

ALCE 2

Advanced Local Contrast Enhancer



User Manual

Version 2.1

Please read this document with
Adobe Acrobat (either **Reader** or **Professional**)
to enable all the interactive features.

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Introduction

This document is a quick-start manual that will guide you through the basic steps of ALCE2 use. It assumes that the Panel (either for Photoshop CS4 and/or CS5) and/or the Scripts (for Photoshop CS3) are already and properly installed - please review the documentation if you feel that something's gone wrong with it.

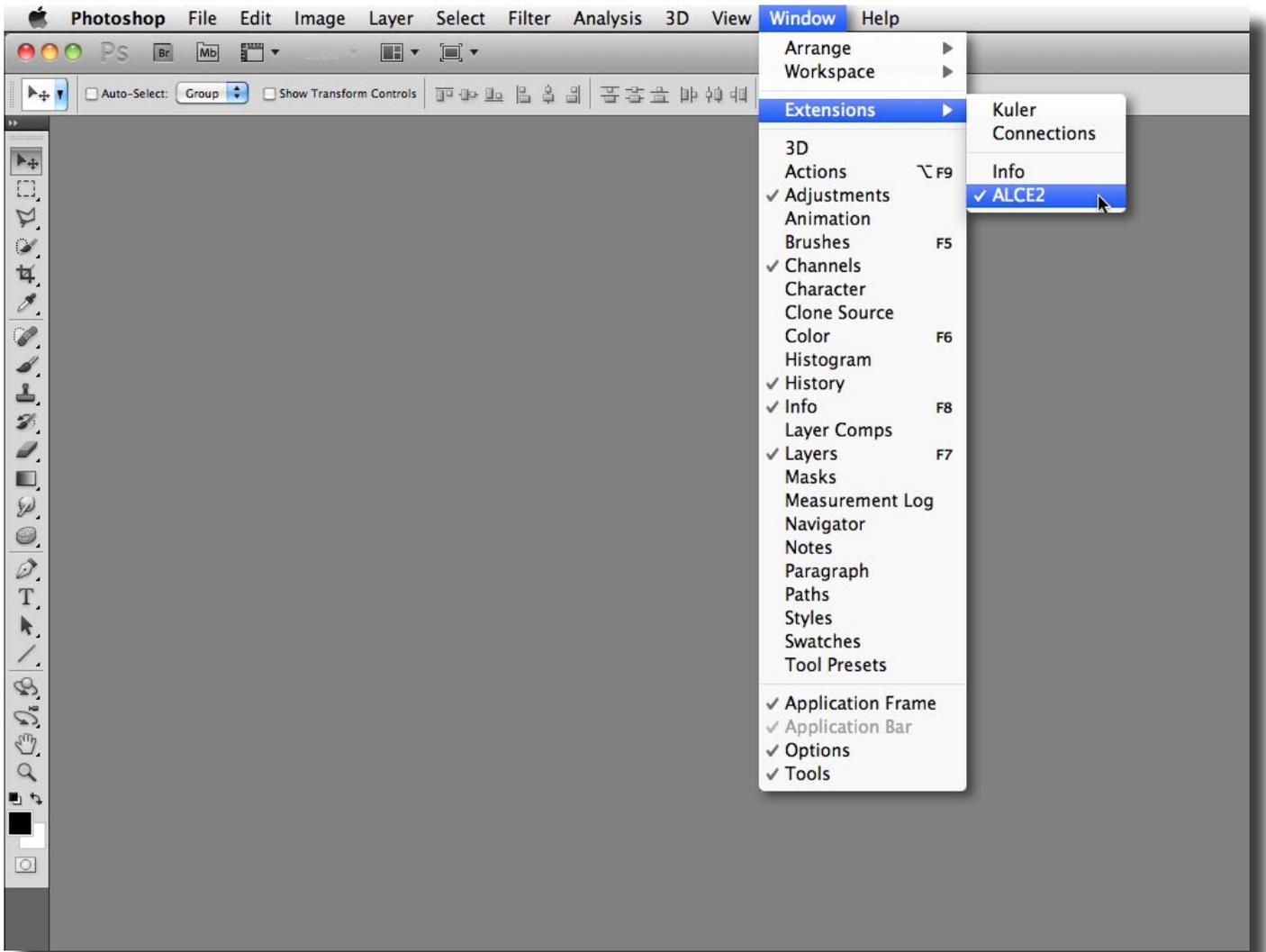
We'll see how to access the Panel and Scripts within Photoshop; how to process an image; how the algorithm works; how to tweak the result to your taste (using some basic and intermediate techniques).

Two sets of two training videos by Marco Olivotto are now online in the ALCE webpage: www.bigano.com/ALCE and they're highly suggested for both beginner and expert users.

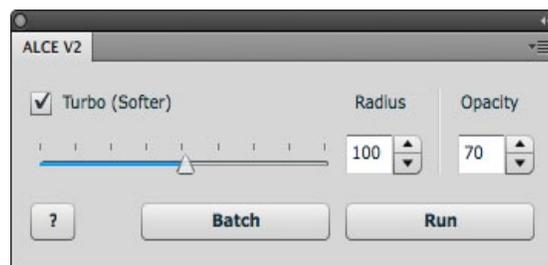
1. How to find ALCE2 within Photoshop™

1.1 - Panel, Batch and Scripts

You can access the panel selecting the ALCE2 item in the Window - Extensions menu (if you have just installed the extension and don't see it, close and restart the application).

