

Improve your photos and rescue old pictures

This guide gives tips on how you can use Paint Shop5 and similar free graphic programmes to improve your photos.

It doesn't matter if you get the photos from a scanner, digital camera, or the Web - they can be improved by a little manipulation before you show them or print them in a family history. Make your corrections in the order suggested to get the best results.

*Although this guide mentions only PaintShop Pro 5 you will find most of the techniques explained work almost exactly the same way with other freeware programmes such as **XnView** and **Paint.net** you can download from the Net.*

This guide covers only what I think are the most useful tools. As you browse the programme's menus you'll find many more tools. Experiment – you'll have a lot of fun.

- Graeme Eggins

Step 1: Open Paint Shop Pro 5

Close all other programmes if you don't need them.

Click on **View** menu at the top of the page and select **Toolbars**. Click to put a tick in **all the boxes** except Histogram window.

Also remember, you can use Paint Shop shortcuts – **O** for control palette, **P** for Tools pallet and **C** for colour pallet. To instantly undo a change, use **Control Z**.

Step 2: Save a copy of the image in native format

Before anything else, it's always a good idea to save a copy of your image in your software's native file format. Use "save as" and name the file something like "My house A" or "My house B." This becomes your "working file."

Don't throw out your original. Keep it as an emergency backup and a reference point of comparison.

Step 3: Rotate your image if needed

Select the image then choose **Image > Rotate > Select** and choose what amount of rotation. Not every image will require rotation, but if the camera was tilted, or if the images were scanned at an odd angle, they will need to be straightened.

Switch on **View > Grid** to check (Set grid measurements in **File > Preferences > General program preferences > Rulers and units**)

Step 4: Crop to emphasise

Cropping is one of the simplest things you can do to enhance a photo, yet many people don't both. By cropping your photos, you can remove unnecessary and

potentially distracting elements so your viewers will be able to focus on the important parts of your picture.

In addition, cropping can significantly reduce the size of the file, which is important for photos you intend to post on the Web or send via email.

To crop, click the **Crop tool** (it looks like two intersecting set squares) on the Tools palette and select the part of the image that you want to retain. The area **outside** the selection will be deleted. To change the area to be cropped, click inside the rectangle and drag it to a new location.

When you are happy, double-click **INSIDE** the selected area. The unwanted area is deleted, and the image window resizes.

Step 5: Correct colour and tone

Critically examine the overall color and tone of your picture. If you are happy, go straight to the next step.

But you may need to adjust for color casts, underexposure, overexposure, and so on. It's important to get color and tone corrected before moving on to retouching and other types of image enhancements.

From the **Colors** menu, choose **Adjust** and then select the following from the fall-down menu:

The **Brightness/Contrast command** brightens or darkens an image or selection and the range of light (the contrast) within it. The Brightness control is a quick way to adjust everything at once, such as when you have a picture that is too dark after being scanned. Contrast increases the difference in shading between areas.

The brightness and contrast values are expressed as percentages, with 0% being the current setting.

To adjust an image's brightness and/or contrast:

- 1 From the **Colors** menu, choose **Brightness/Contrast** in the **Adjust** submenu. The Brightness/Contrast dialog box opens.
- 2 The preview on the left shows the current image. The preview on the right updates as you adjust the settings. Click the "+" and "-" buttons to change the magnification. Drag either image to bring other areas of them into view.
- 3 To update the original image as you change the settings, select the "Auto Proof" check box.
- 4 To view the image's current settings, move the sliders to the midpoint. (Both boxes will display "0.")
- 5 Move the Brightness slider to the right to increase brightness and to the left to decrease brightness. At -100%, the image is solid black. At +100%, the image is solid white. Try it yourself.
- 6 Move the Contrast slider to the left to increase contrast and to the right to decrease it. At -100%, the image has no contrast, so it is solid grey.
- 7 To apply the changes, click OK.

The Highlight/Midtone/Shadow command adjusts the dark, middle, and light values separately. The values are expressed as percentages. The Highlight slider at 100%, Midtone at 50%, and Shadow at 0% represent the image's current settings.

To adjust the highlight, midtone, and shadow:

- 1 From the **Colors** menu, choose **Highlight/Midtone/Shadow** in the **Adjust** submenu. The Highlight/Midtone/Shadow dialog box opens.
- 2 The preview on the left displays the current image. The preview on the right updates as you adjust the settings.
- 3 To update the original image as you change the settings, select the "Auto Proof" check box.
- 4 The **Highlight** (default 100) slider adds lightness proportionally. As the slider moves to the left, it lightens increasingly darker pixels. This adds highlight to more of the image.
- 5 Move the **Midtone** slider (default 50) to shift the middle quarter of the light scale up or down. The areas of midtone lighten as the slider moves right and darken as it moves left.
- 6 The **Shadow** slider (default 0) does the opposite of the highlight slider -- moving it to the right removes lightness proportionally. Lighter pixels are darkened more.

