

## Basics Of Sharpening

### **Summary:**

In this tutorial we will be discussing the first 4 sharpening techniques (sharpen, sharpen edges, sharpen more and unsharp mask) in Photoshop. We will show you the advantages and disadvantages of each technique. Each technique will be explained in detail on what it does and its limitations. Along the way, we will give you tips and tricks such as how to partially sharpen an image. Don't worry if these 4 different techniques do not sharpen your image perfectly because we will be having more sharpening tutorials in the next few courses.

Currently we are using Windows Vista Home Premium 64 Bit and the Photoshop CS4 Extended 64 Bit version.

### **Knowledge You Need to Know:**

If you are unfamiliar with certain areas that are not covered in this tutorial, feel free check out other tutorials on our website. We have many different types of tutorials that can be downloaded (Video, PDF) or viewed online that will train you for **free**! Once you have the knowledge, feel free to come back and go through this tutorial again.

### **Preparing For This Tutorial:**

You will be using a picture of text. If you do not have this image, please scroll down to the image of "***Click Picture To Download Supporting Files***" and download the image. Please open the image PE-SHARPENEXAMPLE in the Photoshop program and duplicate the background layer.

### **Before We Begin:**

We just finished most of the adjustment tutorials, which will correct colors, brightness/contrast, etc. Now that you understand how to create adjustment layers, we felt it was important to show you how sharpen an image.

As you may notice, we did not cover ALL of the adjustments, but for now you have more than enough adjustment knowledge to enhance your image.

### **Image Sharpening:**

There are many ways to sharpen an image in Photoshop and each way has its advantages and disadvantages. If you search on the web for the best sharpening methods in Photoshop, you will find everyone will have their own opinion. Some will say unsharp mask or smart sharpen while others may say the high pass method. The problem is some methods work excellent with a specific sharpening area, while other areas of the image it actually looks worse. Where NOT here to tell you what method is the best, but we are here to show you the common basic sharpening techniques. We will let you decide which method works for your specific image. The only recommendation we will give is we find better results when a tool allows you to manually adjust the settings.

### **Basics Of Blurred Images And Sharpening:**

Before we begin, it is important to understand that a very blurred image will NOT look perfect even if you tweak or adjust and use all the tools in Photoshop. You can fix images that were taken a bit out of focus and make them look perfect, but don't expect miracles if the image has motion blur (there are tools to help motion blur) or extremely out of focus. Now that we have given you a bit of a disclaimer, let's proceed and explain how Photoshop sharpens an image.

How does Photoshop sharpen an image? Because we are a basic/intermediate Photoshop tutorial site, we are not going to get to technical. Each tool will try to find the out of focus areas (different methods) and increase the contrast in those specific areas. By increasing the contrast (darkens the dark areas and lightens the lighter areas of similar pixels) it will sharpen the image.

