

Using layers in Photoshop Elements

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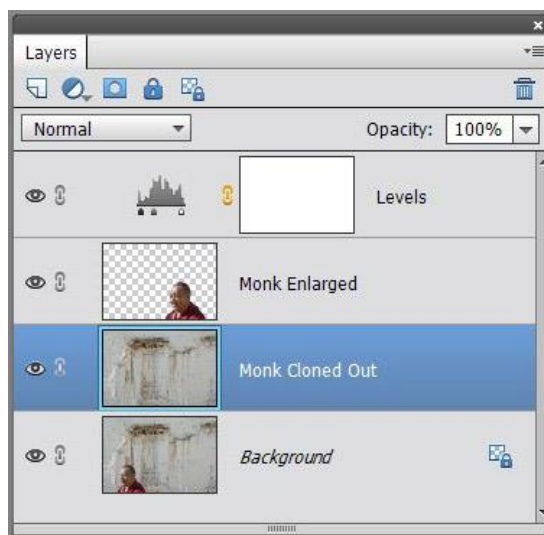
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These notes were written to accompany tuition at Amersham Photographic Society, focusing on just the key facts needed to master each aspect of digital image manipulation with Photoshop Elements.

1. Layer principles

Layers can be created automatically (eg with *Edit>Paste*). As a result, beginners who perhaps do not even have the Layers palette open, can become confused. Layers cannot be ignored and they are incredibly useful, so it's essential to become familiar with them.

Layers can be thought of as a stack of prints and transparent sheets viewed from above. After opening the Layers palette (*Window>Layers*), a new transparent layer can be created by clicking on the *Create a new layer* icon in the Layers palette (a blank page icon), or select *Layer>New>Layer*. Transparency is indicated by a chequer board pattern. Clicking on the *Eye* icon at the left of each layer in the palette makes it visible or invisible. The tools and effects can only be applied to one layer at a time: the *Active Layer*. Clicking on a layer in the palette makes it active and highlights it. Important: visible layers and Active layers are independent of one another, which can be confusing initially.



An example of the use of layers would be to move an object within an image; select the object in the Background layer (e.g. using the *Quick Selection* tool) then *Layer>New>Layer via Copy* puts it into a new layer. Using the *Move* tool, it can now be dragged into a new position in the image. Click on the original Background layer again and the *Clone Stamp* tool can be used to erase the object from its original position.

The position of a layer in the stack can be changed by clicking and dragging it up or down the palette, and a layer can be deleted by dragging it to the *Dustbin* icon at the top of the palette. Unlike a stack of prints & acetate sheets, the active layer can also be made partially transparent with the *Opacity* slider or can be combined in amazing ways with the Blending Modes (by default shown as *Normal* at the top of the palette). Although layers can merged or totally flattened I always keep all the layers of any significant image to enable future re-editing. The Photoshop file format (.PSD) keeps all the layers but other formats such as .JPG cannot support layers and the image will be flattened automatically when, saved.

That's the basics covered already, but here are some other things that you should know about layers...

2. Background layers

When a new image is opened it is automatically placed in a layer named *Background* below which is *Canvas* (not shown in the palette). The Background layer has some special properties:

- the image that it contains cannot be moved around (see a padlock symbol in the layer). To move it, make a copy first
- it cannot be moved from the bottom of the stack to a higher position
- it cannot be transparent - any holes show the *Canvas* which is the Background Colour
- any *Canvas* added to enlarge the image area is applied to the Background layer only
- if the Background layer has been deleted, a new one can be created (eg to show the *Canvas*) with *Layer>New>Layer from Background*.

3. Duplicating layers

Layers can be duplicated by dragging them on to the *Create a new layer* icon within the Layers palette (or *right-click>Duplicate*). Before making a significant change to an image (e.g. Cloning) it's a good idea to make a duplicate layer and use that. If it goes badly you can delete the layer and start again.

It's a good habit to re-name layers as you create them to avoid confusion over what they contain. *Double-click* the name of the layer to re-name it.

4. Combining or linking layers

Image files can get very large and each layer contributes to this, so it's a good idea to delete or merge any layers that are no longer needed:

- *Layer>Merge Visible* will permanently combine all layers that are currently visible
- *Layer>Merge Down* merges the Active layer with the one below, or
- *Layer>Flatten Image* combines all layers in the image and discards those that are not visible.

There is no necessity to flatten layers and they will be retained in a .PSD file for future use. The image does not need to be flattened to print it. Once merged, layers can only be separated again for as long as they remain in the History palette.

Layers may be linked together by selecting multiple layers (*Ctrl-click* or *Shift-click* each) then selecting the *Link Layers* icon (a chain symbol). Movement of any one layer will also move the other linked layers and the chain symbol is shown in each Linked layer as a reminder.

5. Adjustment layers

Adjustments such as Levels, Saturation or Color do not have to be made permanently to an image. It's much more flexible to use *Adjustment Layers* which can be altered later. These are created by *Layer>New Adjustment Layer* (or the *Create new fill or adjustment layer* icon in the Layers palette). To alter the settings later, click on the Adjustment layer thumbnail where you will see the sliders in their adjusted positions.

Tip: Adjustment layers normally affect all visible layers below, but can be set to only affect the one layer immediately below by using *Layer<Create Clipping Mask*.

6. Don't ignore layers

Although the basic concepts of layers are not complex, beginners will find them confusing. The key is to think about the 'stack of prints and acetate sheets' model in your head and think logically about how you would achieve the required result with them.

