

User Guide

Microsoft® Windows® | Apple® OS X®

EN

DxO ViewPoint 2

SHIFT YOUR PERSPECTIVE



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Photo credits: Olivier Lambolez, Olivier Revon, Nyght Falcon
Text: Gilles Théophile
Layout: degresfahrenheit.com

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1.1. Welcome



DxO ViewPoint 2 as a standalone application.

Thank you for choosing DxO ViewPoint, the first software solution for Mac and Windows entirely dedicated to correcting lens distortions and deformed elements on the edges of photos, and to redressing problems with perspective and tilted horizons. Based on DxO Labs' exclusive lens and geometric correction technologies, DxO ViewPoint lets you easily and efficiently restore the natural proportions of the subjects in your images.

1.2. New features in DxO ViewPoint 2

Distortion correction

Use the **Distortion** tool to correct lens distortion. Thanks to DxO Optics Modules, you can automatically apply corrections to your images that are perfectly adapted to the equipment you use. If your lens is not yet supported by a DxO Optics Module, you can make corrections manually. Three distortion correction modes are available — barrel, pincushion, and fisheye.

Correcting volume deformation

The **Volume deformation** tool takes into account your shooting parameters. You can use it to easily correct the deformation of subjects located on the edges of images, whether the distortion is horizontal, vertical, or diagonal.

Fixing perspectives and the horizon

Use the **Perspective** tool to easily rectify convergent lines as well as complex perspective problems and thus give your architectural photos a more natural look. Use the **Horizon** tool to level tilted horizon lines in your landscape photos.

Advanced cropping feature

Thanks to DxO ViewPoint 2's **automatic cropping** feature, you can easily preserve the proportions of your image for a more natural rendering, as well as maximize the visible field for an optimal result.

A clear and intuitive interface

DxO ViewPoint has a workspace composed of a large viewing area along with simple and intuitive toolbars and control palettes. Thanks to the software's explicit icons, you can readily identify the rights tools for applying your corrections in just a few clicks. Place your anchor points with precision using the **Loupe** palette and use the **composition grid** to fine-tune your corrections. You can choose between two display modes: single image for making corrections with a maximum of precision, or side-by-side to be able to see changes in real-time.

Accessible to all

Use DxO ViewPoint as a (32- or 64-bit) standalone application for Mac and Windows or as a plugin for Adobe® Photoshop® CS3, CS4, CS5, CS6, and CC; Adobe® Photoshop® Elements® 9, 10 and 11; Adobe® Photoshop® Lightroom® 3, 4, and 5; and Apple® Aperture® 3.

1.3. DxO help and resources

Find DxO help and resources for DxO ViewPoint 2 — tutorials, guides, webinars – in the DxO Academy (<http://www.dxo.com/intl/photography/tutorials>). You can also access this page directly in DxO ViewPoint 2 by selecting **Help > DxO Academy**.

1.4. System requirements

For the best results with DxO ViewPoint, your computer must conform to the following minimum specifications:

Microsoft® Windows®

Windows Vista® (32, 64-bit), Windows 7 (32, 64-bit), Windows 8 (32, 64-bit)
Intel® Pentium® 4, Intel® Dual Core, or equivalent AMD® processor
2 GB of RAM
400 MB of available disk space

Macintosh

Mac OS X 10.6 Snow Leopard, 10.7 Lion, 10.8 Mountain Lion
Intel® Mac processor
2 GB of RAM
400 MB of available disk space

NOTE

To process large image files, a 64-bit system and 4 GB of RAM are recommended.

1.5. Installation, registration, and activation

Important: An Internet connection is required to follow the steps described below.

Registration

You need to register your license in order to activate your software. To do so, go to the DxO Labs website at <http://www.dxo.com/CD> and follow the registration procedure. If you do not have a customer account, fill out the new customer form. If you already have a customer account, log in.

Downloading

Once you have registered your license, you will find important information in your customer account about the software, along with the download link for DxO ViewPoint. This procedure ensures that you will be installing the latest version of the software. Click on either the Win or Mac button (depending on your equipment) to begin downloading the installer.

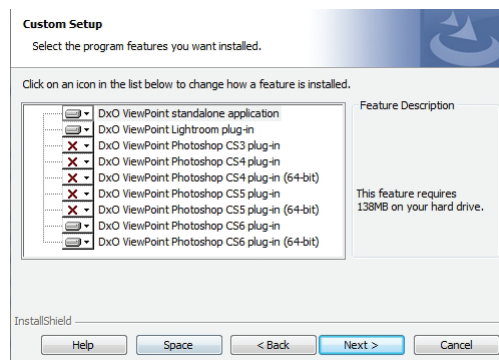
After the download is completed, double-click on the installation program icon that you just downloaded and follow the specified installation procedure. There are several options for installing DxO ViewPoint:

- Standalone application for Microsoft® Windows and Macintosh
- Plugin for Adobe® Photoshop®
- Plugin for Adobe® Photoshop® Elements®
- Plugin for Adobe® Photoshop® Lightroom®
- Plugin for Apple® Aperture®

Important: A single license allows you to install and run DxO ViewPoint on two separate computers.

Installation - Microsoft Windows

After accepting the license agreement, click on **Next**. You can select between **Standard** and **Custom installation**. The standard installation will automatically install all relevant plugins. Custom installation allows you to choose which plugin(s) to install.



Microsoft® Windows installation window.

A new window will open asking you to choose the folder in which you want to install DxO ViewPoint. If the program does not automatically detect the directory in which to install the Adobe® Photoshop® plugin, you can select the appropriate folder by using the Browse button.

Click the **Install** button. The installation starts and may take several minutes.

Installation – Mac OS X

After accepting the license agreement, click on **Next**. A window will open that allows you to select the component(s) you want to install.

A new window will open asking you to choose the folder in which you want to install DxO ViewPoint. If the program does not automatically detect the directory in which to install the Adobe® Photoshop® plugin, you can select the appropriate folder by using the Browse button.

Click the **Install** button. The installation starts and may take several minutes.

Activation

Your activation code can be found on the cover of the installation notes provided in the box with your software or in your online DxO **customer account**.

When you launch DxO ViewPoint for the first time, enter your activation code in the appropriate field in the software activation window and click on the **Activate** button.

A message informs you that DxO ViewPoint has been properly activated.

NOTE

To activate DxO ViewPoint for Microsoft® Windows Vista®, Windows 7 or Windows 8, you must open a session as an administrator. Further, if you are using Windows Vista® and the User Accounts Control is activated, you must launch DxO ViewPoint as an administrator. To do so, right-click on the DxO ViewPoint shortcut icon on the Windows desktop and select "Execute as an administrator." You only have to do this once.

1.5. Uninstalling

Microsoft Windows

For Microsoft® Windows, click on **Start > Programs > DxO ViewPoint 2 > Uninstall DxO ViewPoint 2** and follow the procedure for uninstalling.

Mac OS X

For Mac OS X, click on **Applications > DxO ViewPoint 2 > Uninstall** and follow the procedure for uninstalling.

DxO ViewPoint and your production workflow

2.1. DxO ViewPoint versions

DxO ViewPoint comes in two versions:

- As a **standalone application**, DxO ViewPoint is autonomous. It applies its corrections to the images, which then can be integrated into a host application for further processing (see below for supported image file formats).
- As a **plugin**, DxO ViewPoint can be used with four applications:
 - Adobe® Photoshop® CS3, CS4 (32 and 64-bit), CS5 (32 and 64-bit), CS6 (32 and 64-bit), CC (32 and 64-bit).
 - Adobe® Photoshop® Elements 9, 10, 11.
 - Adobe® Photoshop® Lightroom® 3, 4, 5.
 - Apple® Aperture® 3.