### **Technique #1 (Sharpen):**

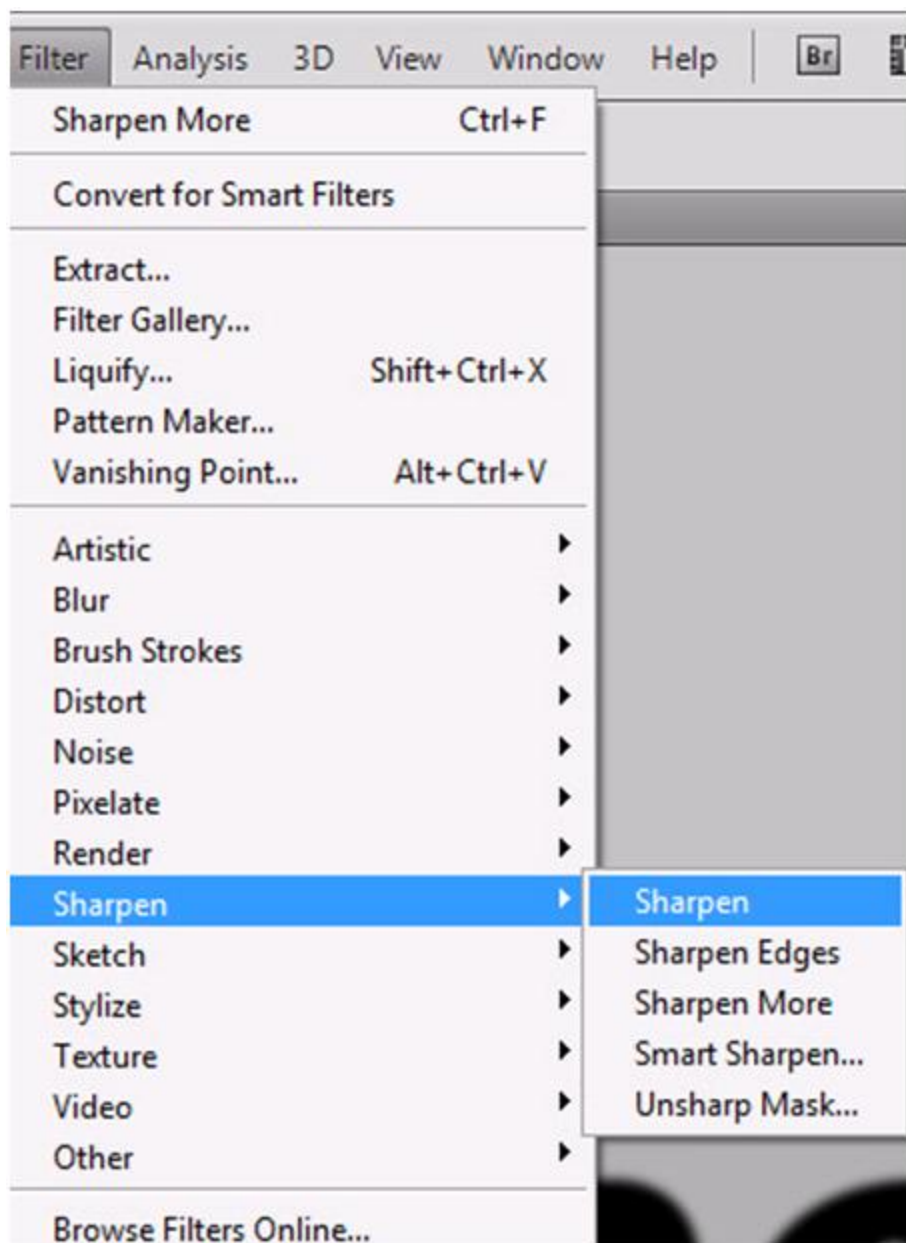
The first tool we will be talking about is the Sharpen Filter. This tool dates back many years in the Photoshop program and when you use this tool it increases the contrast between the pixels. It finds the dark shades and the lighter shades in the image and darkens the darker shades and lightens the lighter shades. This creates a stronger contrast.

This tool does not give you any options and you can't manually adjust the settings. For us, we would rather use a tool that we can adjust the settings.

For this tutorial, we recommend that you follow along with us and do each step while we proceed through this course. When you shrink pictures to fit a web page, indirectly the quality of the image looks better. This means, it will be tougher to only read this tutorial and see all the changes it truly made.

\*\*Please make sure you have opened the image and duplicated the background layer. This will allow you to see the subtle changes of the sharpening methods.

To get to the first sharpen technique, Left click the "Filter" menu and move the mouse pointer down to the "Sharpen" menu. Move the mouse pointer to the sub-menu and Left click on the "Sharpen..." command.



You will notice that it makes very subtle changes in sharpening. A). is the original image, B). is the image using the sharpen filter.



So how can you make it look better? A great keyboard shortcut in Photoshop is CTRL-“F”. This uses the last filter used. Instead of going into the Filter, Sharpen, Sharpen command to run this again, use the CTRL-“F”. Use CTRL-“F” 2 times for this tutorial. Let’s now look at the changes. Remember A). is the original and B). is the sharpen filter and after 3 times (1 time manually and 2 times with the keyboard shortcut) it looks better.

