Photoshop Basics

What is Photoshop?

Photoshop, made by the software company Adobe, is a software application which enables photographic images to be manipulated, tweaked or reassembled. It's used in the publishing industry for print work, in web design, and by artists and photographers. Because almost everyone in the publishing, web or photographic industries use it, we call it an industry standard.

Which version of Photoshop are we using?

Software applications come in different versions. Every year or so, a new version of Photoshop is released, with improvements, new features and so on. We are using the most recent version of Photoshop: version 7.

Image manipulation basics

The basic process of working with images digitally is fairly straightforward. As with any computer application, we can consider the process in three stages:

- Input
- Processing
- Output

Input

Photoshop is primarily a **bitmap** (or **raster**) image manipulation tool, which means that the images are made up of tiny dots, called **pixels**. To get images into Photoshop so we can work with them, we first need to convert them to a grid of pixels. For this we use a flatbed scanner.

When we scan images, the quality of the image is determined by the resolution of the scan. Resolution is measured in **dots per inch** (or **DPI**). Simply put, the higher the resolution, ie the bigger the DPI, the better quality the scan will be. But, it therefore follows that the higher the resolution, the more dots there will be per inch; and more dots means more information. Therefore, you should bear in mind that the higher the resolution, the higher the quality, but also the bigger the resulting file will be on your disk. Take care not to scan images that are too big to work with, or too big to store on your disk.