If an image has been previously opened in one of these applications, you can temporarily transfer the image into DxO ViewPoint. You can process the image in DxO ViewPoint and then transfer it back into the other application.

NOTE

DxO ViewPoint can be installed simultaneously as a standalone application or as a plugin on your computer, so you can use either version whenever you want.

2.2. Supported file formats

DxO ViewPoint processes JPEG and 8- or 16- bit TIFF files up to 200 Megapixels in RGB.

2.3. Workflow with host application

DxO ViewPoint readily integrates with the workflow of photographers who use Adobe solutions. Used as a plugin for Adobe® Photoshop®, Adobe® Photoshop® Lightroom®, or Adobe® Photoshop® Elements®, or as a plugin for Apple® Aperture®, the application is called directly by the host software from an image that is already open.

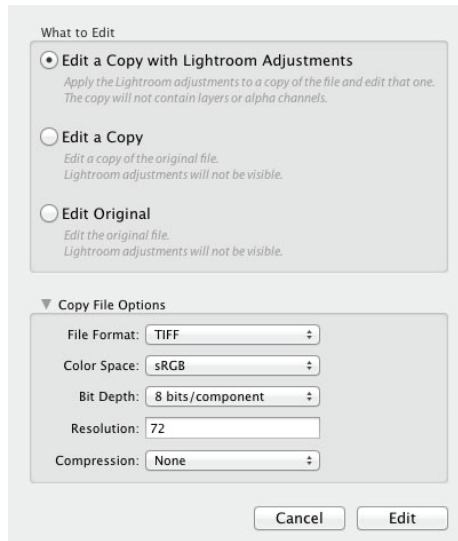
Launching the plugin for Adobe® Photoshop® Lightroom® 3, 4 and 5

To correct an image with DxO ViewPoint while working in Adobe® Photoshop® Lightroom® 3, 4, or 5:

- Launch the plugin version of the application from the **Photo > Edit in > Edit in DxO ViewPoint 2** menu. You can also right-click on the image that you want to correct and select the command **Edit in > Edit in DxO ViewPoint 2**.
- A dialog box will open showing the option **Edit a Copy with Lightroom Adjustments**. This option will allow you to use DxO ViewPoint 2 to touch up images previously corrected in Adobe® Photoshop® Lightroom®.
- Choose the file export format — JPEG or TIFF in 8-bit or 16-bit (16-bit images have higher quality, but the files are much larger). Generally, you should keep the resolution at its actual value, and the compression option should be “None.”
- Click on the **Edit** button to launch DxO ViewPoint.

NOTE

DxO ViewPoint uses DxO Optics Module distortion corrections; to avoid a double correction, we advise you not to use the lens correction features in your host application.



Dialogue box and plugin options for Adobe® Photoshop® Lightroom® 5.

Launching the plugin for Adobe® Photoshop® CS3, CS4, CS5, CS6 and CC

To correct an image in DxO ViewPoint while working with Adobe® Photoshop® CS3, CS4, CS5, CS6 or CC, launch the application from the **Filters > DxO Labs > DxO ViewPoint 2** menu.

Launching the plugin for Adobe® Photoshop® Elements® 9, 10 or 11

To correct an image in DxO ViewPoint 2 while working with Adobe® Photoshop® Elements® 9, 10 or 11, launch the application from the **Filters > DxO Labs > DxO ViewPoint 2** menu.

Launching the plugin for Apple® Aperture® 3

To correct an image in DxO ViewPoint 2 while working with Apple® Aperture® 3,

- Launch the application from the **Photos > Edit with > DxO ViewPoint 2**.
- You can also right-click on the image and select **Edit with a plugin > DxO ViewPoint 2** from the contextual menu.

Opening images with DxO ViewPoint as a standalone application

To correct an image directly in the DxO ViewPoint application:

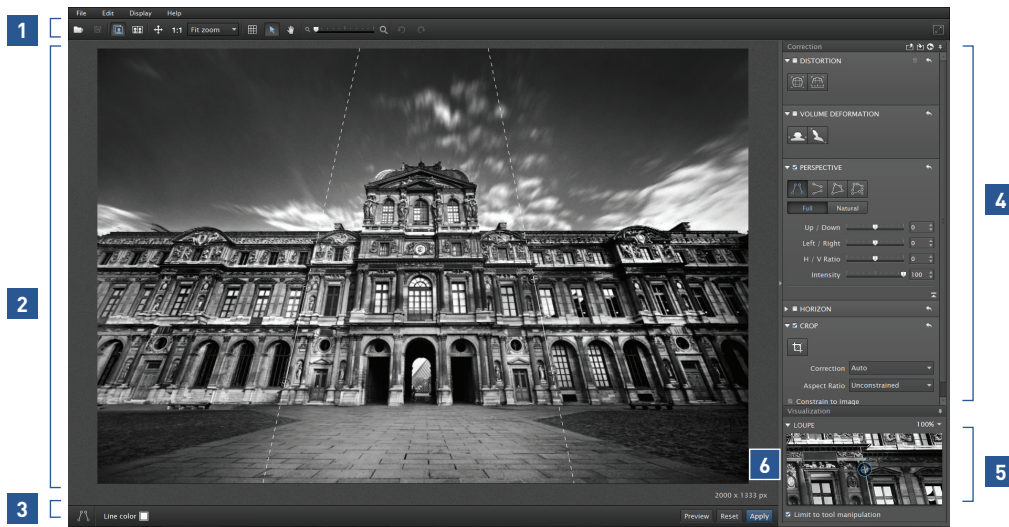
- Go to the **File > Open** menu.
- In the system dialogue window, choose a TIFF or JPEG file.

NOTE

As DxO ViewPoint sometimes modifies the image size, it is not compatible with Adobe® Photoshop's smart objects and dynamic filters, which can be applied only to images whose size remains constant.

The DxO ViewPoint workspace

3.1. Interface



The six principal parts of the DxO ViewPoint user interface.

The DxO ViewPoint user interface is composed of 6 principal parts:

- | | |
|------------------------------------|------------------------------------|
| 1 The upper toolbar | 4 The Correction palette |
| 2 The image display and file depot | 5 The Visualization palette |
| 3 The lower toolbar | 6 Image size indicator (in pixels) |

The image display and file depot

The image display is the largest part of the application workspace and is where images are displayed as you correct them. It is also a file depot area into which you can drag and drop image files directly from your computer directories.

TIP



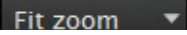






You can click directly in the display area to open your system directory and choose the image you want to correct.

The upper toolbar



Located at the top of the DxO ViewPoint window, the upper toolbar includes tools for opening and saving files, as well as for different display modes and navigation. From left to right:

- File > Open*:** Opens a dialog box to allow you to select an image to correct from the system files or directories in which you store your photos.
- File > Save As*:** Opens a system dialog box to allow you to save the image corrected and processed in DxO ViewPoint. (Note: It is common practice to save the corrected image under a different name than that of the original.)
- Display single image** button: Display corrected and initial images one behind the other; to toggle, left-click with your mouse.
- Display corrected and initial images side-by-side:** The image before correction is displayed on the left; after correction, on the right.