You will notice it did a good job at sharpening the image. Once again the disadvantage is you can’t manually adjust the settings.

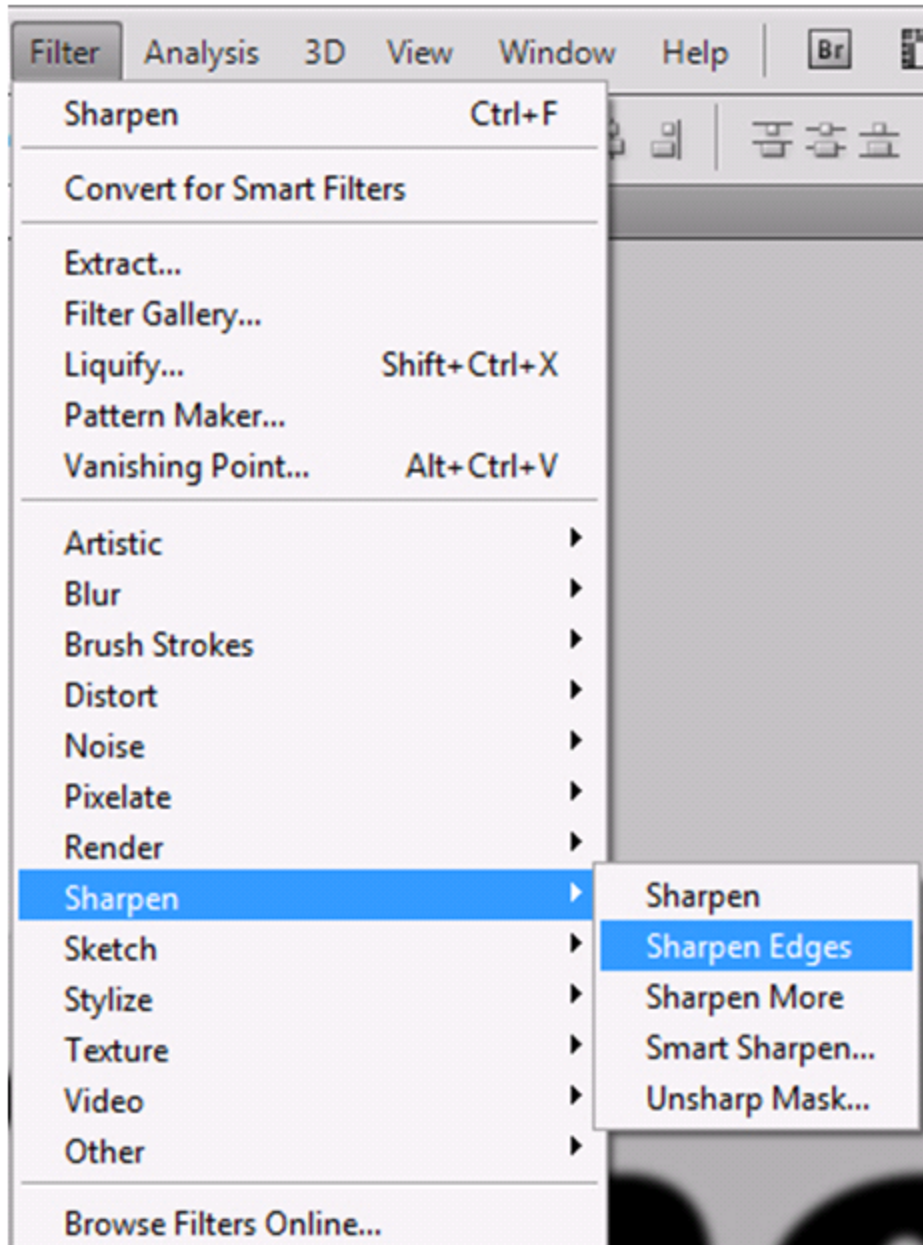


### **Technique #2 (Sharpen Edges):**

\*\*Close and re-open the image or use the history palette, so the image is blurred again.

