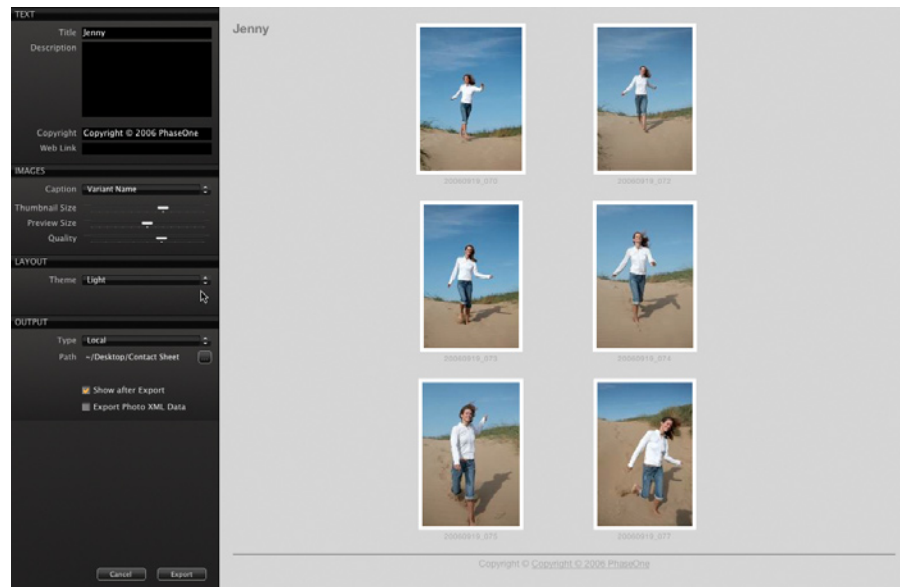
A dialogue presents itself offering the opportunity to provide information such as title, description, etc.

The best practice is to choose the dark grey background color. Light grey background color option is also available, if preferred.

An amazing feature of the web contact sheet is that the size of the images and thumbnails can be customized. If you have access to a secure server or a password-protected web folder, it makes sense to preview images to clients at 800 pixels so they can see the quality of the images. You can see the pixel size of thumbnails or preview size when adjusting the slider, the number indicates how many pixels the images are wide.

Once all options have been selected, choosing Export outputs a complete folder to add to your web site.

It is important that the name is in lower case and without spaces – you can use hyphens or underscores.



Tip: When generating a Web Contact Sheet, Capture One uses the generated proxies in order to achieve a much faster result. However, if the proxies have not been generated yet, the Web Contact Sheet must wait for this to happen. This can take quite some time, so if you are experiencing slow progress in the sheet, missing proxies is most likely to be the reason.

Tip: When asked for a name after export, remember that the name you choose will be the folder name and will appear on your web site – for example: www.adomain.com/foldername