-  **Fit to screen:** Adjusts the image size to fit the application display screen.
-  **1:1** button: Display image at 100% (1 image pixel = 1 screen pixel).
-  **Fit zoom:** This drop-down menu uses predefined zoom values for enlarging or reducing the image display.
-  **Toggle Grid overlay:** This button activates/deactivates the superimposition of the composition grid on an image.
-  **Arrow tool:** Activates the mouse cursor after you have used another tool, such as the Hand, to navigate within an image.
-  **Hand tool:** Lets you navigate within an enlarged image.
-  **Change zoom:** Adjust the zoom level using the slider or a mouse wheel.
-  **Rotation tools for pivoting the image to the left or to the right.**
-  **Full screen:** Click on this button to use the entirety of your screen when working in DxO ViewPoint. To return to the regular display, click on the button again (upper right corner).

* Only in the standalone application version.

Lower toolbar (standalone application version)



This toolbar is displayed at the bottom of the application window, and depending on the correction tool selected and activated in the palettes, can include the following commands (from left to right):

- **Tool selected:** This icon serves as a reminder of the tool you are currently using.
- **Line color:** Clicking on the small blue (default color) square opens a color picker that allows you to choose the color of your perspective and horizon correction lines so as to optimize their visibility on the image you are correcting. (Note: This command is not available with the Crop tool. Also note that the application remembers the last line color you choose.)
- **Opacity Mask:** Available only with the Crop tool, this slider brightens or darkens the parts the image that are outside the crop area.
- **Display grid:** Available only with the Crop tool, this checkbox activates or deactivates the superimposition of the composition grid on the image.
- **Preview:** Available only with the Perspective and Horizon tools, this tool lets you refresh the content of the image after you have applied your corrections.
- **Reset:** Undoes all unsaved corrections and returns to the original image.
- **Apply:** Applies the corrections and then closes the lower toolbar. To reopen the lower toolbar, click on a tool icon in one of the correction palettes.

The lower toolbar (plugin version)

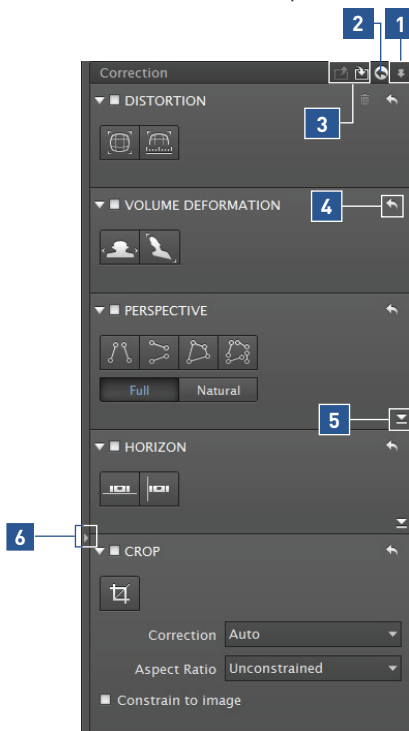


In the plugin version of DxO ViewPoint, a second toolbar is located on the bottom of the window and contains the following commands (from left to right):

- **Help:** Accesses DxO ViewPoint online help (Internet connection required).
- **Preferences:** Opens the dialog box to adjust the application settings.
- **Save:** Definitively applies the corrections and then quits from the plugin before returning to the host application.
- **Cancel:** Allows you to quit from DxO ViewPoint, but first, a dialogue box will ask you if you want to save your changes or not. If you click on Cancel within the dialog box, it will close the dialog box and return you to the DxO ViewPoint interface.

3.2. Correction tool palettes (general information)

The different correction tools – Distortion, Volume deformation, Perspective, Horizon, and Crop – will be explained in greater detail in their respective sections in this guide. Below are brief descriptions of the general features of the palettes and of the commands that all palettes have in common:



- 1 Detach the palettes:** You can move a palette by grabbing the palette header or clicking on the push-pin icon (in the upper right-hand corner of the palette) and then dragging it to any part of the DxO ViewPoint window.
- 2 Replace palettes:** You can return the palettes to their default positions on the right side of the image workspace by clicking on the push-pin icon.
- 3 Reset all corrections:** This feature lets you reset all the corrections to their default settings and to return to the initial image you started with (see part 3.6).
- 4 Save/import current settings:** Save your settings for one image so you can apply them to another (see part 3.5).
- 5 Reset correction:** Each tool has a circular arrow reset button located in the upper right corner of each section (Distortion, Volume deformation, Perspective, Horizon, and Crop).
- 6 Display or hide sliders:** The Distortion, Volume deformation, Perspective, and Horizon palettes each contain a certain number of advanced settings sliders. To open the sliders, click on the arrow icon in the lower right corner of the relevant palettes. To hide them, click on the arrow icon.
- 6 Hide controls:** Click on the small arrow located just above the lines separating the palette tool sections to hide or deploy tool controls.

3.3. Visualization palette



The **Visualization** palette contains a Loupe that lets you more accurately place perspective and horizon anchor points without having to zoom in on the entire image in the display field. The Loupe magnifies the image at 100% and at 200%; you can select either level in the menu in the upper right corner of the Loupe tool box.

The Loupe displays the portions of the image that the mouse rolls over. The **Visualization** palette can be detached from its default location and placed anywhere in the DxO ViewPoint window (see the preceding paragraph). DxO ViewPoint memorizes the position of the palettes when you quit the application.

TIP

If you check the **Limit to tool manipulation** box, the Loupe will be active only when you are working with correction lines and anchor points, the Crop tool, or the Hand tool.

3.4. Menus

Microsoft® Windows® standalone application and plugin versions:

File: Open and Save images; quit from application.

Edit: Undo/Redo commands and access to Preferences.

Display: Enter full-screen mode, hide tool panes, and display/hide the superimposed composition grid.

Help: Access to DxO online help, product activation, check for updates, and version information (“About”).

NOTE

In the standalone application version of DxO ViewPoint, the **File > Save** command overwrites the original file, and the **File > Save As** command creates a new file.

Mac OS X standalone application and plugin versions:

DxO ViewPoint 2: Access to version information (“About”) and to preferences.

File (standalone version): Open, Open Recent, Save, Save As, and Close commands.

File (plugin version): Save command.

Edit: Undo/Redo correction commands, and display/hide the superimposed composition grid.

Display: Enter full-screen mode, hide tool panes, and display/hide the superimposed composition grid.

Help: Access to DxO online help, DxO Academy tutorials, product activation, and check for updates.


NOTE

In the plugin versions, the **Save** button acts like the **File > Save** command (per above), and consequently all corrections overwrite the original file.


3.5 Saving and importing current settings

You can save all the current settings you apply to an image so as to be able to apply them to another photo with the same characteristics.

Saving current settings:


After you have chosen your settings and applied your corrections, save your correction settings by clicking on the icon  located at the top of the correction tools palette.

Importing custom settings:

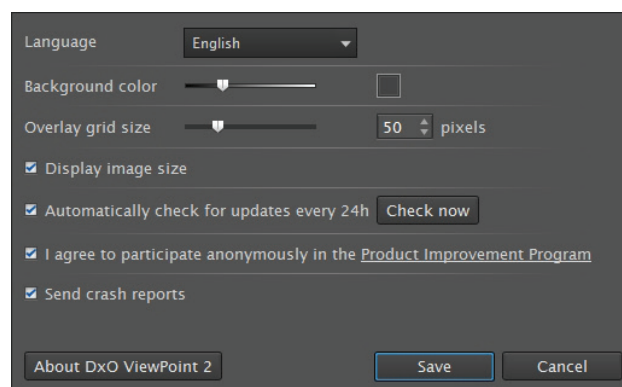
Open a new image and then click on the icon  to import your saved settings. The entirety of your previous corrections will be applied to your new image.