The next sharpen technique is the sharpen edges filter. The difference between the sharpen filter and the sharpen edges filter is that this filter looks for large amounts of contrast already in the image. Edges will have a high contrast. This is how Photoshop determines the edges of the image and tries to sharpen the image on the edges.

Left click the “Filter” menu and move the mouse pointer to the “Sharpen” menu and move to the submenu and Left click the “Sharpen Edges...” command.



The part you want to look at is the edges. You will notice a subtle change on the edges. The A). is the original and B). is the filter with sharpen edges applied.



Let's apply this sharpen edges 3 more times (total of 4). Use the CTRL-"F" 3 times. You will notice an improvement over the original.

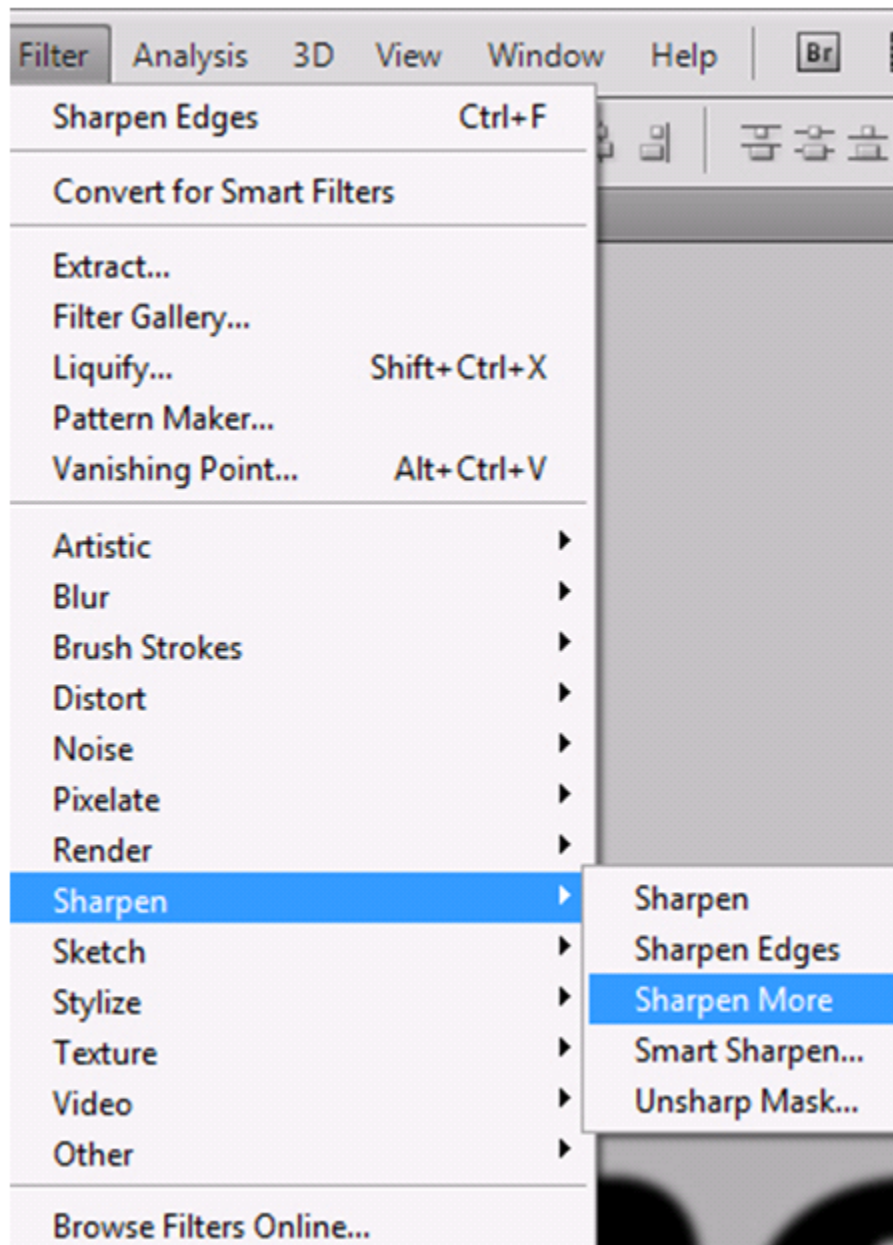


### **Technique #3 (Sharpen More):**

\*\*Close and re-open the image or use the history palette, so the image is blurred again.