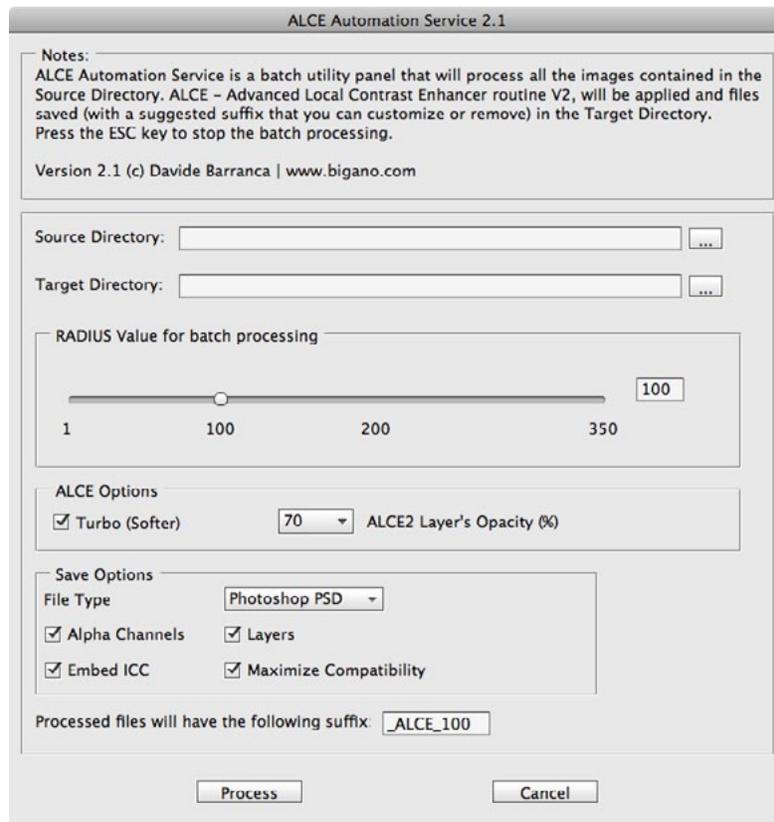


The ALCE2 panel will appear it'll look as follows:

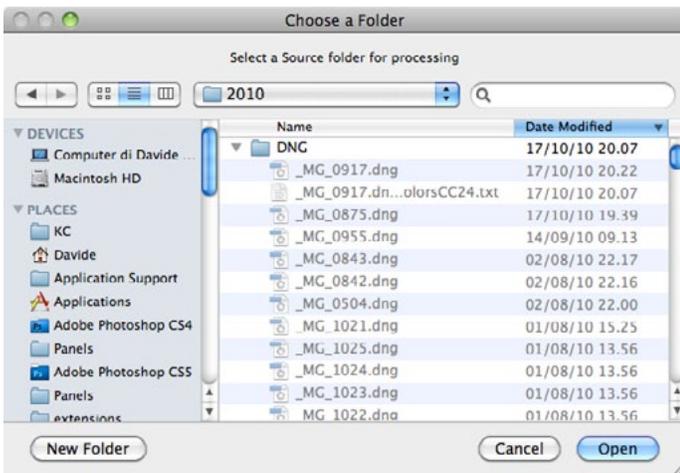


Clicking the “Run” button will apply the ALCE2 routine to the opened image (skip to the “How to apply ALCE to your pictures” to learn more).

The Batch button will open “Alce Automation Service” - a batch utility windows:



In the batch window you must select a Source Directory and a Target Directory clicking the “...” buttons (your standard Operative System “Choose a Folder” window appears):