Hue/Saturation/Lightness command

Hue refers to the color, saturation to the colour's purity, and lightness to the color's brightness. Use the Hue/Saturation/Lightness command to modify these values for an entire image or selection. (Defaults are 0, 0, 0)

- 1 From the **Colors** menu, choose **Hue/Saturation/Lightness** in the **Adjust** submenu.
- 2 To view the image's current settings, drag the sliders to the midpoint. (Both boxes will display "0.")
- 3 Move the Hue slider to the left and right to shift all the colors in the image around the color wheel. This slider measures the color wheel in percentage. The +100% and -100% return the color to its original position.
- 4 Drag the Saturation slider to the left to decrease saturation and to the right to increase it. At -100%, the colours are removed, and only grey remains.
- 5 Move the Lightness slider to increase and decrease the lightness in the image. A -100% setting produces pure black. A +100% setting produces pure white in those colours with a lightness of 50% and above.

Red / Green / Blue command

The Red/Green/Blue command changes the levels of red, green, and blue in an image or selection. Your computer monitors creates colors by combining red, green, and blue, the three primary colors for projected light. The red, green, and blue values are represented as percentages, with 0% being the current setting.

To adjust the red, green, and/or blue levels:

- 1 From the **Colors** menu, choose **Red/Green/Blue** in the **Adjust** submenu. The Red/Green/Blue dialog box opens.
- 2 To view the image's current settings, move the sliders to the midpoint. (The boxes will display "0.")
- 3 Move the Red slider to increase and decrease the amount of red in the image. Use the Green and Blue sliders the same way.

Grey Scale command

From the **Colors** menu, select **Grey Scale**. The Grey Scale command removes the colours from an image and replaces them with greys. The effect is similar to a black-and-white photograph.

You may like to change a modern photo from colour to black and white so that it sits better on a page with older b/w photos, for example as in a family history.

Negative Image command

From the **Colors** menu, select **Negative Image**. This command replaces the color value of each color with its opposite on the 0-255 scale. You get what looks like a photographic negative. Use in reverse you can use a scanned negative to make a positive image.

*(Ignore **channel splitting**, **pallets**, **Posterize** and **Solarize** commands and **colour depth**. Most people rarely use them but try if you like weird results.)*

Color replacer

You'll find it on the tools menu on the left hand side of the page – it looks like a broad red arrow on a blue background. Use it to replace one colour with another – say to replace yellow with orange on a drawing.

1. Use the eye dropper (also on the tools menu) to select the colour you want to replace by clicking on that colour in your photo. That colour will appear as the **foreground** colour on the Color Pallet on the RHS of the page.
2. Use the eye dropper to click on the **background** colour on the Colour Pallet. This action will bring up a colour wheel. Select your new colour. It will become the new background colour.
3. Click the Color Replacer
3. **RIGHT** click the image. This will replace the foreground color with your new background color.

Step 5: Repair and restore

Now that you have accurate colour and tone, you can focus on the flaws in the image that may need to be repaired. This includes removing scratches, tears, wrinkles, spots, and noise.

From the **Colors** menu, select **Filter Browser**. This will allow you to try many different effects, from enhancing the edges of objects to Despeckling or removing random scratches and minor imperfections.

The best way to learn which filters to use is to try them. You can always undo : -)

Clone brush: One of Paint Shop's most useful tools is the Clone Brush. It is the two brushes on the Tools menu. You can use it to copy one part of a photo over another. For example, let's say you have an old photo with a big crease across it. Copy uncreased sections over the creased party and voila! – no crease!

To use the Clone Brush :

1. Position the cursor over the part of the image that you want to copy.
2. Either <Shift> + click or right click with your mouse. Your computer will beep to indicate that you have selected the source area.
3. Move the cursor to where you will start copying.
4. Press and hold the LEFT mouse button. Crosshairs will appear over the picture. The crosshairs indicate which pixel you are copying.
5. When you're finished copying, release the mouse button.

Step: 6: Cosmetic improvements

After you have made any repairs, you may discover other cosmetic flaws in the image that need retouching. This can include smoothing skin tone, blurring wrinkles and blemishes, perhaps even replacing entire objects.

