



Image Control Techniques With Scanned Images

By Bernadette Griffith,
Director of Educational Services, Generations® Products





Scanned images are a challenge but with **Generations®** software they are more than manageable. If you are scanning color images, your scanner will almost always see more colors than you want in an embroidered design. With **Generations®** you can control the colors and select only the colors that you want in your designs.

In this lesson we will cover how to control the colors a couple of different ways using the tools in the **Generations®** program. We will not cover scanner software since there are so many different scanners on the market that it would be almost impossible.

We will start with a simple scanned image like this apple. The image is a pretty basic but allows us to practice using the tools in the program and create a nice design.

Next, take a deep breath and say, "**This is easy!**" You are now ready to begin

1. Open your **Generations®** program using the  icon from your desktop or from the **Start** menu.
2. Click on the **Insert Image**  icon located on the **Create toolbar** and locate the folder where you have downloaded the lesson and image files.
3. From the **Insert Image** box, click on the **Apple.jpg** image to insert this file into **Image Processing**.
4. In the **Image Processing, Generations®** automatically detects that this is a scanned image. We are going to change that setting to **Simple Artwork** by clicking on the button next to that option.

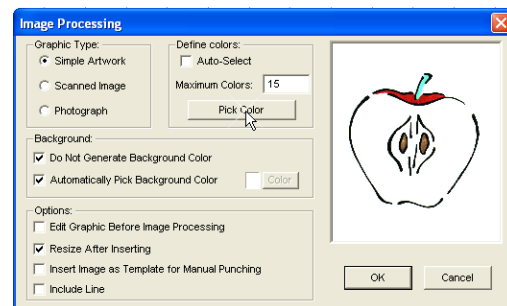




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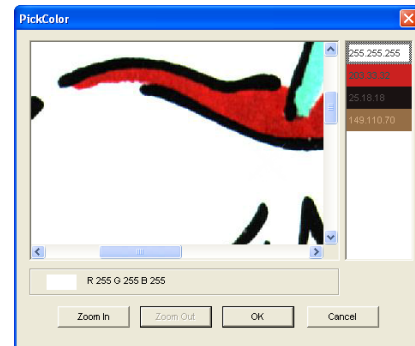
- Control the number of colors that will be generated in the design by selecting the colors manually. **Remove the check mark** next to **Auto-Select** in the **Define Colors** section.

- Click on the **Pick Color button** and the Pick Color box opens displaying the image.

If your screen is white use the slider bars on the sides and bottom to move the image into view, or use the Zoom Out button.

- In the **Pick Color box**, you can use the **eyedropper** tool to select only the colors you want in your image by **left clicking** on the color.

If you select a color in error, left click on the color and press the delete key to remove it from the selection.



- In this image, we need to select the **white background**, the **black outline**, the **red of the apple** and the **brown seeds**.

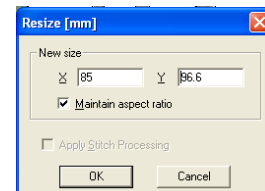
The background is considered a color and needs to be selected as well.


- Click on the **OK** button when you have selected the desired colors and you will return to the **Image Processing** box. In the **Define colors** box, you will see that the number has gone from 15 to 4.

- Click on **OK** to insert the image into **Generations®**.

- Resize the image before inserting into the program.

You will note that scanned images are generally larger then clipart images that would be inserted into the program.



- After inserting the image in the program, **generate**  to create the stitches in the design.

Note that the design has only the colors that were selected and not all the shades of red, brown or black actually in the image.

From here you can use the editing tools to complete the outline, change fills and clean up some small areas in the design.


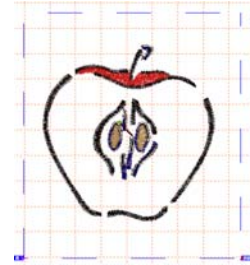
- Click on the **Hide Image**  icon to hide the original background image on the page and make working with the design easier.



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2. **Right click** on the background around the outside of the apple. The area will be surrounded with blue flashing lines.