In plugin mode, this feature offers a non-destructive workflow and allows you to apply the corrections saved in DxO ViewPoint to an image changed in the host application.

3.6 Resetting corrections

So long as your corrections have not been applied nor saved, they can be reversed or modified as desired throughout the duration of your work in DxO ViewPoint. To reset one or more of the corrections applied, click on the circular arrow  at the top right of the relevant palette(s).

3.7. Preferences



The Preferences dialogue box lets you control a certain number of settings:

Language: Change the program language (English, German, French, or Japanese). Note that you must restart the application if you change the language.

Background color: Change the shade of the gray background in the image display area. To return to the default shade, double-click on the slider.

Overlay grid size: Adjust the size of the grid squares. To return to the default size, double-click on the slider.

Show/hide image size: Display the dimensions of the image in pixels underneath the main workspace window.

Automatically check for updates every 24h: Self-explanatory. An adjacent **Check now** button lets you manually inquire about application updates (Internet connection required).

Product Improvement Program: Choose to participate or cease to participate in this anonymous user feedback program designed to help perfect DxO ViewPoint.

Send crash reports: Activate or deactivate automatic generation and sending of error reports following a program crash.

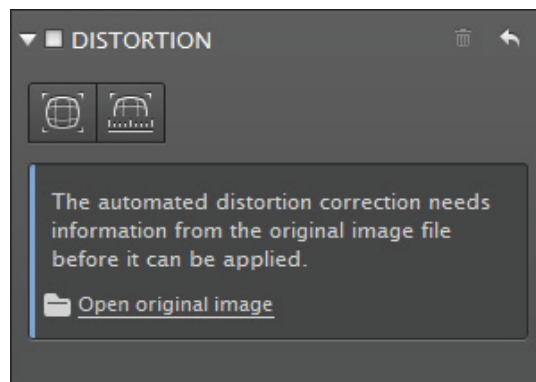
About DxO ViewPoint 2: Contains information about the application version, along with certain legal notices.

Save: Save all changes made in the Preferences window.

Cancel: Undo all changes and close the Preferences window.

3.8. Warning messages

Warning messages tied to EXIF data or to DxO Optics Modules can appear in the DxO ViewPoint **Distortion**, **Volume deformation** and **Perspective** palettes.



Warning message in the Distortion palette.

Distortion palette:

- **EXIF data:** In plugin mode, if EXIF data is not available, DxO ViewPoint will retrieve the information from the original file. If that is not possible, then automatic distortion correction cannot be performed, although manual correction is still possible.
- **DxO Optics Modules:** Different messages address ambiguity (i.e., several different DxO Optics Modules are available for the same equipment), and the availability of and updates to Optics Modules. If there are no DxO Optics Modules available, then automatic correction cannot be performed, although manual correction is still possible.

Perspective/Volume deformation palettes: If EXIF data is missing, then automatic correction will not occur. The message will suggest manually adjusting the **H/V Ratio** slider to modify the image proportions or the intensity.

Correcting distortion

4.1. About distortion

All lenses are more or less affected by distortion, which takes two principal forms:

- **Barrel:** Lines are curved toward the exterior of the image.
- **Pincushion:** Lines are curved toward the interior of the image.

Some lenses are affected by both phenomena — for example, a zoom lens can display a barrel distortion at its shortest focal length, and a pincushion distortion at its longest focal length... not counting all the distortion variations at intermediate focal lengths.

DxO ViewPoint lets you correct distortion for every kind of lens, either automatically for camera/lens combinations supported by DxO Optics Modules, or manually if the camera/lens combination you use is not yet supported by a DxO Optics Module.

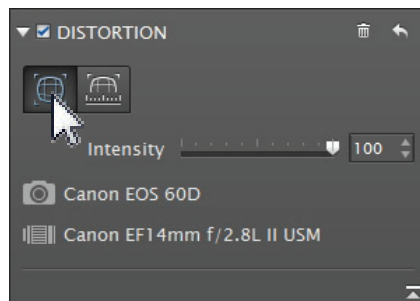
DxO ViewPoint also corrects automatically or manually the circular distortion seen in images taken with fisheye lenses.

4.2. Correcting distortion automatically

If your material is supported by a DxO Optics Module, you can correct your image automatically.

Step 1 – Open an image in DxO ViewPoint by selecting **File > Open**, or drag and drop your image into the application window.

Step 2 – In the **Distortion** palette, click on the **Automatic** button.



Step 3 – A dialogue box will indicate if a DxO Optics Module for your equipment is already installed, or if not, whether it is available for downloading.

Step 4 – Click on **OK** to correct the image using the selected DxO Optics Module and to close the dialogue box.

NOTE

DxO ViewPoint uses DxO Optics Module distortion corrections; to avoid a double correction, we advise you not to use the lens correction features in your host application.

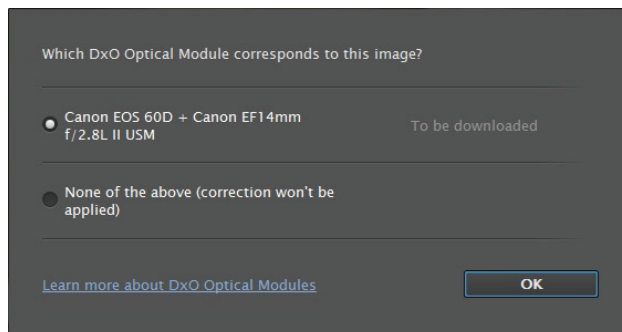
NOTE

When a DxO Optics Module is installed and taken into account, the Distortion palette displays the following information: camera model used, lens model used, and the name of the original image file.

4.3. Managing DxO Optics Modules

Downloading and installing DxO Optics Modules

When you choose automatic distortion correction, a dialogue box about managing DxO Optics Modules will open. This dialogue box indicates which DxO Optics Module(s) can be used, allows you to choose among the appropriate DxO Optics Modules available if there is any ambiguity — that is, if DxO ViewPoint cannot fully identify the camera/lens combination you used to take the shot.




DxO Optics Module dialogue box.

The same dialogue box also displays the status of the appropriate available DxO Optics Modules — “Installed,” “Update available,” or “Download.” Select the DxO Optics Module you want to use and then click on **OK**. If you are downloading an updated version or a new module, you will see a progress bar. As soon as the download is finished, the installation will be immediately effected and taken into account. You will not need to restart the application.

If a DxO Optics Module is not available

If no DxO Optics Module is available for your equipment, the automatic correction will not be applied, and the **Automatic** button is deactivated. In this case, you can manually correct your image (see part 4.5).

NOTE

You can eliminate the DxO Optics Module you are using for processing an image by clicking on the trash can icon  located in the upper right of the Distortion palette.

4.4. Applying an automatic distortion correction in plugin mode

As a plugin, if DxO ViewPoint does not find the necessary EXIF metadata information, a dialogue box will offer to find the original image in order to retrieve the missing information. This said, certain programs modify and sometimes eliminate the EXIF data necessary for DxO ViewPoint to determine the proper DxO Optics Module to use (this is the case with Adobe® Photoshop® Lightroom® and Apple® Aperture®).

Step 1 – Open your image in DxO ViewPoint.

Step 2 – If a dialogue box in the Distortion palette requests access to the original file, click on **Open original image**.