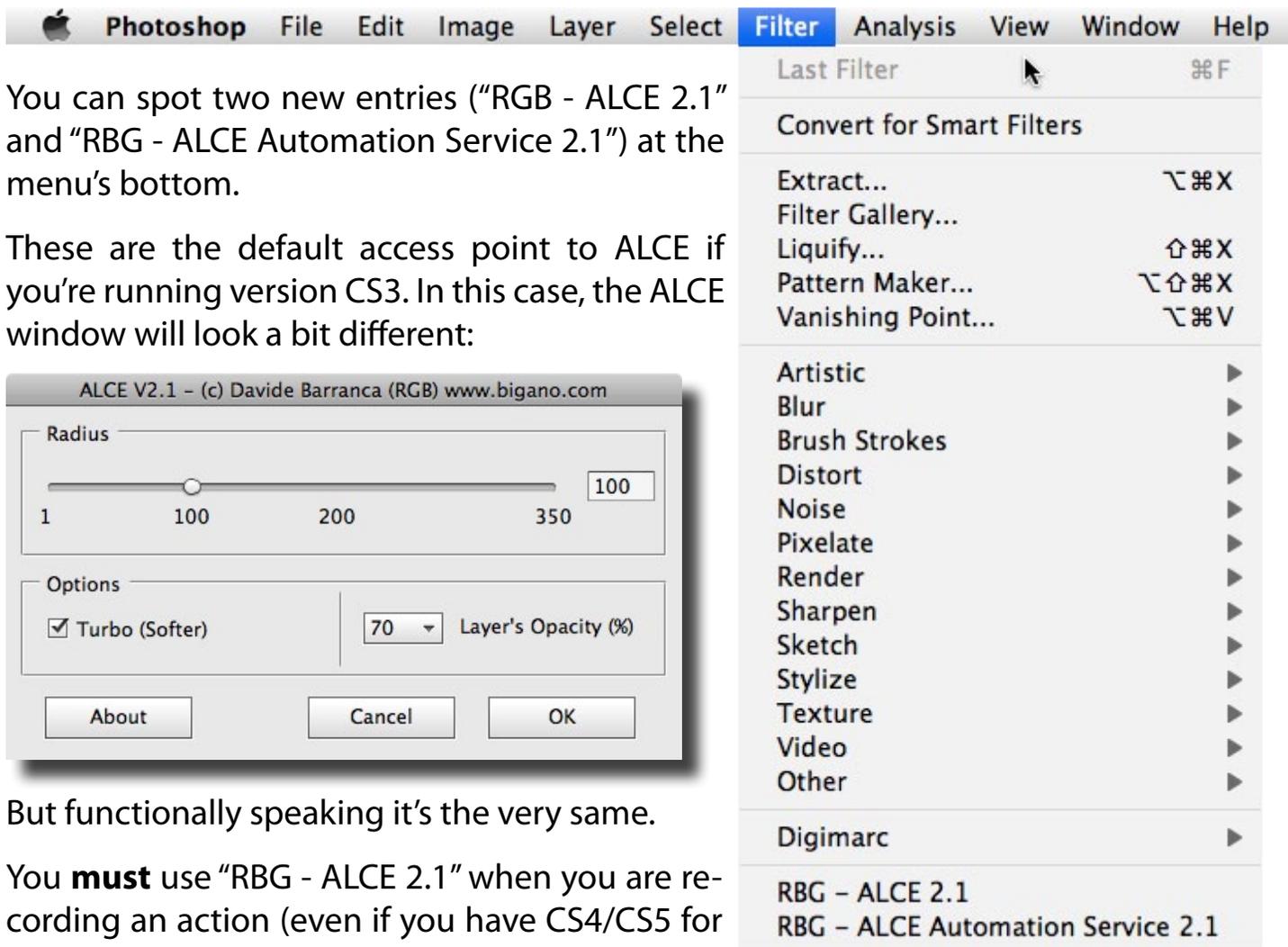
All the files in the Source directory will be processed by ALCE2 with the chosen radius, and saved in the Target directory according to the specified Saving options (file formats, like PSD, TIFF, JPG and so on). Eventually, you can customize the proposed file suffix, that will be added to the processed file.

When you’re done, click the “Process” button: Alce Automation Service will open every

image file with a known extension in the Source Directory, process them, and save them in the Target Directory.

If you’re on a Mac, be aware that images without extensions won’t be processed.

In version 2.1 you can find the very same functions from the Filter menu:



You can spot two new entries (“RBG - ALCE 2.1” and “RBG - ALCE Automation Service 2.1”) at the menu’s bottom.

These are the default access point to ALCE if you’re running version CS3. In this case, the ALCE window will look a bit different:

But functionally speaking it’s the very same.

You **must** use “RBG - ALCE 2.1” when you are recording an action (even if you have CS4/CS5 for the Panel version won’t be recorded properly).

1.2 - What’s New in version 2.1

Turbo (Softer) option: this checkbox enables a much faster algorithm, especially with large radii. As a side effect, the overall result is a little bit softer, compared to ALCE without the Turbo on. By default the option is checked, for the gain in speed is valuable, and usually the extra softness is either wanted or almost unnoticeable.

Opacity Control: the routine will create a new ALCE layer: its opacity by default is 70% (you can change the percentage directly from the panel) - of course, depending on your taste, it’s possible to tweak the opacity afterwards as well.

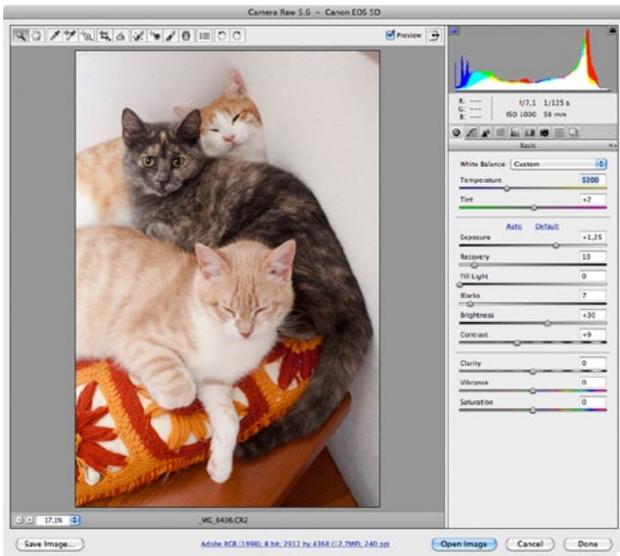
Actions: finally it’s now possible to record ALCE into an Action. Although, you must launch ALCE from the Filter menu (see above in this page) and not from the panel; otherwise the action won’t play correctly.