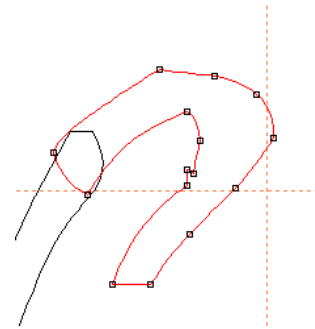


3. **Press the [CTRL] + [DEL] keys at the same time.** This will remove the background area that is not needed in the design.

4. **Right click** on the black outline of the top of the apple stem to select it. The area will be surrounded by blue flashing lines showing that it is selected.

5. Click on the **View Outline**  icon and the area will be shaded with crosshatch shading.

6. Click on the **Edit Mode**  icon. A red line will surround the area with small nodes around it.



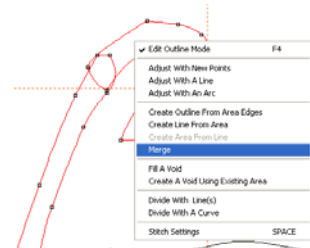
7. **Left click and hold the left mouse button in** as you drag one of the nodes until it overlaps the next area of the stem as shown:

The two sections of the stem are overlapped and we need to merge them together to form one section.

1. With the first section of the stem still selected with red lines, **right click** on the other section of the stem.

Both sections will be selected with the red lines and the nodes.

2. **Right Click** in the middle of one of the selected areas and the **editing menu** will open.



3. From the menu, select **Merge** and the two areas will become one area.

4. Generate and the two areas are now one area.

*You can adjust the lines if needed by **left clicking** on the line and moving it to make a straight or pointed section, or **right clicking** on the line to make a curved or rounded section.*



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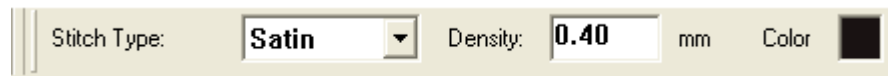
You can select the other areas of the outline for the apple and merge them together following the steps above to complete the outline.

Lets clean this up a little bit more.

1. **Left click** on the **black color chip** located on the left hand side of the window to select the black outline(s) at once.



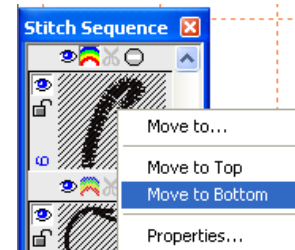
2. Change the stitch type of the black outline to **satın** using the **Quick Bar** and **generate** to create new stitches in the outline.



3. Click on the **Stitch Sequence**  icon.

4. **Left Click on the black color chip** on the left side of the window to select the black outline(s).

5. **Right click** on one of the shaded areas in the **Stitch Sequence** strip and select the **Move to the Bottom** option. This will place the black outline to stitch last in the stitching order.



There may also be a couple of stray color pieces in the design since it was a scanned image.

Look through the **Stitch Sequence** strip to see if there are small areas that are not needed in the design. If there are you can clean these up by **left clicking** on the cell that they are located in on the Stitch Sequence strip, press and hold the **[CTRL]** and **left click** on any additional pieces that you wish to remove.

When you have them all selected, press the **[CTRL]+[DEL]** keys to remove them from the designs.

You can continue to edit this image, changing colors and fill types as desired. Remember to generate to make all changes take effect.

Now you can add lettering or continue to edit to get the design you desire.

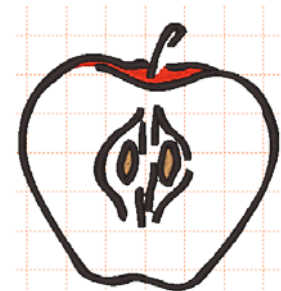






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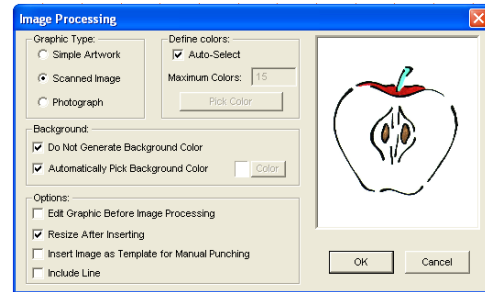
Lets clean up this scanned image another way.