Step 3 – To find the original image, click on **Open** in the system dialogue box that appears at the top of DxO ViewPoint. You will need to find the JPEG or RAW image file that was loaded directly from your camera before processing.

Step 4 – After finding and selecting the original image, validate by clicking on **Open**. If the corresponding DxO Optics Module is not already installed, a new dialogue box will open and prompt you to download it (if available); otherwise it will display the information about the shooting equipment and the name of the original file.

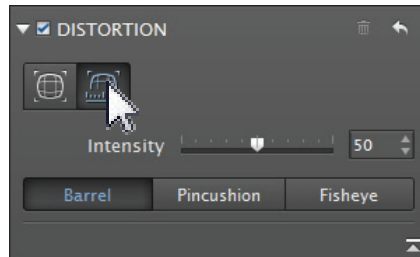
Step 5 – After you have applied your corrections, click on the **Save** button on the lower right. DxO ViewPoint will close and the corrected file will be transferred back to the host application.

4.5. Correcting distortion manually

If your shooting equipment is not supported by a DxO Optics Module, you can manually correct your image.

Step 1 – Open an image in DxO ViewPoint by selecting **File > Open**, or drag and drop your image into the application window.

Step 2 – In the **Distortion** palette, click on the **Manual** button.



Distortion palette manual correction.

Step 3 – Depending on the type of distortion visible in the image, select either **Barrel**, **Pincushion**, or **Fisheye**. The correction will be applied immediately.

Step 4 – If necessary, you can use the **Intensity** slider to fine-tune the correction.

i NOTE

With respect to the **Distortion** palette, see part 3.8 for more information concerning messages about missing EXIF data (making automatic correction impossible).

Correcting volume deformation

5.1. About volume deformation

The deformation of subjects located on the edges of images is geometrical flaw that is frequently seen in interior, marriage, and other event photos.

Known as “volume deformation,” this flaw is due to taking pictures of groups of people or objects with a wide-angle or wide-angle zoom lens. The curve of the lens stretches out and distorts the subjects on the image edges.

i NOTE

For optimal quality results, we advise you to correct any problems with distortion before correcting volume deformation.

5.2. Determining the type of volume deformation

Look carefully at your image to determine the kind of distortion affecting it:

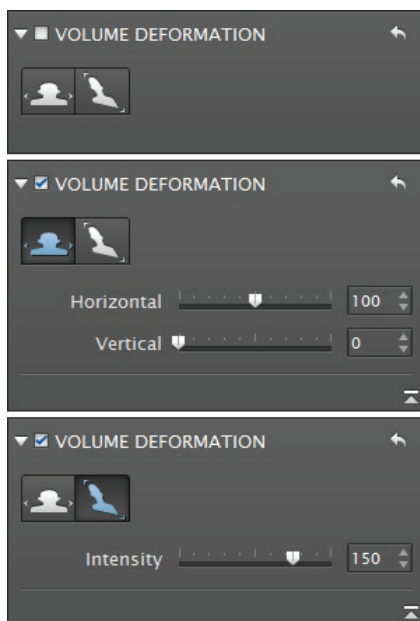
- If the spherical objects (such as heads) near the edges of your image appear stretched or flattened, your image is suffering from a cylindrical or horizontal/vertical volume deformation, in which case you need to use the horizontal/vertical correction tool.



- If objects seem to stretch toward the corners of the image, then you are dealing with diagonal volume deformation, in which case you will need to use the diagonal correction tool.



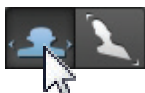
5.3. Correcting horizontal/vertical volume deformation



The three states of the Volume deformation palette.

Applying the correction

After opening your image in DxO ViewPoint, activate the horizontal or vertical volume deformation correction by clicking on the **Horizontal/Vertical** button in the **Volume deformation** palette.



The correction is automatically applied to the image.

Fine-tuning the settings

The settings can be adjusted by using the sliders.

- The **Horizontal** slider can stretch the image content toward the edges of the photo (slider moved to the left) or can compress the objects toward the center (slider moved to the right). Its default value is 100 (slider at center).
- The **Vertical** slider flattens the image content vertically. Its default value is 0 (slider on the left).

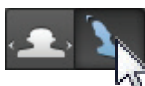
NOTE

DxO ViewPoint displays a new warning message if it detects **volume deformation** in the image. This message is located in the Volume deformation palette and offers you the opportunity to directly fix the problem by clicking on **Correct**.

5.4. Correcting diagonal volume deformation

Applying the correction

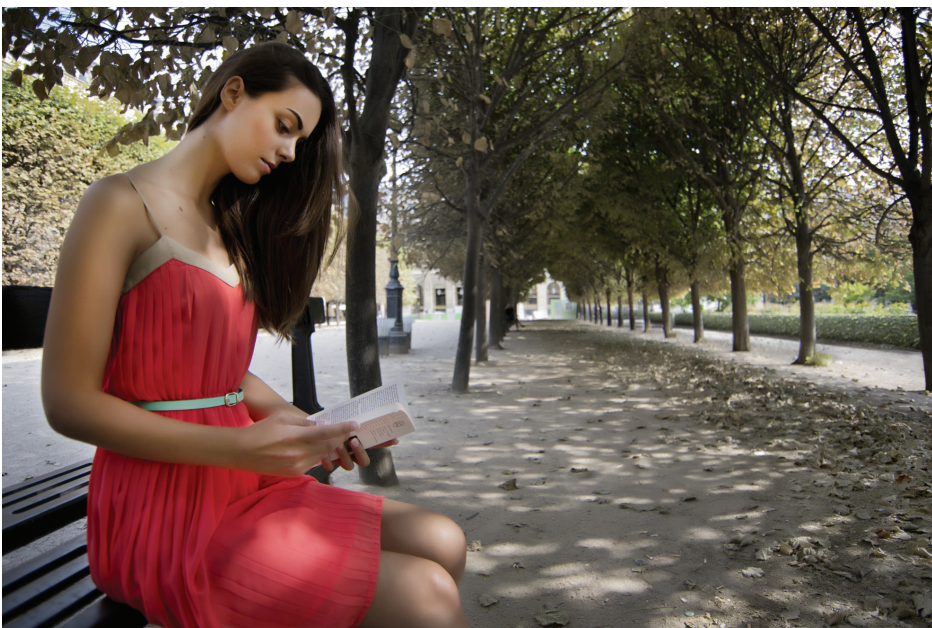
After opening your image in DxO ViewPoint, activate the diagonal volume deformation correction by clicking on the **Diagonal** button in the **Volume deformation** palette.



The automatic correction is immediately applied to the image.

NOTE

When in doubt, don't hesitate to experiment with both tools, and then choose the one that makes the subjects in your image appear the most natural. Keep in mind that you can fine-tune the automatic correction by using the sliders in the **Volume deformation** palette.



Correction of diagonal volume deformation, before and after.

Fine-tuning settings

If necessary, you can manually fine-tune the correction by adjusting the **Intensity** slider. Moving the slider to the left, the image will be progressively stretched and distorted toward the center; moving to the right, the image is stretched and distorted toward the edges. The default setting for this slider is 150.

TIP

Double-click on any slider to return it to its default value setting.

NOTE

Correcting volume deformation can clip the total surface area of the image. If you think you will need to apply this correction, give a larger frame to your photo when shooting.

TIP

You can fine-tune the value settings of your corrections by clicking on the up and down arrows located on the right side of the slider value. You can also manually enter a value.