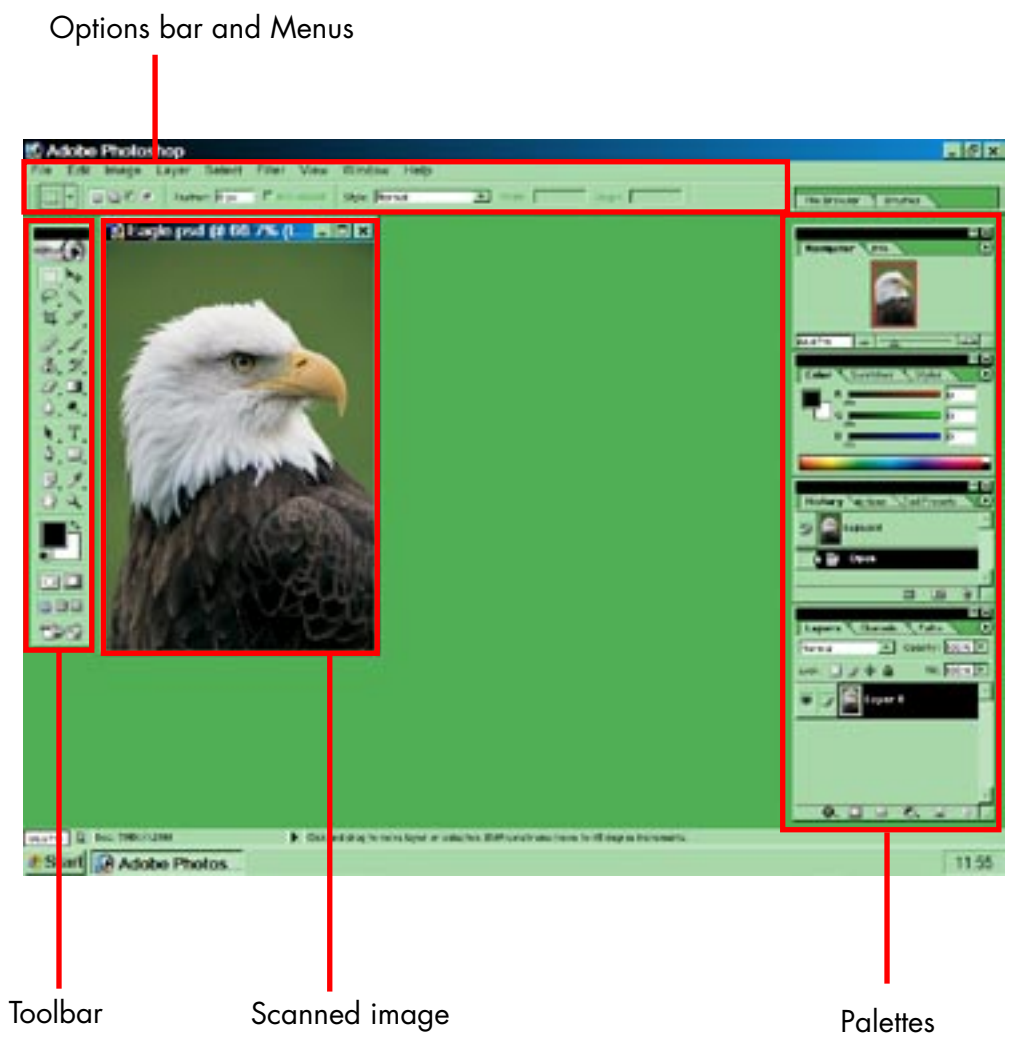
Processing

The processing stage is where you will be using Photoshop to colour balance, collage, montage, illustrate, compose, style and generally alter your scanned images.

Output

In this module, the output stage will usually be a print. We have access to colour laser printers from the room, as well as an A1 plotter and monochrome laser printers. For assessment, it's advisable to do a high quality print from the colour laser printer.

Finding your way around Photoshop



Photoshop has a number of features that should be familiar from other applications. Like all computer programs, it has menus along the top of the screen. It also has a toolbar, palettes and an options bar.

The **toolbar** contains tools such as paintbrushes etc which can be used to alter your image.

The **options bar** contains settings which can alter the way that the tools work, changing such settings as brush size or ink density.

The **palettes** let you control other elements that are in your image, such as layers or ink colour, and also allow you to zoom in and out using the Navigator palette.

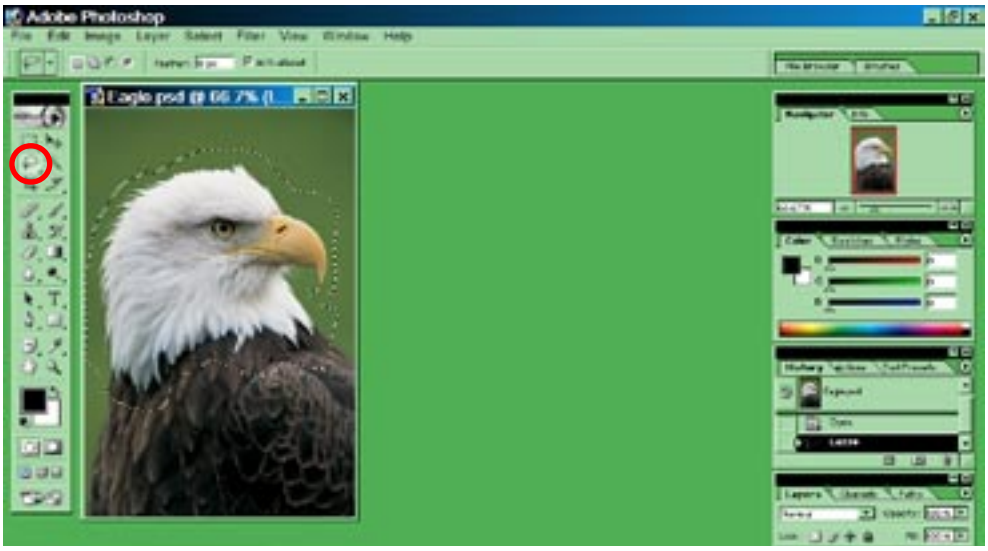
A Sample Project

Follow through the steps of this sample project to learn about some of the image manipulation possibilities in Photoshop.

We are going to transplant the head of this eagle onto that of a rubber duck. Both these source images can be found in the Samples folder in the Photoshop 7 Program files folder.