Cleaning up scanned images in the Cartoon Editor uses the same basic principals used in the Image processing.

1. Click on the **New File**  icon and open a blank design file.
2. Click on the **Insert Image**  icon located on the **Create toolbar** and locate the folder where you have downloaded the lesson and image files.

3. From the **Insert Image** box click on the **Apple.jpg** image to insert it into the **Image Processing**.

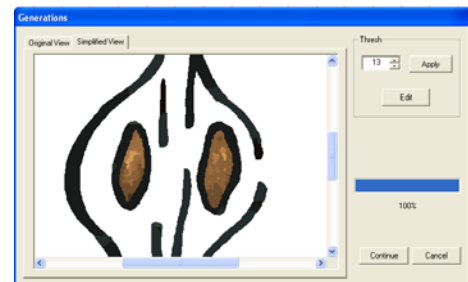
4. In the **Image Processing**, **Generations®** automatically detects that this is a scanned image. Click on the **OK** button and the program will open the Cartoon Edit portion of the program.



5. The program will begin the process of finding the best percentage of color saturation in each area. Depending on the speed of your computer, size and complexity of the image, this process may take a few minutes to complete.

6. When the color recognition is finished, the program will display the colors in the image in the **Simplified View screen**. You can compare the original image with the Simplified View by clicking on the tabs at the top of the box.

If you feel that the image should have less color, change the Thresh to a lower number. If you want more color areas recognized, change the Thresh a higher number and click on apply to start the color recognition process over.



For this example, we will use the Cartoon Editor to control the colors better.

7. Click on the **Edit button** to open the **Cartoon Editor**.

*In the **Cartoon Editor**, the color chips display all the colors in the apple that the program was able to see.*



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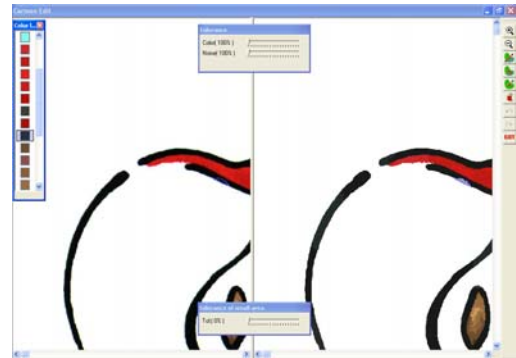
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On the left side of the screen is the graphic image that is being inserted into the program.

On the right side is the image that will show the editing as it is completed. This is the image that the design will be generated from when we insert this back into the program.

On the very right of the window there are the tools needed to clean up the scanned image.



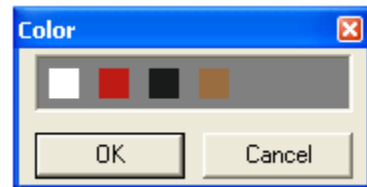
Please note that this Cartoon Editor is similar to the Photo editor and the tools behave in the same fashion in both editors. There is a complete Photo section in the manual that covers many of these tools in greater detail. For this lesson we only need a few of the tools.

1. To select the desired colors for the design, click on the **Select Image Colors**



icon, located on the toolbar on the right.

2. A small box will open. **Left** click on the **colors** in the image that you want. You may click on either image to select the colors for the design.



3. When have selected the **four colors** in this design, click on the **OK** button and note that the image on the right has changed to reflect the editing that was just finished. The image on the left remains the same.

4. **Left click** on one of the **color chips** and the areas of that color will fill with crosshatch shading showing that it is selected.



5. **Right click** on a section on either image and that area will fill with the crosshatch shading showing that it is selected.

6. Remember those two small areas that were in the apple that we edited using the Simple Image and color selection? They are also in this image. To locate them and remove them from the image, use the **Tolerance of Small Area** slider box to select them in the image.