TIP

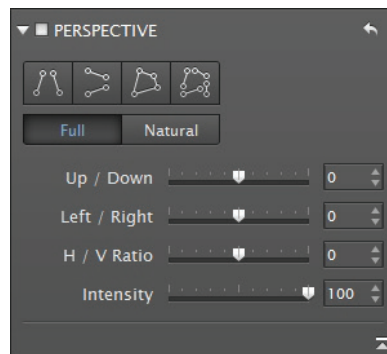
You can better see the changes effected by the volume deformation correction if you display the composition grid, which serves as a visual reference.

Fixing perspective

6.1. About perspective

In architectural photography, the position of the photographer relative to a building almost always means a low-angle or high-angle shot. In both cases, convergent lines distort the subject, and the distortion becomes even more pronounced toward the edges of the image. DxO ViewPoint 2 offers tools for correcting vertical and horizontal parallel lines, for forcing a rectangle (to straighten out, for example, window and door frames), as well as an 8-point correction mode that allows you to correct each side completely independently.

6.2. Forcing vertical parallels



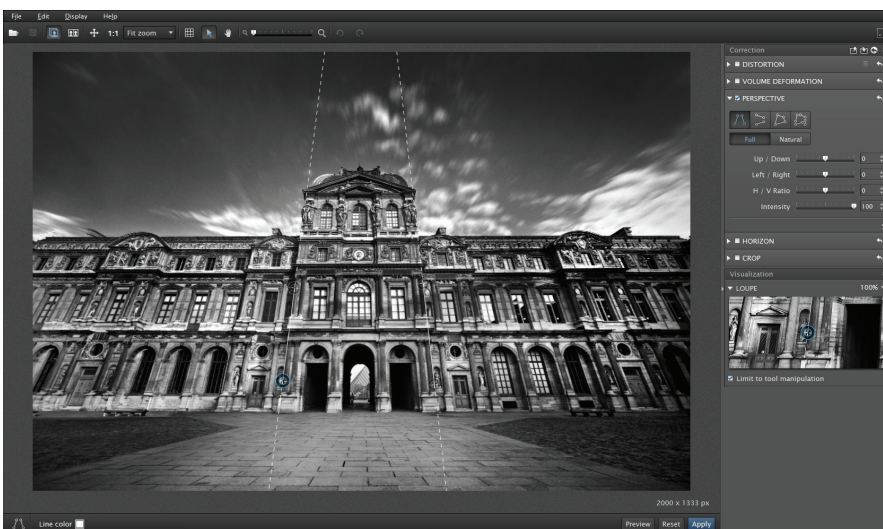
Perspective palette.

After opening your image in DxO ViewPoint, go to the Perspective palette and then click on the **Force Vertical Parallel** button.



Placing anchor points

Two vertical lines, each one with two circular anchor points, will be superimposed on your image. Choose **two vertical reference elements** in your image, preferably located on the same plane, for optimal correction.



Choose your vertical reference elements and place of the correction lines.

TIP

You can change the color of the lines to improve their visibility with respect to the background color of your image. Click on the colored **Line color** block located in the lower toolbar and select the color you want to use.

Place the mouse cursor on one of the anchor points. Click on it and drag it to the end of one of your reference elements. Move the second anchor point so as to align the line with your vertical element. Do the same thing with the anchor points in the second vertical line.



Image zoom.

For even more precise positioning, you can use your keyboard navigation or arrow keys to adjust the anchor points. The Tab key (Windows only) will let you quickly toggle between one anchor point and another. After you have created a guideline, you can move it by clicking on the center of the line with your mouse and dragging the line to the desired location.

Verifying the correction

DxO ViewPoint lets you verify your correction settings before applying them to your image. To do so, click on the **Preview** button in the lower toolbar.

DxO ViewPoint will correct your image and will darken the parts of the image that will be suppressed when the automatic crop is applied (see Chapter 8 – Cropping).



The darkened zones indicate the parts of the image that will disappear when cropped.

The greater the correction, the more the image will be cropped to compensate for rectifying the low- or high-angle shot.


TIP

To place your anchor points more precisely, you can zoom in on your image whenever you wish using the zoom tools in the upper toolbars, or you can use the **Loupe** located in the **Visualization** palette. You can also use the **Hand** tool to manipulate the position of your image more quickly.

TIP

Correcting perspective can result in substantial cropping, so be sure to take your shot with a sufficiently large frame.

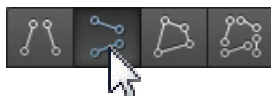
NOTE

So long as the corrected image has not been saved, the changes can be undone and can be reset by clicking on the **Reset the correction** button .

6.3. Forcing horizontal parallels

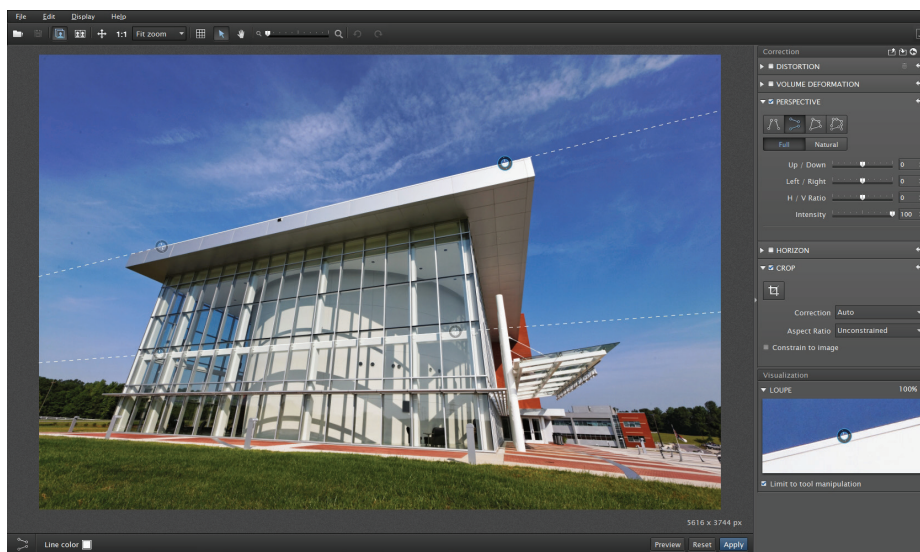
The principle is identical to that for forcing vertical parallels: the reference lines are horizontal and will let you align and level, for example, the top and bottom of a building, a window frame, or a door.

To activate the correction for horizontal perspectives, click on the **Force Horizontal Parallel** button in the **Perspective** palette.



Placing the anchor points

Two horizontal lines with two circular anchor points will be superimposed on your image. Choose **two horizontal reference elements** in your image and place your lines in the same way as for correcting vertical perspectives.



Choosing horizontal reference elements and placing correction lines.

Verifying the correction

Verify your correction by clicking on the **Preview** button in the lower toolbar. DxO ViewPoint will darken the parts of the image that will be suppressed when the automatic cropping is applied.

6.4. Forcing a rectangle

A third function of the perspective correction feature lets you use a reference rectangle to simultaneously correct both vertical and horizontal perspectives independently on each side. The applications are numerous: you can restore the exact shapes and forms to distorted elements in the scene, or straighten an interior space (such as an airport arrivals hall, a museum, or palace gallery) that was not shot in perfect alignment with an axis, or was taken at a too-low or too-high angle, etc.