1. Select the head of the eagle with the Lasso tool.

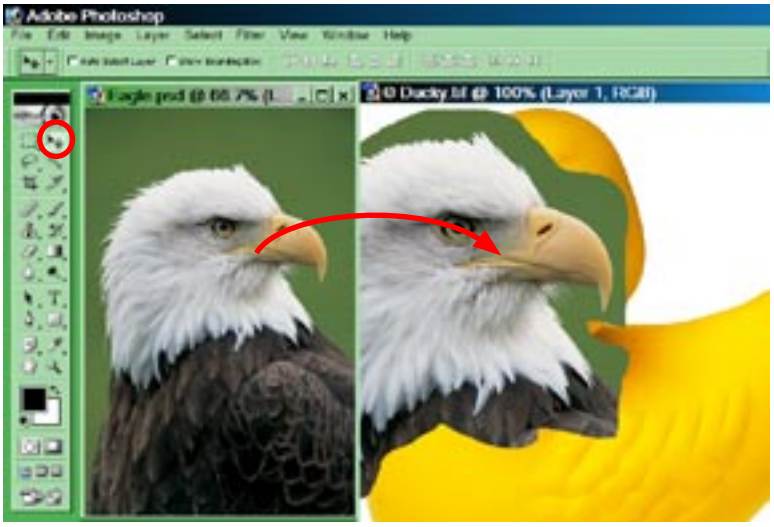
Use the **Lasso** to draw freehand around the head of the eagle.

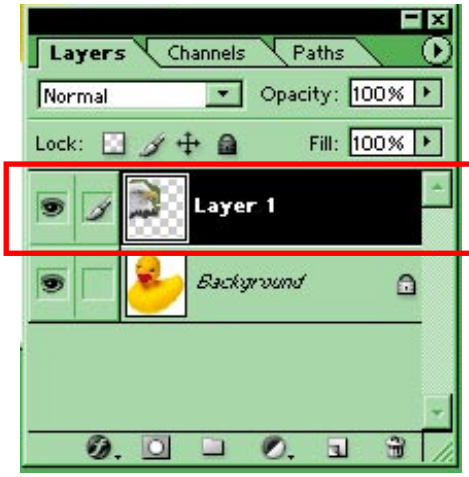


2. Move the head onto the rubber duck

Firstly, open the rubber duck image. Then, using the **Move tool,** drag the selected eagle head from the eagle image to the rubber duck image.

Notice that this creates a new layer in the **Layers palette** at the bottom right of your screen.





A new layer is automatically created

3. Scale the eagle head so it fits

Firstly, select the eagle head layer in the layers palette. Next, go to the **Edit Menu** and choose **Transform–>Scale**. This adds a bounding box and handles to the layer (see image below). By dragging the handles, you can resize the head of the eagle. When it looks like it's the right sort of size to match the head of the rubber duck, you can apply the transformation by double-clicking inside the bounding box, or by pressing the **return** key on the keyboard. Next, you should go to the **Edit Menu–>Transform–>Flip Horizontal** to make the eagle head face the same way as the rubber duck.

4. Removing the green background behind the eagle's head

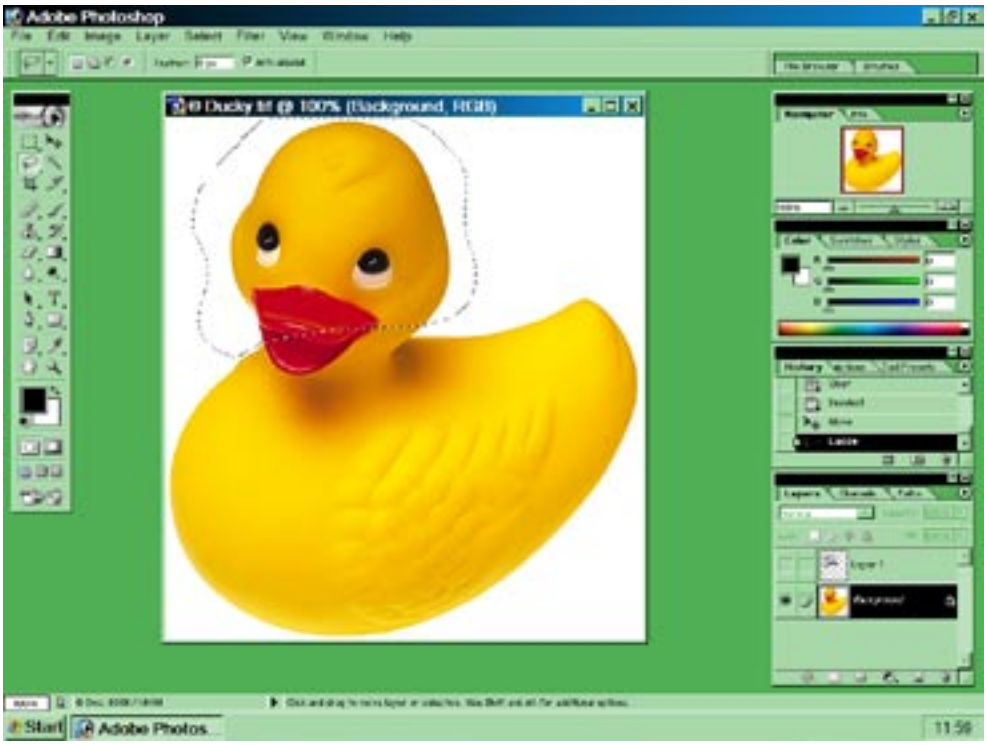
The easiest way to do this is to use the **Magic Wand** tool to select the area of green in one go. It would be possible, but difficult, to use the **Lasso** tool to draw round the green area, but the Magic Wand speeds up this process. Once it's selected, then you can delete it by pressing the **backspace** key on the keyboard.