2. How to apply ALCE2 to your pictures

2.1 Image types supported

ALCE2 works on every raster image that's been opened in Photoshop (for instance PSD, TIFF, JPEG, etc.)

To process raw files (DNG, CR2, NEF, etc) you must first open them with Adobe Camera Raw or the raw converter of your choice and then import them into Photoshop:



As soon as the picture is within Photoshop, like in the second screengrab above, you're allowed to process it.

ALCE2 supports all the following image modes: RGB, CMYK, Grayscale, Lab either in 8bits and 16 bits; you can not process Duotone, Bitmap, Multichannel or Indexed Colors files.

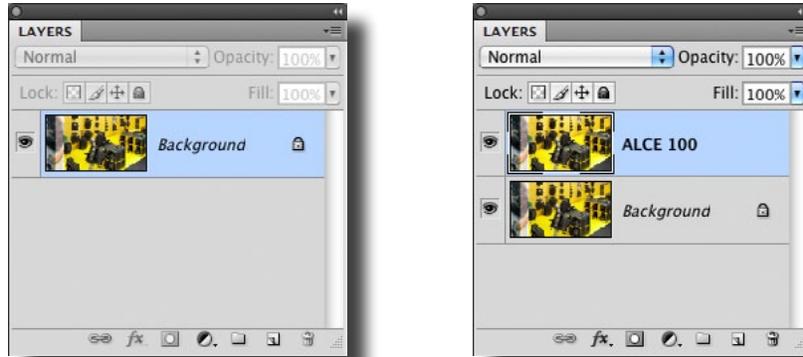
2.2 One click processing

To get a quick ALCE2 testdrive, open a picture, launch the ALCE2 then simply click the Run button with the default value of 100. The routine will start, (it may take a while depending on the file size and the computer you're using), then the result of the processing will be pasted on the top of the original image.

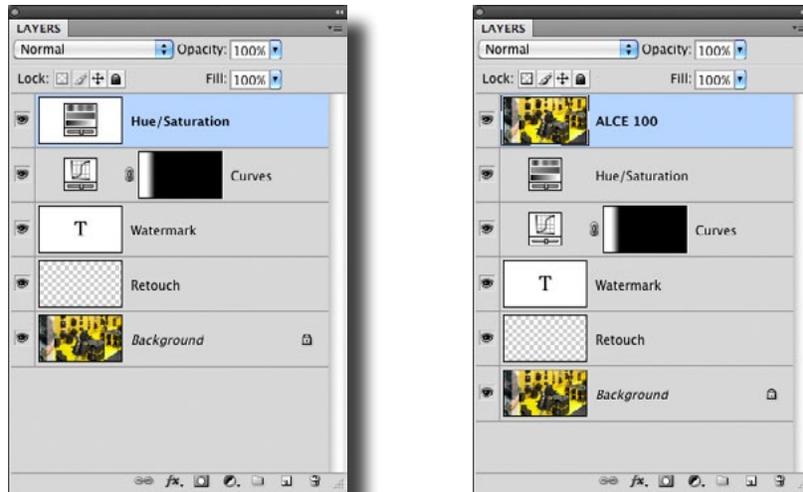
Is the processed version any better than the original? Chances are that the answer is yes. But the more you know, the more you'll be able to squeeze out from this Local Contrast enhancement routine. Before going any further, let's have a look to the way ALCE2 integrates with the existing image layers.

2.3 Layer structure

When you apply the ALCE2 routine at, say, 100 value, it will create a new, processed layer that's called "ALCE2 100" on the top of the existing layers. If you run it on a flattened image, the layer palette will look like this (before and after):



But you can even apply it to a file which has a more complex layer structure, without any risk of damaging the original corrections, like in the following example:



ALCE2 doesn't apply the routine depending on the selected layer, but on a merged version of all visible layers. The result is pasted as a new topmost layer, and named accordingly to the chosen value ("ALCE2 100" for instance).

In the next section you will learn more about the value, which is actually a radius, and how to pick up the more appropriate for your taste and needs.

3. The Radius

3.1 Global versus Local

To apply a global contrast adjustments usually means, at least, to set a white and a black point (more properly called an highlight and a shadow) into a picture that may lack them.

You can do this in a number of ways (Levels or Curves adjustments, for instance). The picture pops and the global contrast is boosted: we'll stick with a B/W picture first, in order to focus our attention to contrast only, and not color.

Roll your mouse in and out the following image to see the before and after (it requires Adobe Acrobat):

If you really understand this improvement, you can also spot some areas in the picture, that, although better than the original, can be even more boosted. We can't do that in a global fashion, for this would introduce extreme clipping in the shadows and the high-

lights - that is, we can't mess the entire picture to make a small particular better.

It would be nice if we could select smaller regions within the picture: and then adjust the contrast within each region differently, depending on every region's specific features. This way we could boost the contrast not globally, but locally.

The picture that follows is the same, but this time you'll see the before and after comparison from the (globally) corrected version, and the ALCE2 processing (local contrast).

Roll your mouse in and out the following picture to see the before and after (it requires Adobe Acrobat):

The difference is quite strong - local contrast adjustment makes dull the version that, compared to the original in the page before, seemed so stronger.