The sharpen more filter is silly because it is the sharpen filter but increased settings. You still can't change any of the settings. If you used the CTRL-"F" to repeat the regular sharpen filter, you would be using the sharpen more filter.

To use, Left click the "Filter" menu and move the mouse pointer to the "Sharpen" menu and then Left click the "Sharpen More..." command in the submenu.



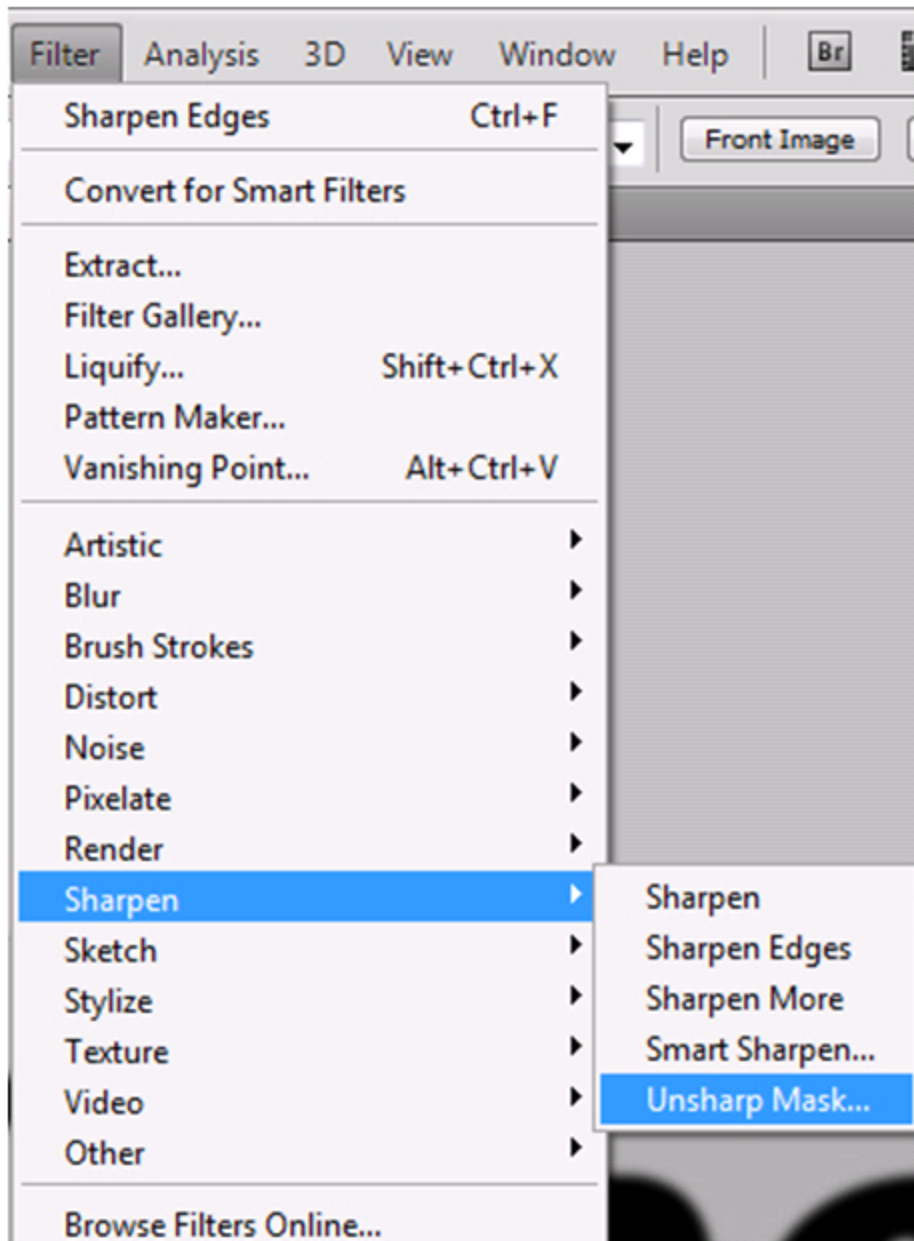
#### **Technique #4 (Unsharp Mask):**

\*\*Close and re-open the image or use the history palette, so the image is blurred again.