You will see that once the green is removed, the rubber duck's head can be seen behind the eagle's. This can be removed by the following process:

Firstly, select the background layer in the **Layers palette**, and then click the little eye next to the eagle head layer.

This should make the eagle head layer invisible. With the eagle layer temporarily hidden, but still there, we can work on the background layer without causing any damage to the eagle layer.

Using the **Lasso tool**, select an area that contains the duck's head. Then use the **backspace** key on the keyboard to delete it. You could alternatively use the **Eraser tool**, or choose **Fill** from the **Edit menu** to fill the selection with white.

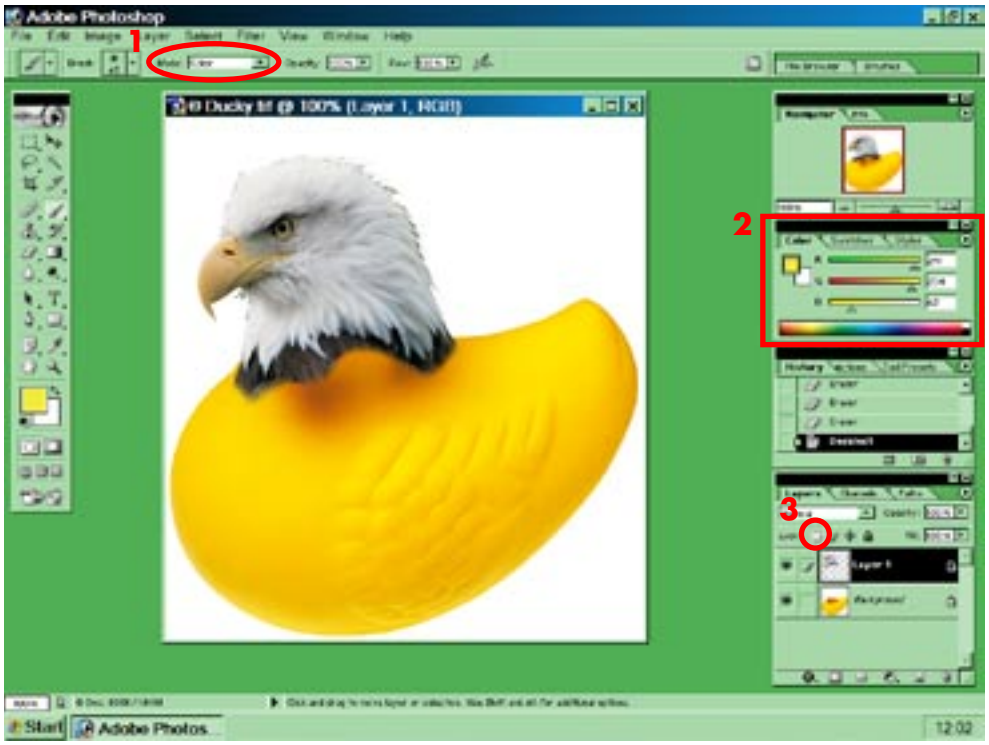


After this is done, you should make the eagle layer visible again, and move it into position with the **Move tool**.