ALCE2 doesn't actually select any region within the picture (it works in a more sophisticated fashion) but you've got the idea: divide the image in smaller zones, then contrast each zone depending on its particular features. You'll see that the zones area and the radius are somehow linked, and this is also connected to the "local-ness" of the effect.

3.2 How Local is your Contrast?

Short answer: it depends on your radius. The smaller the radius, the more Local the Contrast. Let me show you an example: roll over the buttons right below this text to preview the original image and the ALCE2 at radius 80 and 20 (it requires Adobe Acrobat Reader or Pro):

Now you may, at least intuitively, grasp that the radius controls how wide is the area of the zones we, ideally, were dividing the picture into; that is, the smaller the radius is, the finer is the “tiling”, the more local is the contrast; on the other hand, the larger is the radius, the broader is the “tiling”, the less local is the contrast.

Pay attention that the radius is not a relative value, but an absolute one (currently, its units are pixels). Which translates in plain english that the effect depends on the image size (in pixels): to apply an ALCE2 50 to a 6MP image or to a 39MP one leads to very different results. The image content (the subject) also play a role as we’ll see in a moment, but we’re speaking about raw size now.

As a rule of thumb, you’ve got to use larger radii with larger pictures, to match perceptually the effect of smaller radii with smaller pictures. For instance: a 3000x4000px image with ALCE2 50 is perceptually very close to ALCE2 25 applied to the same image downsampled (before processing) to 1500x2000px.

3.3 Radius ranges (small, medium, large)

With a little bit of practice, you’ll easily learn what kind of radius to apply in order to get the effect you’ve in mind. Look at this comparison:



Image size has surely to be taken into account, but the picture subject plays an important role. Unless you're in a angry mood, you wouldn't smash the portrait above with a too small radius (it emphasizes all kind of skin issues), while preferring the second or third version is a matter of taste.

Basically, depending on the picture size, we can define three radius ranges (remember that the value is expressed in pixels):

1. Small: approx. from 1px to 10px
2. Medium: approx. from 20px to 80px
3. Large: approx from 100px up to the maximum of 350px

I've left a big gap between each range, for it's impossible to theoretically define a range too strictly: it depends on image size and image content (the subject, as we've seen). Let's have a look to each case.

3.4 Small radii

A radius of 1px or similar gives a traditional UnSharpMask-like effect, slightly better for someone, and definitely better in some circumstances. Roll over with your mouse to see the before/after comparison (it requires Adobe Acrobat Reader or Pro):

3.5 Medium radii

The medium range is the one where the Local effect is stronger - it may lead to unwanted halos from time to time, but luckily there is plenty of techniques to get rid of them. Please have a look to the “Working with ALCE” video by Marco Olivotto on our [website](#) - more info about this and its companion video “Introducing ALCE” in the Video training section at the end of the document.

Roll over with your mouse to see the before/after comparison (it requires Adobe Acrobat Reader or Pro):

3.6 Large radii

There are surprisingly a huge lot of pictures that benefit from a large radius ALCE processing. Depending on the filesize, you can easily and carefree apply up to a 350px radius (please note that you’ve to check the “Radius Extended Range” checkbox in order to access values greater than 200).

It may take a while to complete the processing of a very large file with a 200px radius, depending on the performance of the computer Photoshop is running on, but the small

wait is usually worthwhile. A couple of examples, roll over with your mouse to see the before/after comparison (it requires Adobe Acrobat Reader or Pro):

4. Tweaking

If you feel the ALCE2 effect is not following your taste, there are a number of ways to correct it. We will review few basic and intermediate techniques. For more advanced processing please have a look to the Video Training, section 5 of this document.