From the **Tools** menu, select the **Retouching** tool (it looks like a pointing hand). You now have a choice of various retouching tools. For example, to whiten and brighten teeth use Retouch's **Dodge** tool. It brightens midtones without destroying highlights and shadows.

Experiment. Use the **Brush Tip** menu to make your touch-up brush larger or smaller. The Clone brush can also be very useful in covering up damaged areas.

Consider Layers

Why use layers?

Because they make making adjustments easier, you can recycle sections and use again, and you can trace over them.

When you create a new graphic or open an existing one, you have a layer. Open a photo and you will see that there is already one layer (named by default "Background").

Now go up to **Layers** menu – select **Duplicate**

Copy of Background appears on your **Layers** pallet.

Place your mouse (no clicking) over the layer name and you'll see a miniature image.

You **left** click to operate the **controls**, which are, left to right:

- **Layer Visibility Toggle** - This button turns on and off the visibility of that particular layer. It is very useful. There are times when you will want to turn off a layer so that it does not interfere with what you are working on.
- **Protect transparency** – this stops you drawing on transparent parts of a layer. Leave it as it is.
- **Group layers** – does what it says

- **Layer Opacity** – Also called the "Opacity Slider". It is very useful for adjusting coloring, superimposing one graphic over another, etc.
- **Blend mode:** Generally, leave at Normal. You can experiment with the others but make sure you have both layers switched on.
- **Enable mask and Link Mask:** Ignore. PSP5 is rather poor on masking so using these tools is not covered in these notes.

You can create a new layer by either going to the Layers menu at the top of your screen or by RIGHT clicking on the name of a layer.

(BTW, get into the habit of giving each layer a descriptive name as you create it or you may get confused later.)

Your choices are **New – Duplicate – Delete – Properties**.

To **Delete** a layer go to the layers menu and click Delete with the layer selected, and you can delete the layer. Alternatively, you can also left click and drag a layer into the rubbish bin on the Layers palette.

Some other important things to know about layers

The dark and light grey grid you see behind graphics on layers means that part of the graphic is transparent. When you create a new layer, it is automatically transparent.

Learn to use "Paste as a New Layer". You do this by selecting the **Edit** menu > **Paste** > **Paste as a new layer**. When you make a selection in one graphic and paste it into another graphic "as a new layer", the background is automatically transparent.

Step 7: Save your working file

Do a final save of your corrected, restored, and retouched photo. If you will be using the image in another project you can come back to this file at a later time. The following steps are specific to the requirements of final output and will be saved under a new file name in step 10.

Step 8: Resize

Chances are, your image is not going to be the ideal size for your final output. You will need to use your software's resize or resample command to adjust the size and resolution. If your image is going to be printed, you will need to set the resolution somewhere between 150-300 ppi and enter the desired print dimensions. If your image is intended for the Web or multimedia, you will want to use a resolution of 72 ppi and enter the desired pixel dimensions.

Step 9: Unsharp mask

Many times, as you adjust the size of an image it will need to be resampled. This resampling always results in some softness or blurriness. In addition, other image processing tasks such as rotating and retouching can soften the image.

Paint Shop Pro contains several commands that sharpen your image by increasing the contrast of adjacent pixels. Go to the Image menu and select **Sharpen** and select one of the following:

Sharpen improves the clarity of the image by increasing the contrast between adjacent pixels where there are significant color contrasts, usually at the edges of objects. **Sharpen More** has a stronger effect.

Unsharp Mask sharpens the mid- to high-contrast edges in the image without enhancing unwanted materials. This command locates adjacent pixels that have a difference in lightness values that you specify and increases their contrast by an amount you specify.

To use the Unsharp Mask:

1. In the preview window, centre an important part of the image (such as a face).
2. Sharpen the image with the following options:

Radius: The number of pixels to adjust around each edge. A value between 0.5 and 2 works best, depending on the image. A lower value sharpens only the edge pixels, while a higher value sharpens a wider band of pixels. The effect is much less noticeable in print than on-screen because a small radius (for example, 1 pixel) represents a smaller area in a high-resolution printed image. Therefore, use lower values for on-screen images and higher values for high resolution printed images.

Strength: The amount of contrast to increase in the image's pixels. Start with about 100 and increase it gradually.

Clipping: The difference in lightness values that adjacent pixels must have before they are sharpened. The default is 5.

Step 10: Save a copy for output as Web file or print file

At this point you are ready to save a copy of your file in the format required for final output. For photos you'll be posting on the Web or sending by email, you will probably want to use JPEG format. For photos being used in a printed project, TIFF is commonly used.

That's all! Have fun experimenting.

Graeme