5. Tidying up the edges

Using the **Eraser tool**, and a soft-edged brush, carefully blend the lower edges of the eagle's head so that it looks more natural. Here, a selection has been made to ensure that no slip-ups with the eraser tool damage the rest of the eagle head. You should see that the eraser tool, when used on a layer, erases a transparent hole in that layer, revealing what's underneath.

6. Colour tinting the eagle head



Using the **Paintbrush**, we can tint the colour of the eagle's head to make it a similar colour to the rubber duck. Before using the brush, there are a few things to check first. In the **options bar**, at the top of the screen, check that the brush's **blend mode** is set to **Color (1)**. Next, choose a yellow colour using the **Colour palette** (you should match this by eye)**(2)**. Thirdly select the correct layer in the **layers palette**, and **Lock the transparency (3)**. This means that any ink applied to the layer will only go on the area of the layer that is NOT transparent.

Then, painting with the paintbrush tool should colour tint the eagle's head to match the colour of the rubber duck's body.

Saving your work onto CDR or CDRW

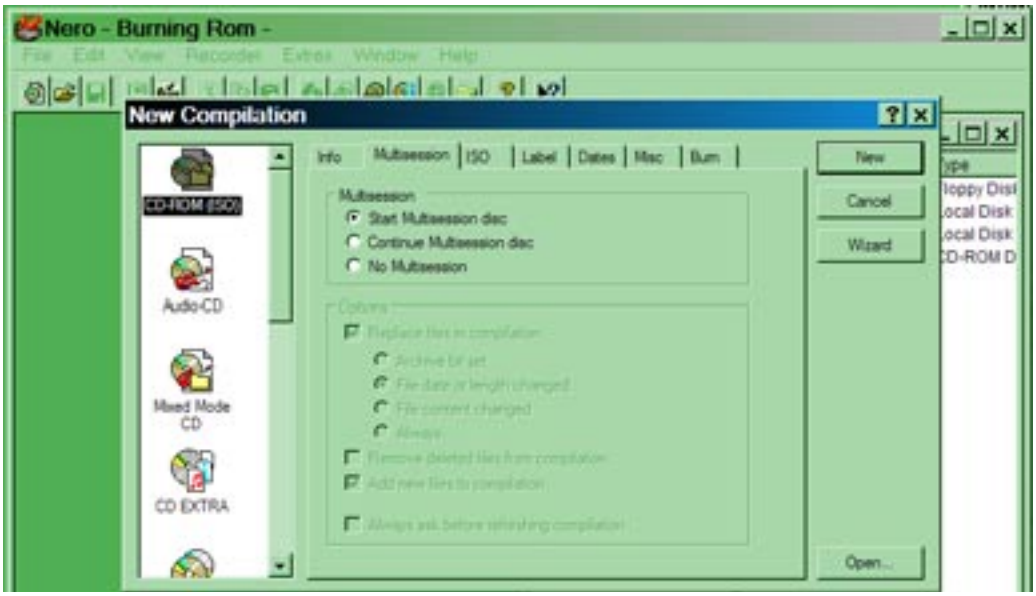
As long as you are logged onto any computer in the lab, you are able to save your work in a number of places. If your images are quite small, then you can save them onto a floppy disk (3½" Floppy A:). If they are too large or there are too many to fit on a floppy disk, then they can be saved in the My Documents folder on the C: drive of the computer you are working on. However, any files you have saved in this folder will be deleted as soon as you log off your computer. In order to keep them for next time, they will need to be saved onto a CDR or CDRW.

A CDR is a writable CD. This means that you can save your work onto the CD for future use. However, CDR's are permanent, meaning that they can't be reused. Once they have been saved onto, whatever files you saved cannot be altered. For this reason, we recommend that you use a CDRW, or rewritable CD. This lets you use the CDRW much like a floppy disk, saving and updating files much as you would on a floppy disk.