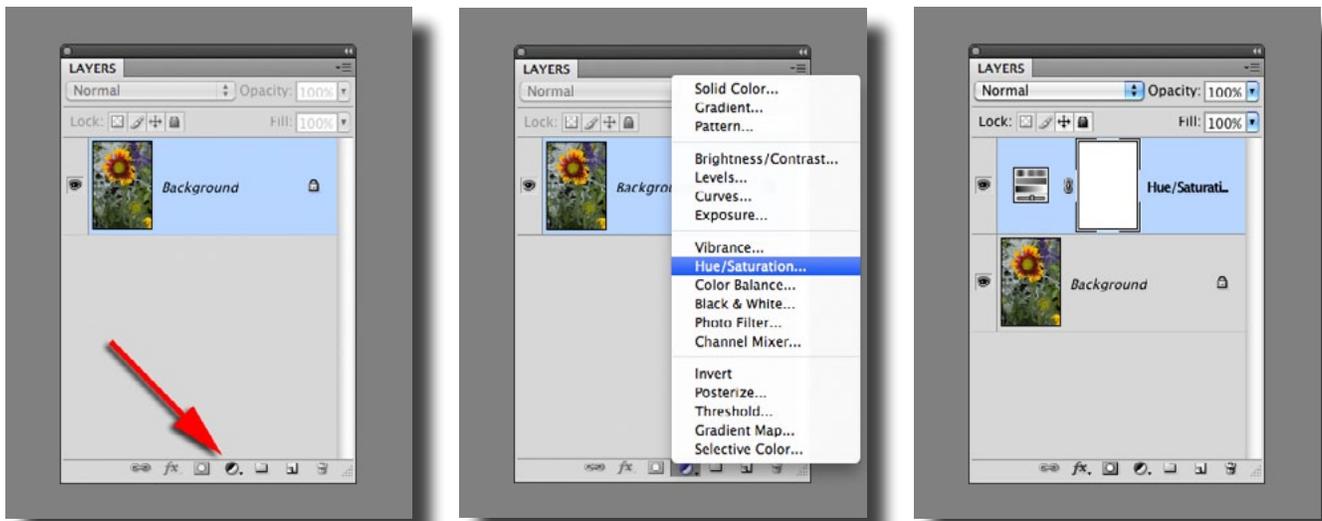
4.1 BASIC - Opacity

The radius seems to be right, but the effect is too strong. We can easily correct this lowering the opacity of the ALCE2 layer. You find the layer opacity control in the upper right corner of the Layers palette. Roll over the buttons right below this text to preview the original image, and the ALCE2 60 at 100% opacity and ALCE2 60 at a lowered, 60% opacity (it requires Adobe Acrobat Reader or Pro):

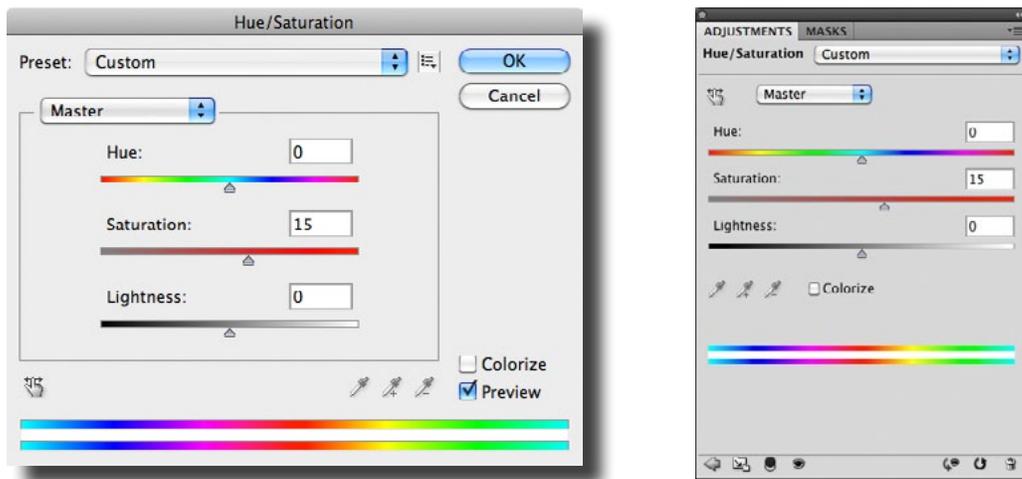
4.2 BASIC - Saturation

It may happen that you feel ALCE processing result, while gaining in contrast compared to the original, loses in saturation. Actually, this isn't a bug - along with a boost in contrast, we would expect a raise in saturation: ALCE doesn't do this (for several good reasons), so you have to compensate, depending on your taste, with a Hue/Saturation adjustment layer. Roll over the buttons right below this text to preview the original image, the ALCE and the ALCE plus a Saturation compensation (it requires Adobe Acrobat Reader or Pro):

We used to suggest a pre-saturation, with a Hue/Saturation adjustment layer (click the icon in the bottom right corner of the layer palette, then choose Hue/Saturation).



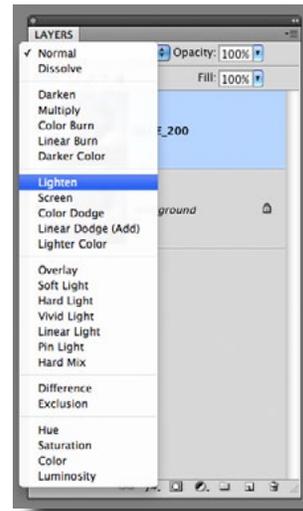
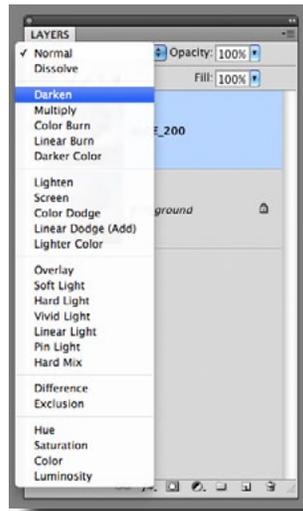
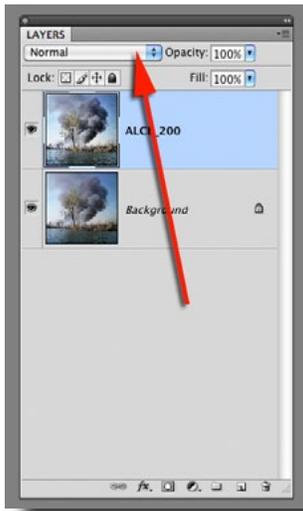
We're now more biased toward a post-saturation instead. How much? It depends to the image and your taste. The following may be a startpoint:



Please note that more sophisticated ways to correct the saturation (which are out of the scope of this manual) are possible; check bright areas for oversaturation issues before saving.