The final technique for this tutorial is one of the better sharpening tools in Photoshop. Some will debate that it is the best sharpening tool while others will name other sharpening tools. You may

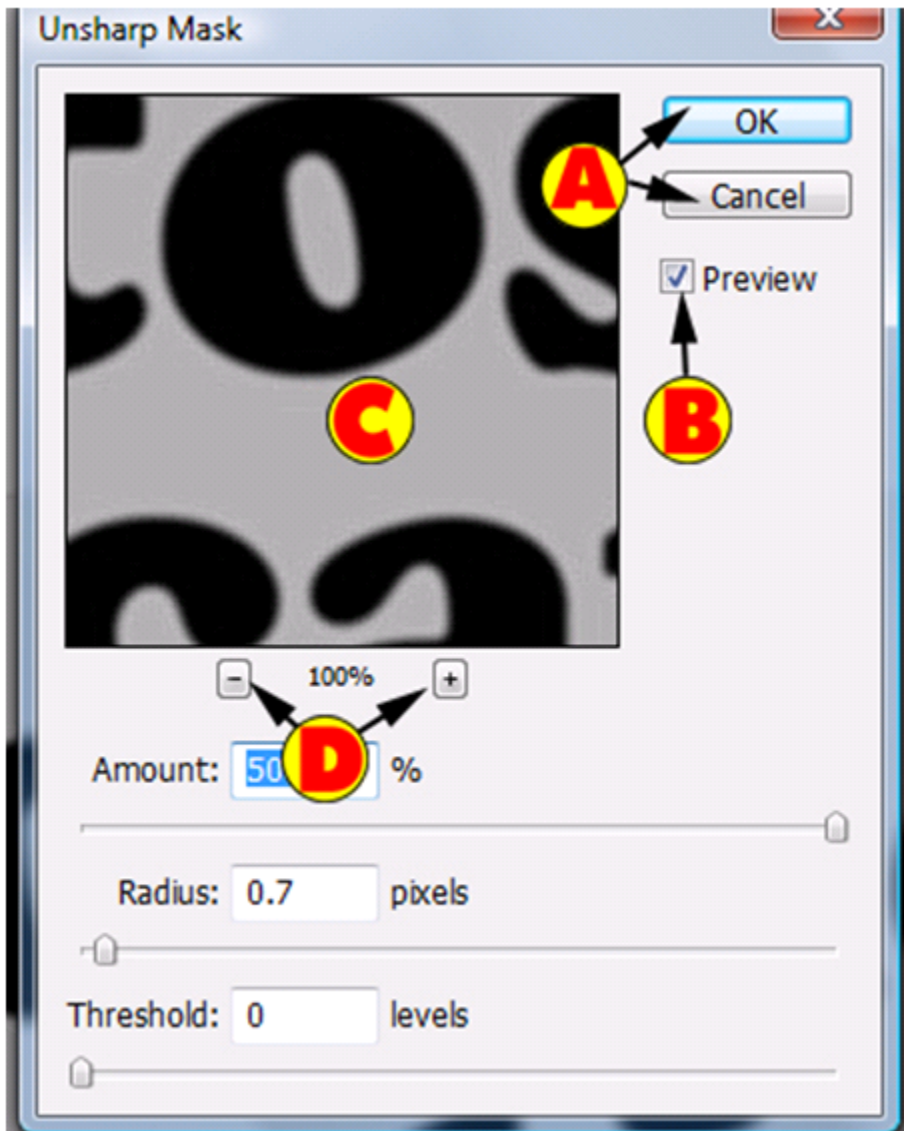
be thinking, but I do NOT want to Unsharp anything or else it will make it worse. Just trust us that it will make the image look better.