It's best practice to work from the My Documents folder during the workshops. Only write your images to CDRW at the end of the session, before you log off the computer.

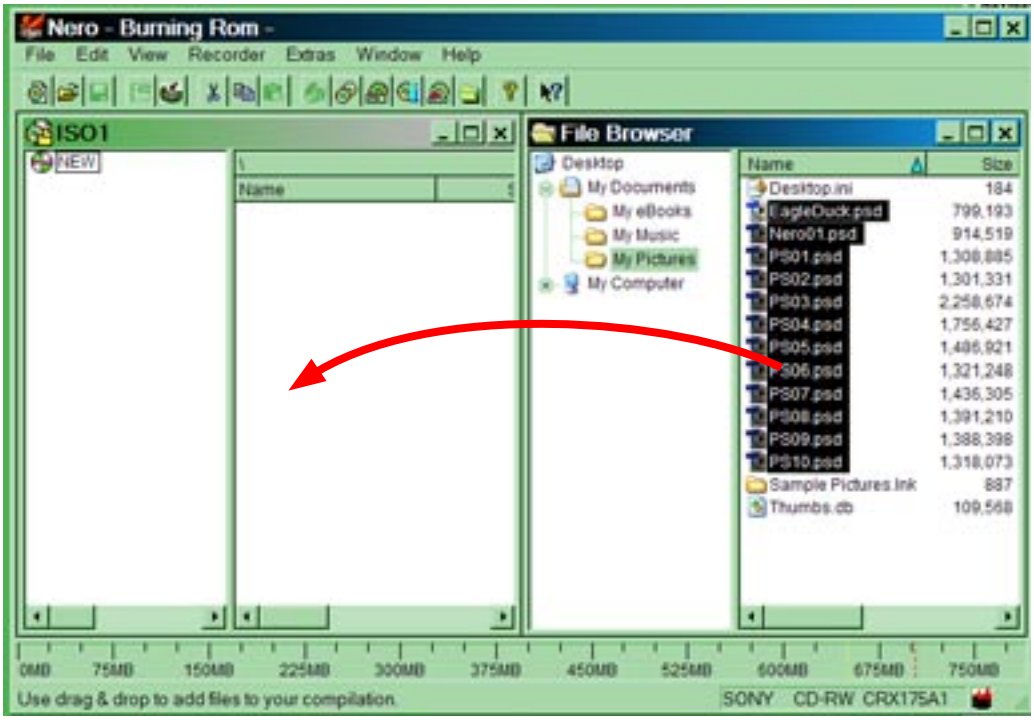
How to save your work to CDRW

1. Open Nero

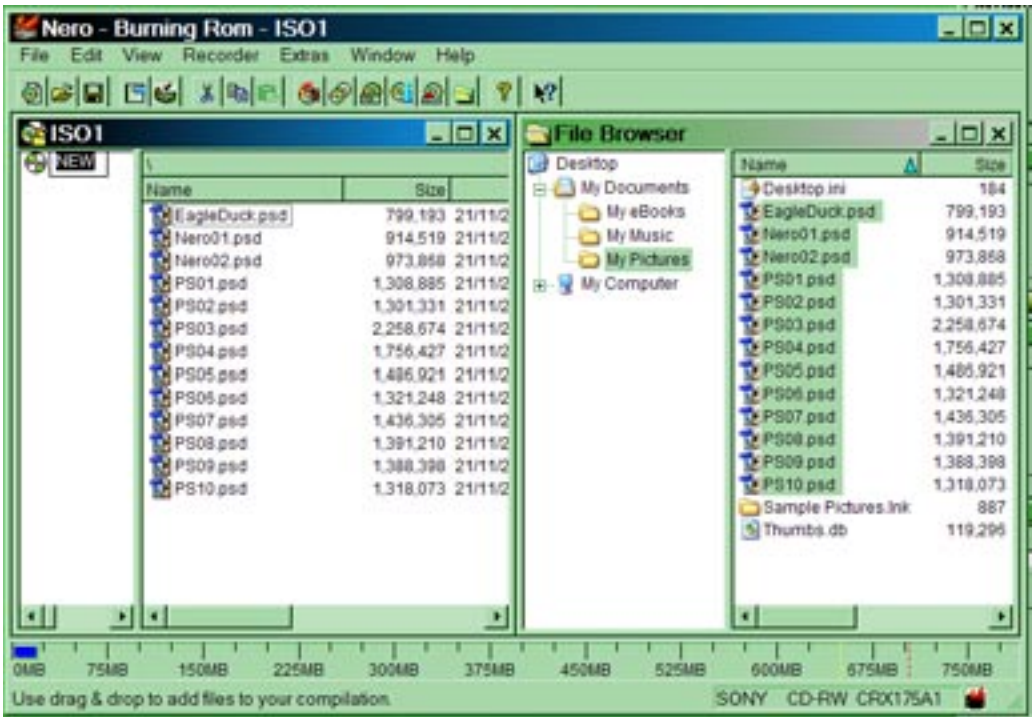


Nero is the program that we use to write CDRs or CDRWs. First, insert your blank CDRW and then choose **Start Multisession disc**. Then click **New**.

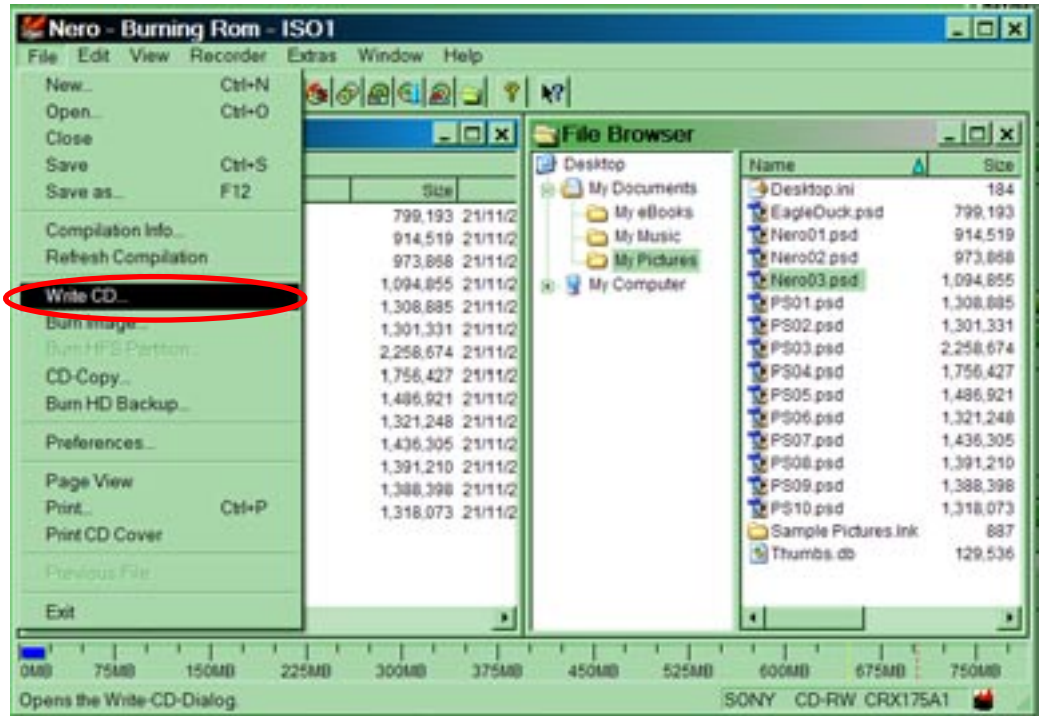
2. Choose which files will be put onto CD



On the right side of your screen, you should navigate to the files you wish to burn onto the CD. To select them and arrange them on the CD, drag them from the window on the right across to the window on the left.



3. Write the CD



Carry on dragging files across until you are ready to burn the CD. To do this, choose Write CD from the File menu. Click the OK button to begin the CD burning process.

Nero will inform you of its progress, and then when the CD is ready, will show an alert to tell you so. Sometimes the computer appears to have stopped working while the CD is burning: don't let this worry you. Just be patient and eventually it will finish.