4.3 INTERMEDIATE - Blending modes

If you've ever found that ALCE2 processing layer is doing, somehow, too much lightening or too much darkening to your picture, you can tweak the effect with blending modes. You access layer blending modes dropdown list up in the Layers palette. We will focus on Darken and Lighten blending modes:



Roll over the buttons right below this text to preview the original image, ALCE2 (Normal), ALCE2 (Lighten) and ALCE2 (Darken) - it requires Adobe Acrobat Reader or Pro:

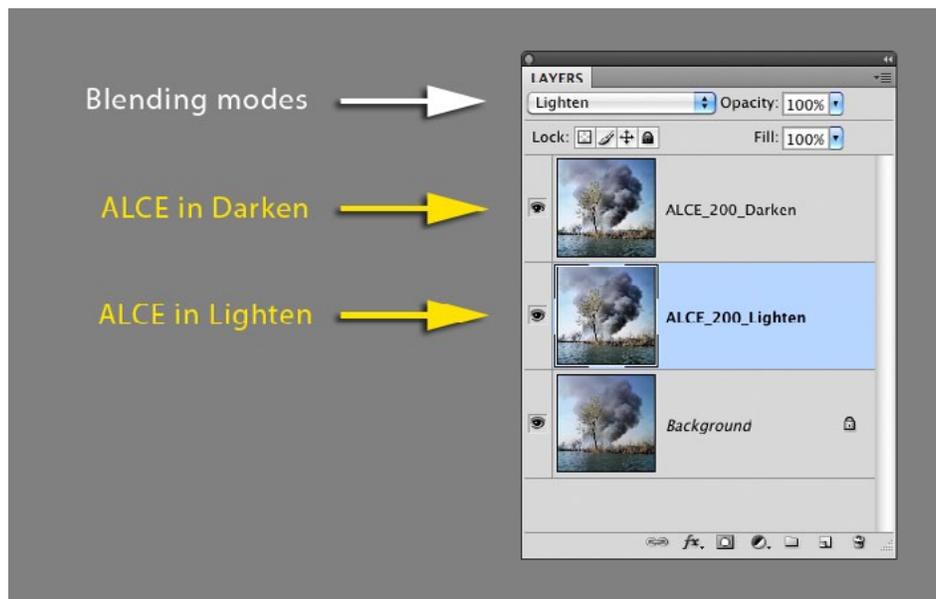
Let me spend few lines explaining what you've seen.

Normal blending mode is what you're used to. The layer is opaque and if you pile ALCE2 on the top of the original, you see ALCE2 (and not the original).

Darken blending mode applied to ALCE2 layer keeps the ALCE2 layer parts where it is darker than the original (basically, you get the darkening halos and lose the lightening ones). Actually, Darken could be named "don't lighten".

Lighten blending mode applied to ALCE2 layer keeps the ALCE2 layer parts where it is lighter than the original (basically, you get the lightening halos and lose the darkening ones). Actually, Lighten could be named "don't darken".

As a more advanced tip, I suggest you to run ALCE2, then duplicate the ALCE2 processed layer twice so you have Original, plus two identical copies of ALCE2, one on top of another. Rename them ALCE2_Darken and ALCE2_Lighten, then change the blending mode of the two ALCE layers, guess what, respectively to Lighten and Darken:



The overall effect of the two combined layers should now equal the ALCE2 single layer in Normal mode. Fine, so what?

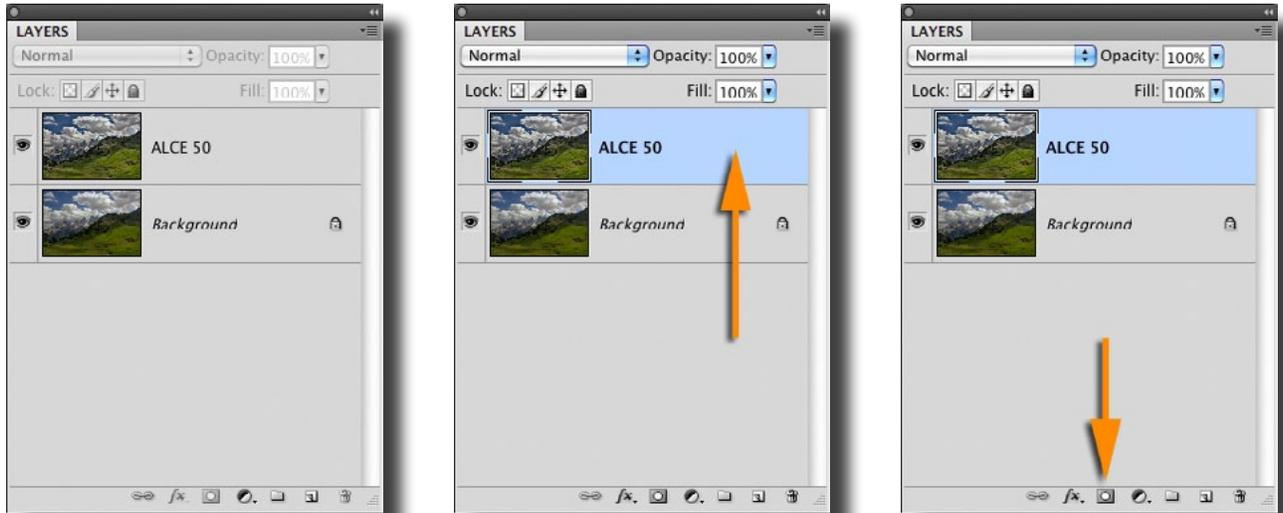
The interesting part is that you can now play with opacity of the two Lighten and Darken layers: this way you can boost or lower independently the dark or light halos of the ALCE2 effect. Say, Darken 75% and Lighten 40%.