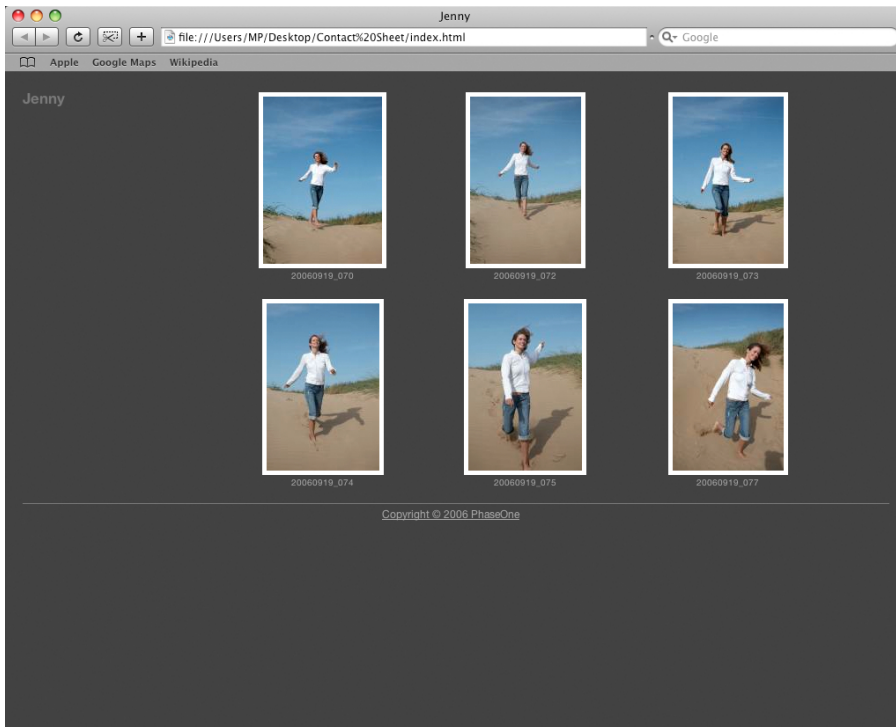


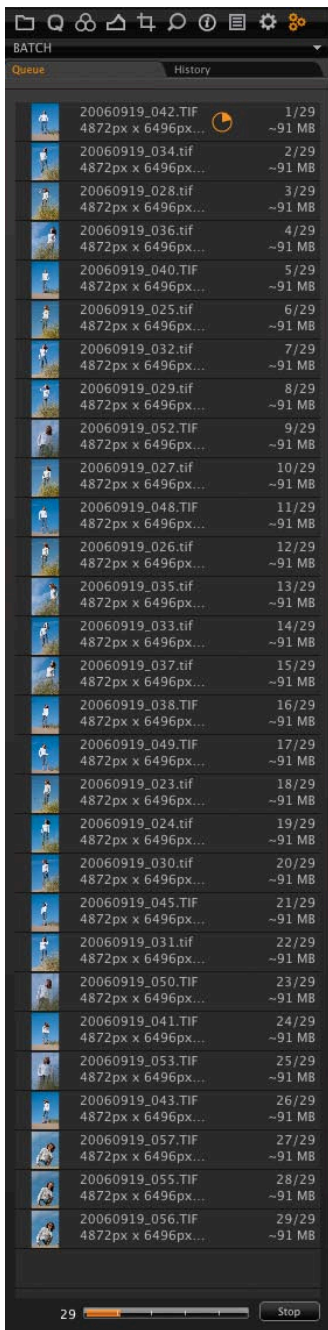
Can I add/disable sharpening for my contact sheets?

No, sharpening can be applied to the images themselves, not to the web contact sheet as a whole.

What is the best workflow to adjust exposure for images for web?

The most effective way to adjust images quickly for output is to fine tune exposure and contrast, then copy the settings and then to select all similar images and paste the settings to them.





12.3 How does the batch work?

After the output recipe is created mark the files to be processed. Now choose File>Process, or press Process button. The batch of files will be processed to the selected output folder.

If you wish to Process all selected instead of just one, first select the images you wish to process then hold Shift whilst pressing Process or hold Shift whilst choosing File>Process, this menu item will be Process Selected when pressing Shift.

Capture One has been designed to process batches of images quickly and efficiently.

The Batch of files will start processing immediately after choosing File>Process or Process button.

Batch processing can work in two ways depending on your preference:

By default, processing happens in the background without noticeable effect on the performance of the application.

There is the option to stop the batch queue, only enabling it to process images when other work has finished or overnight.

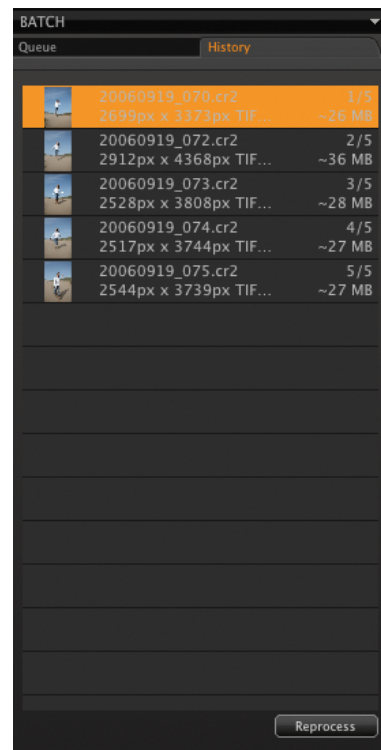
To set the application to work in this way, go to the Batch Tool tab. At the bottom of the tab, press the 'Stop' button. Processing will not commence until this has been reset to 'Start'.

When there are a large number of images in the batch queue, processing priority can be changed by dragging and dropping unprocessed files around in the queue.

You can always remove files from the batch queue by marking the file or files and pressing backspace(mac).

History

The batch tool tab shows a history of all recent files that have been processed. If for any reason, there is a need for further copies of these images, the relevant ones can be selected and the 'Reprocess' button selected.