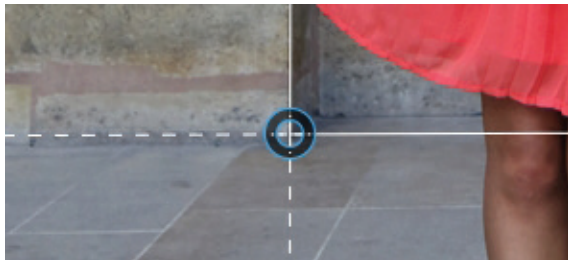
Image corrected (on right) using the Rectangle tool.

To activate the correction, click on the **Rectangle** button.



Placing anchor points

You can act on all four lines: place the anchor points on the axes of the vertical and horizontal reference lines (which should be on the same plane as much as possible — that is, on elements located at approximately the same shooting distance).



Each anchor point acts on two lines at the same time.

Verify the correction

Verify your correction by clicking on the **Preview** button in the lower toolbar. DxO ViewPoint will darken the parts of the image that will be suppressed when the automatic cropping is applied.

6.5. Correcting perspectives in 8-point mode

The 8-point perspective correction follows the same principle as **forcing a rectangle**, with one important difference: while forcing a rectangle lets you adjust the four sides independently, the lines need to be placed on the same plane in order to achieve an optimal result. With the 8-point method, you can place the lines on different planes, which gives you great flexibility when making complex corrections, or when the elements that need to be fixed are not all at the same distance from the where the photo was shot.

To activate the correction, click on the **8 points** button.



Place the anchor points

You can act on each of four lines in a completely independent way: you can place them on the vertical and horizontal reference lines in the image, even if they are not on the same plane — that is, even if they are at different distances from the shooting point. The lines should be located as far away as possible from each other.

NOTE

Manipulating one anchor point circle in the Rectangle tool affects both a vertical and a horizontal line.

TIP

Clicking on Ctrl/Cmd while moving an anchor point will cause the correction to take effect in real time without having to click on the Preview button.

TIP

You can display the composition grid to verify that all the principal elements in your image have been correctly adjusted according to your settings, instead of relying solely on a naked-eye assessment.

TIP

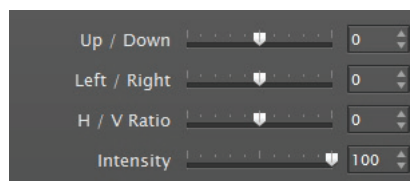
If you hold down Ctrl/Cmd while moving your anchor point, the correction will be applied in real time without your having to refresh the display.



Verify the correction

Verify your correction by clicking on the **Preview** button in the lower toolbar. DxO ViewPoint will darken the parts of the image that will be suppressed when the automatic cropping is applied.

6.6. Advanced settings



The Perspective palette sliders.

Advanced setting sliders

The **Perspective** palette provides four sliders for fine-tuning correction settings:

- **Up/Down:** Toggles the image around a horizontal axis. This command can be used if the image has few reference lines, and also to compensate as much as possible for a shot that was not perfectly in line with the subject.
- **Left/Right:** Toggles the image around a vertical axis.
- **H/V Ratio:** This slider lets you fix distortions that can sometimes accompany perspective corrections. The default value is 0. Moved to the left, the image is compressed vertically; moved to the right, the image is compressed horizontally.



Effect of the H/V Ratio slider.

- **Intensity:** This cursor, with a default value of 100, helps you find the best compromise between possible corrections and the most natural rendering.

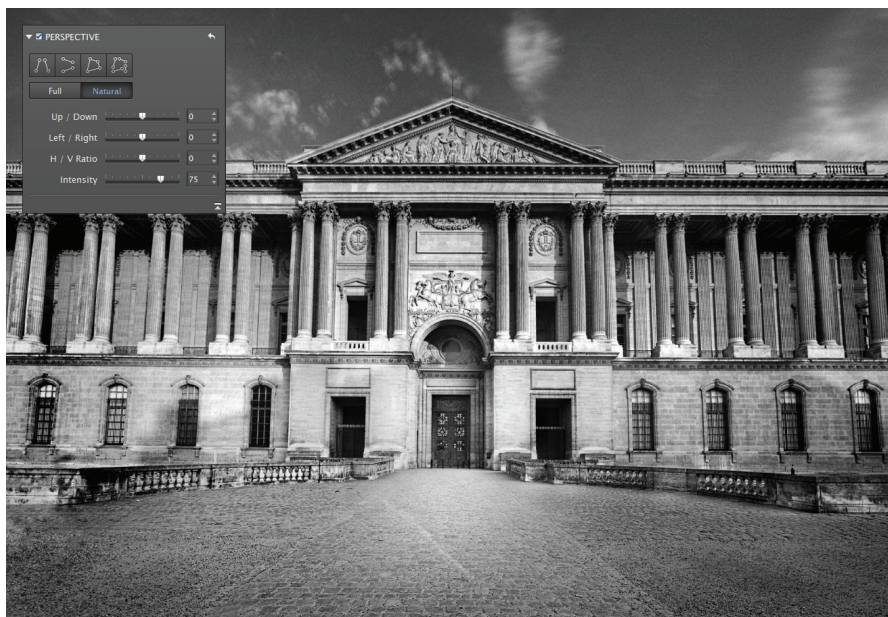


The Intensity slider lets you adjust the perspective correction to achieve the most natural look.

Full and Natural buttons

You can also select one of two correction modes, “Full” or “Natural”:

- **Full:** Applies an unrestricted perspective correction at maximum intensity (100), which can result in a pronounced deformation of the image.
- **Natural:** Applies a correction with the intensity pre-set to 75 for a more realistic rendering.



Full vs. Natural perspective correction.

NOTE

With respect to the **Perspective** palette, see part 3.8 for more information concerning messages about missing EXIF data making impossible the automatic correction of the image aspect ratio.

Straightening the horizon

7.1. About horizons

A common flaw in landscape photography: the horizon is tilted by several degrees, or vertical elements such as poles or trees appear slanted. In all instances, tilting occurs most often because the photographer does not hold the camera absolutely level. The solution to this problem is simple: adjust the entire image by several degrees.

7.2. Straightening the horizon by plotting a horizontal reference line

The **Horizon** tool lets you correct compositions with a tilted horizon line. This feature can be used in tandem with the **Perspective** tool.

To activate the tool, click on the **Horizontal Level** button in the Horizon palette, and place the anchor points.



A horizontal line with two circular anchor points will be superimposed on your image.

Choose a **horizontal reference element** in your image.

TIP

You can change the color of the correction lines to improve their visibility with respect to the background color of your image. Click on the colored Line color block located in the lower tool-bar and select the color you want to use.



Choice of horizontal reference element and placement of the correction line.

Place the mouse cursor on one of the anchor points. Click on the anchor point to grab and move it to one of the ends of your reference element. Move the second anchor point to align with the line on your horizontal element.

TIP

To place your anchor points more precisely, you can zoom in on your image whenever you wish using the zoom tools in the upper toolbar, or you can use the **Loupe** located in the **Visualization** palette.

Verify the correction

Verify your correction by clicking on the Preview button in the lower toolbar. DxO ViewPoint will darken the parts of the image that will be suppressed when the automatic cropping is applied.

7.3. Straightening the horizon by plotting a vertical reference line

Proceed in the same way as for recovering the horizon by drawing a vertical reference line.



7.4. Straightening the horizon by using the slider or by entering values

The angle is indicated in degrees to the right of the slider in the **Horizon** palette. To display the slider, click on the small arrow in the lower right-hand side of the palette.



Angle slider

Cropping

The corrections done using the **Distortion**, **Volume deformation**, **Perspective**, and **Horizon** tools include an automatic crop feature that maximizes the visible field of the image. DxO ViewPoint's **Crop** tool lets you adjust the proportions of the final image to suit your tastes.