4.4 INTERMEDIATE - Layer masks

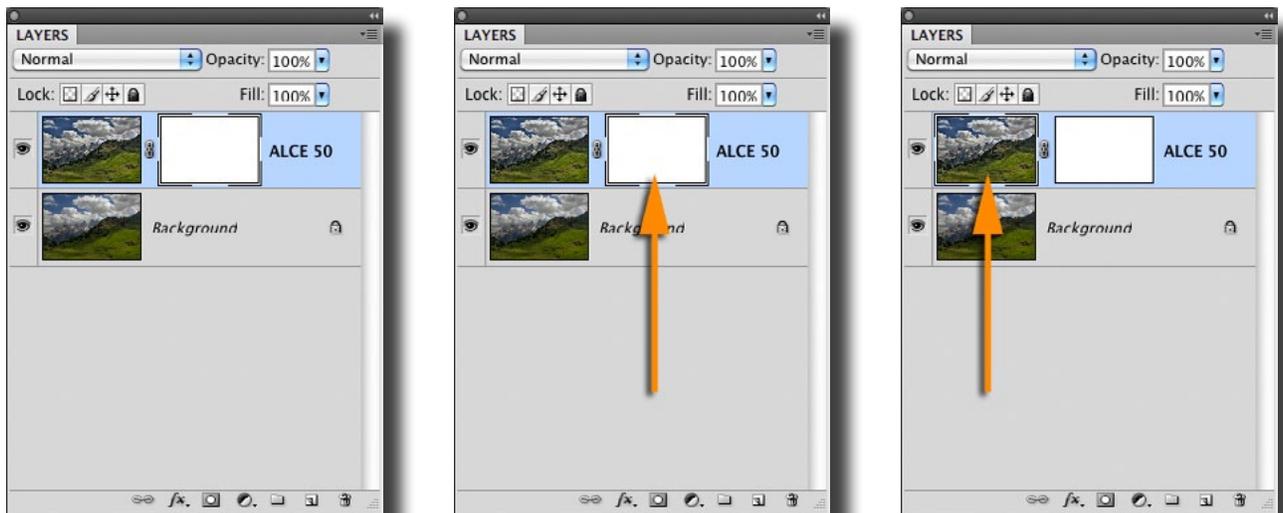
It may happen that the ALCE2 effect is very good everywhere in your picture, except in a small area; where it may add unwanted detail, or maybe it produces halos. One way

to locally control the ALCE2 effect is by means of layer masks; this kind of trick already is in the arsenal of pro retouchers for sure, but it's worth mentioning it here anyway as an intermediate topic.

Here is how to add a layer mask, let's say you have a background and an ALCE2 layer. First select the layer (click on the ALCE2 layer in the Layers, it becomes light blue), then click on the small icon in the bottom of the Layers palette as shown in the screengrab:



This way you're adding a blank (white) layer mask to the ALCE2 layer. Please note that a small line appears in the icon corners, meaning "selected"; when you single-click the layer icon, or the layer mask icon, you're selecting one or another:



With a white layer mask, nothing seems to change, and that's fine.

White in a layer mask means that the "actual" layer is fully visible. Now pick up the brush tool from the toolbar and start painting with black into the layer mask (click once into the layer mask icon if you notice that you're painting not into the mask, but into

the ALCE2 layer: a small border appears around the mask icon, which means: you're doing things to the mask, and not to the layer). What you should see is that where you've painted, the ALCE2 effect disappears, that is: black in a layer mask hides the associated layer content. Basically, you can create a layer mask to the ALCE2 processed layer, and paint black into the mask where you want to hide, to "erase", the effect.

Roll over with your mouse the buttons below to see the original, ALCE2, and ALCE2 masked version (it requires Adobe Acrobat Reader or Pro):

So you've seen that black hides, but what about gray? To paint the mask with 50% (mid) gray, is the same than lowering the opacity of the layer to 50% (that is: shades of gray are shades of opacity in the show/hide game).

That's all for now, about ALCE elaboration in this User Manual: I've shown here some basic to intermediate techniques of ALCE2 post-processing. The topics covered should be enough for you to start working with it. To learn more about advanced topics, please read the following and last section.

5. Video training



We're proud to offer for free two sets of english spoken training videos recorded by RBG (Roberto Bigano Group) member Marco Olivotto.

The first one, "Introducing ALCE" is about installation, theory and basic use (it also contains an easy, convincing explanation of what the radius really mean).

The second one, "Working with ALCE" is about image processing and our local contrast routine - Marco shows 10 real world examples of image elaborations and challenges each picture with different techniques. They are a great source of information for both the beginner and the expert user - you'll enjoy them.

The videos are on our [website](#) and on a dedicated [Vimeo channel](#).

Thank you for buying ALCE2: we hope you'll find creative and intelligent ways to apply it to your pictures. Happy photoshopping! ;-)