Capture One 4 – Keyboard Shortcuts

Function	Mac	Windows	Function	Mac	Windows			
AutoAdjust (Primary file)	CMD+F	Ctrl+F	Tool tab shortcuts Tooltabs Library Tab Capture Tab Quick Tab Color Tab Exposure Tab Composition Tab Detail Tab Metadata Tab Adjustments Tab	Key CMD+Option+1 CMD+Option+2 CMD+Option+3 CMD+Option+4 CMD+Option+5 CMD+Option+6 CMD+Option+7	Ctrl+1 Ctrl+2 Ctrl+3 Ctrl+4 Ctrl+5 Ctrl+6 Ctrl+7 Ctrl+8 Ctrl+9			
AutoAdjust (ALL) Selected	Shift+CMD+F	Ctrl+Shift+F						
Trash (Primary file)	Backspace	Delete						
Trash (ALL) Selected	Option+CMD+Backspace	Ctrl+Shift+Delete						
MoveTo (Primary file)	CMD+J	Ctrl+J						
MoveTo (ALL) Selected	Shift+CMD+J	Ctrl+Shift+J						
Process (Primary file)	CMD+D	Ctrl+D						
Process (ALL) Selected	Shift+CMD+D	Ctrl+Shift+D						
Reset (Primary file)	CMD+R	Ctrl+R				Previous Tab	CMD+Option+←	Ctrl+Shift+Tab
Reset (ALL) Selected	CMD+Shift+R	Ctrl+Shift+R				Next Tab	CMD+Option+→	Ctrl+Tab
RotateLeft (Primary file)	CMD+Option+L	Ctrl+Alt+L						
RotateLeft (ALL) Selected	CMD+Option+Shift+L	Ctrl+Shift+Alt+L						
RotateRight (Primary file)	CMD+Option+R	Ctrl+Alt+R						
RotateRight (ALL) Selected	CMD+Option+Shift+R	Ctrl+Shift+Alt+R						
Rotate Snap (Primary file)	CMD+Option+X	Ctrl+Alt+.						
Rotate Snap (ALL) Selected	CMD+Option+Shift+X							
Viewer Zoom In		Ctrl+Plus						
Viewer Zoom Out		Ctrl+Minus						
Viewer Zoom to Fit	CMD+0	Ctrl+0						
Viewer Zoom to 100%	Option+CMD+0	Ctrl+Alt+0						
New Variant		F7						
Clone Variant		F8						
Copy Adjustments	CMD+Shift+C	Ctrl+Shift+C						
Apply Adjustments	CMD+Shift+V	Ctrl+Shift+V						
Import		Shift+Ctrl+I						
Capture	CMD+K	Ctrl+K						
Exposure Warning Toggle	CMD+E	Ctrl+E						

Capture One 4 – Keyboard Shortcuts

Function	Mac	Windows	Function	Mac	Windows
Select All	CMD+A	Ctrl+A	Remove rating (Primary file)	0	0
Deselect All	Shift+CMD+A	Ctrl+Shift+A	Remove rating from (ALL) Selected	Option+0	Shift+0
Invert Selection	Ctrl+I		Rate 1 star (Primary file)	1	1
Select Previous	CMD+Left	Ctrl+Left	Rate (ALL) Selected 1 star	Option+1	Shift+1
Select Next	CMD+Right	Ctrl+Right	Rate 2 stars (Primary file)	2	2
Set Compare Item	Return	Return	Rate (ALL) Selected 2 stars	Option+2	Shift+2
Clear Compare Item	CMD+Return	Shift+Return	Rate 3 stars (Primary file)	3	3
Next Tool Tab	Ctrl+Tab		Rate (ALL) Selected 3 stars	Option+3	Shift+3
Previous Tool Tab	Ctrl+Shift+Tab		Rate 4 stars (Primary file)	4	4
Browser Toggle Visible	CMD+B	Ctrl+B	Rate (ALL) Selected 4 stars	Option+4	Shift+4
Browser Toggle Position	Shift+CMD+B	Ctrl+Shift+B	Rate 5 stars (Primary file)	5	5
Browser Toggle Auto	Option+CMD+B		Rate (ALL) Selected 5 stars	Option+5	Shift+5
Tools Toggle Visible	CMD+T	Ctrl+T			
Tools Toggle Position	Shift+CMD+T	Ctrl+Shift+T	Cursor Tools Shortcuts		
Tools Toggle Auto	Option+CMD+T		Cursortool	Key	
Undo	CMD+Z	Ctrl+Z	Use Shift to toggle		
Redo	Shift+CMD+Z (Ctrl+Shift+Z)	Ctrl+Y	Select	V	
Navigationwindow when zooming	Space		MoveTo	V	
Help	CMD+?	F1	Trash	V	
Show preferences	CMD+, (comma)	Ctrl+K	Pan	H	
Hide Capture One	CMD+H		ZoomIn	Z	
Hide Others	Option+CMD+H		ZoomOut	Z	
Quit	CMD+Q	Alt+F4	Crop	C	
			Rotate	R	
			FreehandRotate	R	
			LeftRotate	R	
			RightRotate	R	
			WhiteBalance	W	
			HighlightPicker	L	
			ShadowPicker	L	
			CurvePointPicker	U	
			CopyAdjustments	A	
			ApplyAdjustments	A	

Capture One 4 – Mouse Shortcuts

If your mouse or pointing device has a scroll (wheel) function you can use it in selected areas to control features of Capture One.

The Viewer

Place your mouse cursor over an image in the Viewer; moving the scroll wheel up will zoom into an image and moving the scroll wheel down zooms out. You don't have to have images to selected to zoom in or out.

The Browser

If you place your mouse cursor anywhere in the Browser you can scroll up and down in your image collection by using the mouse scroll wheel

Sliders and input fields

Place your mouse cursor over a slider in any given tool and you can use your scroll wheel to fine-tune the slider settings, by scrolling up or down on the mouse. You don't have to select a slider, simply place your mouse cursor over it and start scrolling. You can easily move for slider to slider and control to control and make fine-tuned adjustments.

Similarly you can place your mouse cursor over any input field in a control and adjust it up or down by using the mouse scroll wheel.

Curve points

The mouse scroll wheel is a great tool for fine-tuning your curves work. Pick curve points and use the mouse scroll wheel to carefully adjust these.