The fact that the visible layers and the Active layer can be different is the second hurdle to overcome. Recent versions of Photoshop have tried to help with this by, for example, not allowing you to manipulate a layer that you can't see. Keep the Layers palette open at all times and with practice, layers will become second nature and reward you with much greater flexibility in your image processing.

Advanced Layer Capabilities

7. Blending options

Blending is the process by which the Active layer is combined with the visible layers below it in the stack. The default setting is *Normal* (at the top of the Layers palette), where no blending occurs. However, many other wonderful and creative options exist in the drop-down menu. For example *Screen* produces a combination akin to two projectors on a screen and *Lighten* only shows those areas in the upper layer which are lighter than the corresponding areas in the lower layer. These can create wondrous creative opportunities and are worthy of some time to explore.

8. Shortcuts

Throughout Photoshop, there are useful keyboard shortcuts and a few are worth remembering:

- *Control-Click* a thumbnail in the Layers palette to turn it into a selection.
- *Alt-Click* on the *Eye* icon to make just that one layer visible and repeat to make all the previous layers visible once more.

There is also a too-small menu in the top right hand corner of the Layers palette which offers handy shortcuts or *Right-click* a layer in the Layers palette to reveal many useful commands.

9. Combining layers from different images

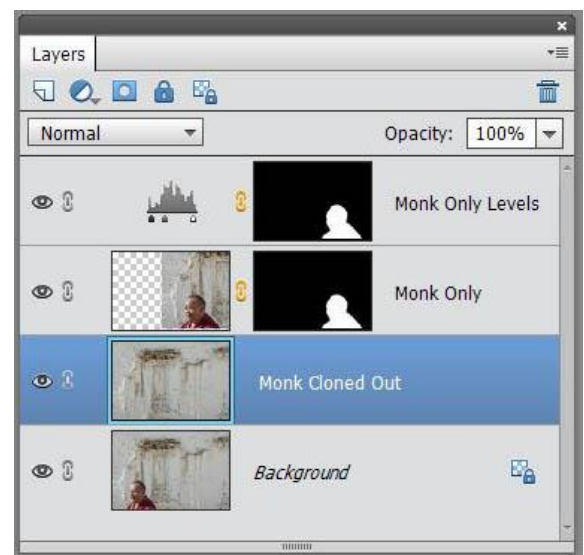
You may want to combine images from more than one exposure in a single Photoshop file (e.g. to replace a sky). Achieving this is not as intuitive as it might be; open the donor image and make the required layer active. *Select>All* then *Edit>Copy*. Now open the recipient image and select *Edit>Paste*. Another way to achieve this is to drag and drop the donor thumbnail from the Photo Bin onto the recipient image.

10. Adjustment layer masks

After getting to grips with layers, an understanding of *Layer Masks* will bring great rewards in terms of editing flexibility and reversibility. When you make a selection and apply an adjustment to it (eg *Enhance>Adjust Lighting>Levels*), the adjustment only applies to the selected area. This is baked-into the edit and can only be changed whilst still in the History palette.

Using an *Adjustment Layer* on a selection instead (*Layer>New Adjustment Layer>Levels*), achieves the same result but the adjustment values can be re-visited forever and the selection area can also be changed. This is achieved by an Adjustment Layer Mask which is represented by the greyscale thumbnail alongside the image thumbnail in the layers palette. Where it is black, the corresponding area of the image is not affected by the adjustment. Where it is white it is fully affected. Where it is 50% grey, it is 50% affected etc. The Layer Mask is, in all other respects, a regular greyscale layer and the full tool set works on it; Paintbrush, selections, filters etc. To operate on the mask instead of the image thumbnail, click on it and ensure that there is a box around it.

Extremely feathered selections are commonly used in this way to create soft-edged masks to add contrast, lighten or darken many areas of an image. Each can be re-visited and adjusted freely.



11. Image layer masks

A Layer Mask can also be applied to an image layer; *Layer>Layer Mask>Reveal All* (or *Hide All*). There is also an *Add Layer Mask* icon in the Layer palette. Click on the Layer Mask to make it active and paint with black or white within the image to hide or reveal it.

A selection in an image layer can be turned into a Layer Mask with *Layer>Layer Mask>Reveal Selection* (or *Hide Selection*) and so showing (or hiding) only that part of the image within the marching ants.

When combining images, masks can be used to determine the required areas from each and these can be adjusted at will. The image layer and its mask are normally locked together and can be moved as a pair.

Another useful tool for combining two images along a line (eg a horizon) is the Gradient tool. With black and white as the foreground and background colours, choose the Gradient tool and set it for a Foreground to Background, Linear Gradient. Click on the mask for the upper layer and then click and drag in the image. This will create a black to white gradient which hides the upper image along the line of the gradient. If the wrong half is revealed, drag again in the opposite direction. If the edge is too sharp, drag a longer gradient. If the position is wrong, drag repeatedly until it is exactly where you want it. Tip; to add a second gradient to an existing one (eg black to white to black), add a Foreground (or Background) to Transparent Gradient.

12. Layer mask shortcuts

- *Shift-click* on a mask to hide it, or repeat to reveal it again.
- *Alt-click* on a mask to show the actual mask itself on screen. Repeat to hide it again.
- *Control-click* on a mask to make a selection from it.
- *Right-click* on a mask for other options.
- *Alt+drag & drop* to copy a mask from one layer to another.

Masks are just greyscale images so they can be edited in the same way; with black, white or grey brushes, Blur tool etc. A mask with a sharp edge could be softened with a Blur filter.