The darkened zones on the image represent the areas lost after correction.

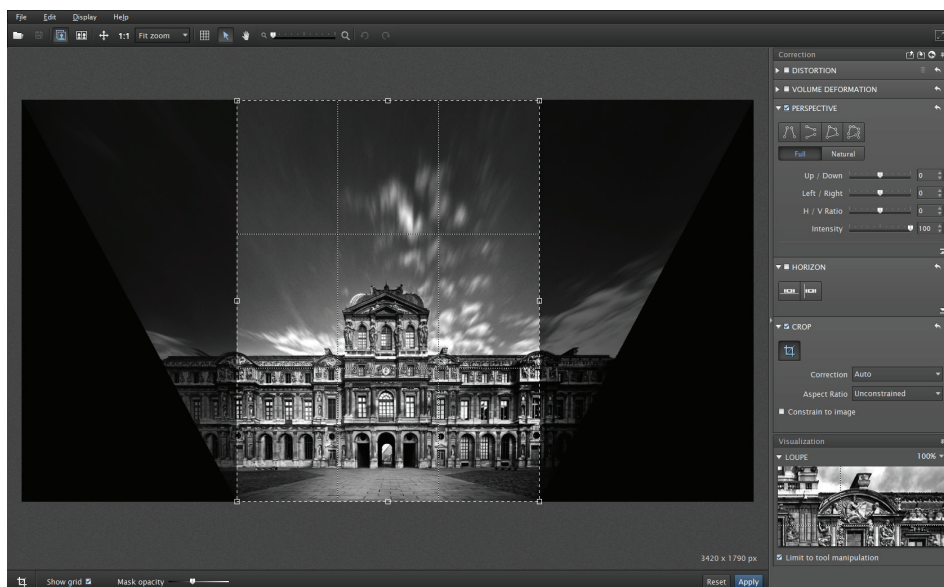
8.1. Automatically cropping an image

After opening your image in DxO ViewPoint, go to the **Crop** palette and click on the **Crop** button. An adjustable grid will be superimposed on your image.

Select **Auto** mode in the **Correction** drop-down menu. In this mode, DxO ViewPoint calculates the preserved zone of the image as closely as possible and displays darkened zones that correspond to the surface area that will be lost in the original image.

TIP

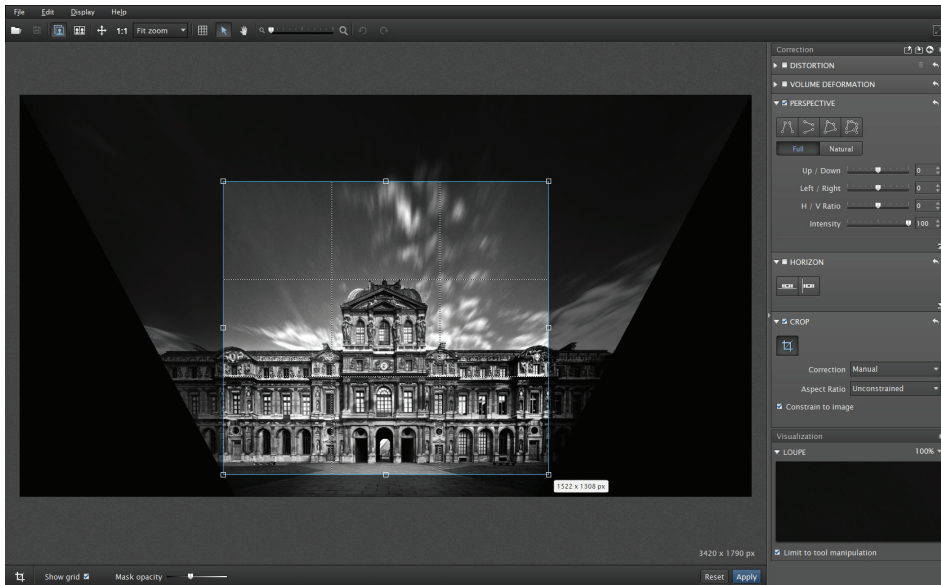
Checking/unchecking the **Show grid** box in the lower toolbar lets you activate/deactivate the composition grid in the image.



Auto mode calculates the crop as closely as possible.

Several formats are offered in the **Aspect Ratio** drop-down menu: 16/9 (TV format), 5/4, 5/2, 2/1, 3/2 (APS-C reflex and full-format cameras), 4/3 (compact camera format), and 1/1 (square format). By clicking on **Preserve** in the **Aspect Ratio** drop-down menu, you will preserve the proportions of the original image. By selecting **Unconstrained**, you can manually apply a correction. By selecting **Add Custom**, you can enter the pixel values (for height and width) of your choice and define the proportions of the custom crop.

Select the format you would like: the grid superimposed on your image will be automatically modified. By clicking on the grid, you can also change the position of the frame and adapt it to the composition of your image.



The grid can be resized and repositioned.

By checking the **Constrain to image** box, the frame is automatically confined to the part of the image being worked on so as to avoid having any dark zones superimposed on the perspective corrections.

To apply the crop, click on the **Apply** button in the lower toolbar.

Save your changes by clicking on **File > Save As** (or **Save** if you use DxO ViewPoint as a plugin).

8.2. Manually cropping an image

After opening your image in DxO ViewPoint, click on the **Crop** button in the **Crop** palette. The adjustable grid will be superimposed on your image. To adjust the proportions of the final image to suit your tastes, select **Manual** mode from the **Correction** drop-down menu.

Change the dimensions of the adjustable grid by manipulating the resizing points located in the corners and on the sides of the grid. You can also change the overall position of the frame to adapt it to the composition of your image.

TIP

The crop grid is divided into thirds, making it easy to apply the “rule of thirds” when composing your final image.

NOTE

Even though the crop is applied when you click on **Apply**, this can be undone so long as the image is not saved.

NOTE

Whether in automatic or manual mode, DxO ViewPoint 2 automatically detects the orientation of the crop zone.

TIP

You can use the navigation or arrow keys on your keyboard to adjust the position of the crop zone.

Keyboard shortcuts

Command	Microsoft Windows shortcut	Mac OS X shortcut
Fit display to screen	F3	Cmd + 0
Display at 100%	F4	Cmd + 1
Zoom in	Ctrl ++	Cmd ++
Zoom out	Ctrl +-	Cmd + -
Arrow tool	P	P
Hand tool	H or spacebar	H or spacebar
Crop tool	C	C
Rotate image left	Ctrl + L	Cmd + L
Rotate image right	Ctrl + R	Cmd + R
Show/Hide superimposed grid	G	G
Move anchor points	↓↑↔	↓↑↔
Toggle between anchor points	Tab	
Redefine the crop zone	↓↑↔	↓↑↔
Open	Ctrl + O	Cmd + O
Save as	Ctrl + S	Cmd + S
Quit	Alt + F4	Cmd + Q
Undo	Ctrl + Z	Cmd + Z
Redo	Ctrl + Y	Cmd + Shift + Z
Preferences	Ctrl + Shift + P	Cmd + ,
Show image before and after correction	Ctrl + D	Cmd + D
Full screen	F	F
Exit full screen mode	F or Esc	F or Esc
Show/Hide controls	F9	Tab
Online help	F1	Cmd + /
Accelerated mode for Perspective and Horizon tools	Press on Ctrl when placing anchor points on the image	Press on Cmd when placing anchor points on the image