To use this tool, Left click on the “Filter” menu and move the mouse pointer down to the “Sharpen” menu. Now Left click the “Unsharp Mask...” in the submenu.



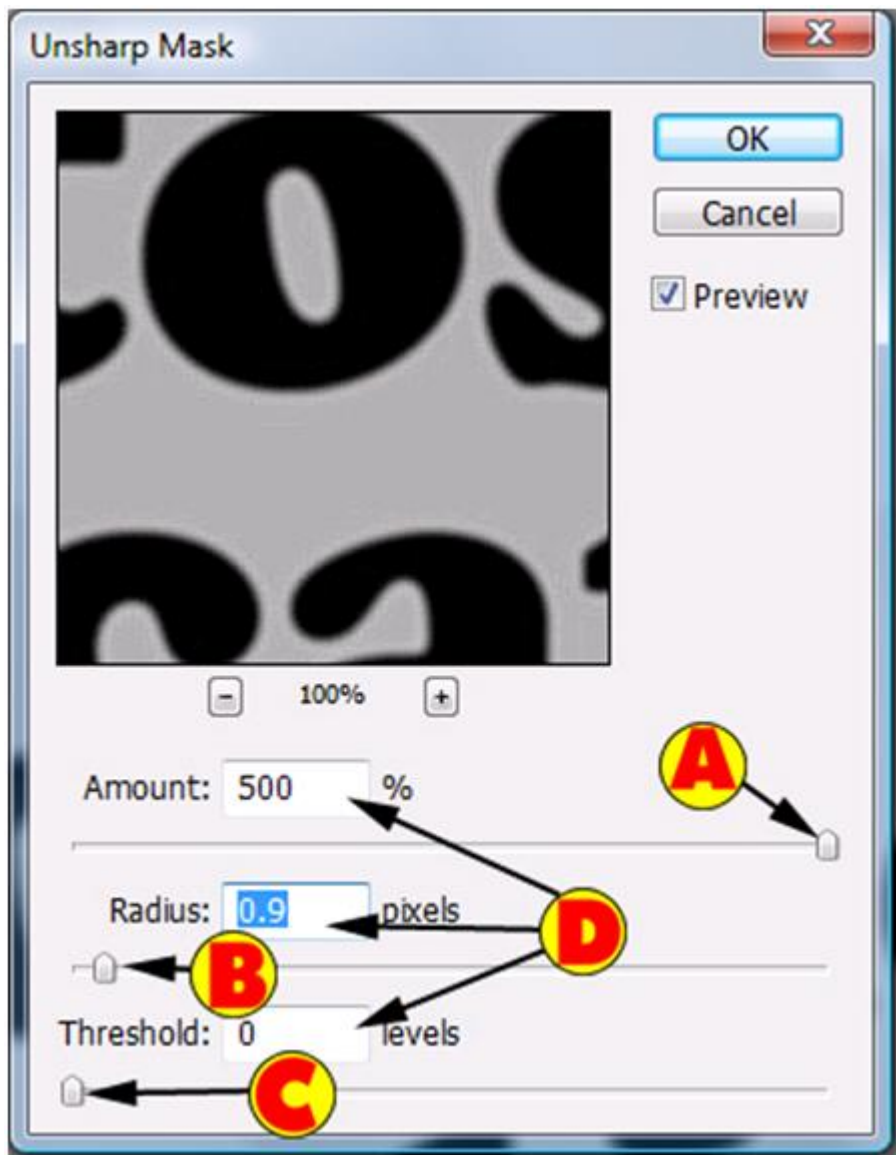
Here are some of the settings in the Unsharp Mask dialog box.

- A). Left click “OK” to apply and “Cancel” to disregard the changes.
- B). Make sure the “Preview” option has a check in the box, so you can see the changes in the image as you make the adjustments.
- C). Move your mouse pointer to this preview section. To move the image, HOLD down the Left mouse button and drag the mouse. Now release the Left mouse button. **Photoshop Tip** – If you want to see what the original looked like, HOLD down the Left mouse button (no need to move the mouse) and it will display the original. Release the Left mouse button when you would like to view it modified again.
- D). Left click either the “-“ or “+” to zoom in and out.



Let's talk about the rest of the options in this dialog box. For all slider bars, move your mouse pointer to the up arrow and HOLD down the Left mouse button and drag the mouse left or right. Release the Left mouse button when you are satisfied with the changes.

- A). The Amount is the amount of contrast you want added to the edge.
- B). The Radius is how much you want to increase the size of the edges.
- C). The Threshold is telling Photoshop how different the values of the brightness is before determining the edges.
- D). You can also enter a numeric value in these text boxes. Left click the box and enter, 500% for the amount, 0.9 pixels for the radius and 0 for the threshold for this tutorial.



So how should you set each setting for your image? First, most of the times you do NOT want to touch the threshold. The radius range works well usually well between 0.3 and 3.0. For the amount field, you will need to play around with to get it right. For this tutorial we increased the amount to 500, but normally you would be in the 50-150 range.

Let's look at the results of the unsharp mask filter. The left hand side A). is the original image and the right hand side of the image B). is using the unsharp mask. Because you have the flexibility to change the settings, you will see that it did an excellent job.



### **Sharpening Partial Image Only:**

There are 2 common easy ways to sharpen only a portion of the image. 1). You can select the portion that you want to sharpen and use the filter while that portion is selected. Anything inside the selection will be sharpened. 2). Use a sharpen tool in Photoshop and then mask the areas you want to hide. This means you will need a copy of the blurred image below the sharpened image layer. Just create a mask on the sharpened layer and you can get some good results.

Here is a mask that we created to enhance a portion of this text in this tutorial. We used a black to white (left to right) gradient. This allows us to go from the original blurred image (left side) to a sharpened image (right side).

# Photoshop Education

## Real Life Examples:

As you can see, we used text as the image. Here is some before and after images of our cat (Destiny). Notice the blur on top of the head and back of the cat.



Here is the sharpened image that we did in Photoshop. If you compare the 2, you will see the difference. The first image was a bit out of focus and after we applied the sharpening (unsharp mask), it looks much better.



Even though we scaled this down (when you scale down an image it looks better), here is the comparison.



### **Tips And Tricks:**

As we go through the next few tutorials, we will be talking about other techniques that allow you to sharpen an image. Remember, not 1 tool is perfect for a specific sharpening. Remember, we already discussed back in the [Smudge, Sharpen, Blur Tools](#) tutorial about the sharpening tool. We use that tool a lot to enhance a specific small area of a photo.

As you use the sharpen, sharpen edges or even unsharp mask, if you repeat the process or increase certain settings, it can cause you problems. You need to be VERY careful at watching the subtle changes in sharpening. Here is an example of using the sharpen edges 10 times. It did not take much to add too much sharpening.



Remember if you have a picture with motion blur or extremely out of focus, Photoshop will NOT usually make those images look excellent. Sometimes you can make them look good, but not great.

As we stated in the sharpening partial image section, you can adjust only certain areas of the image. Sometimes, a specific sharpening technique works wonders in certain areas. What we do is make duplicate copies of the image. Select a specific layer and adjust it by using a certain technique and then mask out the areas that it did not improve. Then for the layer below it, we may use a different technique for the whole image and mask out certain areas and repeat the process. You will begin to learn what tools in Photoshop will fix certain areas. Once you understand how to correct these types of pictures, you just stack the layers and adjust only specific parts of the image with certain tools.

Always make a duplicate copy of the original picture when you are sharpening, because there are very subtle changes and it is common for us to compare the original full image to the sharpened layer.

When you are sharpening an image, you are sharpening **ONLY** that layer.

We will have a course in the future about how to process RAW images. A RAW image on a camera has not been enhanced by the camera. Camera's usually do a good job at enhancing your image before it stores the file, but if you leave it as a RAW mode, you will get better results when sharpening or enhancing an image in Photoshop.