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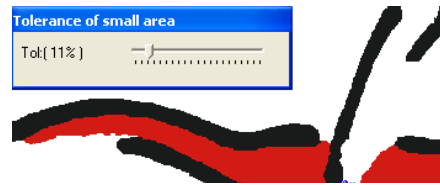
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- Slide the bar slightly to the right and the small areas will fill with crosshatch shading.



- Click on the **Merge to Closest Area** icon from the tool bar on the right. This will merge these two small areas to the area next to them and remove them from the design.



- Right click on the white background to select that area for editing. The area will be filled with a cross hatched shading showing that it is selected.



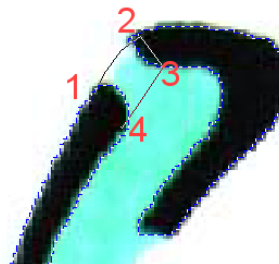
- To create a section for the stem, we will use the **Divide Area With a Line**



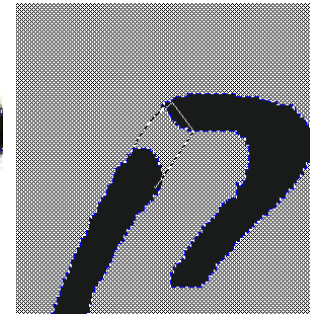
tool from the tool bar. Click on that icon and begin to divide the white area between the two stem sections with a line with a left click only.

You can place multiple clicks on to make the curve but the division must start outside of the white area and finish outside of the white area.

- Use either the right or left side image screen to make the division. Place the **first left click** inside the lower black stem.



- Then **left click** in the black section of the upper curved stem portion.



- Drag the line across the bottom** of the upper stem portion and left click to place a point on the other corner.
- Drag the line back down** to the lower black stem portion. Place a final **left click**.
- Press **[Enter]** to make the division take effect. Then press the **[ESC]** key on the keyboard to deactivate the **Divide with a Line tool**.

If there is not a division in the area, start again making sure that the line starts outside of the white selected area and ends outside of the white selected area. In this case we needed to start in the black sections of the stem to make the division.



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6. The division should look like this on your screen.

Note that in the white area, there is now a blue/green section from the original stem.



***This is an important concept to note.** The program has made the division based on the colors that are available in the original image. If the blue/green stem had not been in a color in the original image, we would not have been able to make this division here.*

Try dividing another area of the white background and watch what happens. You create a line using the Divide with a Line tool, but when you press enter, no division takes place.


That is because in the original image, there is no color there for the program to create an area other than the white background. But don't worry, you can still edit in the Generations® program after we insert the image.

Now let's merge that blue/green stem section to the black stem sections in the Cartoon Editor.

1. Right click on the blue/green section of the stem that was created.
2. **Press and hold the [CTRL] key** on the keyboard. On the **Right side of the screen, right click** on the black stem pieces.
3. All three sections will be filled with the cross hatched shading. They look like they are one piece, but they are still three separate pieces.

4. Click on the Merge Selected  icon and the three areas will become one black stem.



5. Now that we have selected the colors and merged the stems sections, click on the **Exit**  button and you will be taken back to the original screen in the Cartoon Edit portion of the program.
6. Click on the **Continue button** and the image will be inserted into the **Generations®** program.

7. Resize the image to **Y= 98** and generate to place the stitches in the design.



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8. Edit the image as explained in the first section of this lesson.

You can edit this image in any fashion that you want to in the program and create a nice design.

Tryout some of the other editing tools in the program to copy, pasted divide and more.

Are you ready to try scanning in an image?

While we cannot teach you to use your scanner software, we can show you the basics on scanning.

The last page of this lesson contains the apple image used in the lessons. If you printed the lessons in a normal or every day print setting, reprint the last page only on a high quality print setting and use it to practice scanning in color.

There are some basic scanning tips that you can follow no matter what scanner model you have.

- For color images, scan at the lowest DPI that will give you the detail in your design that you need. If your scanner can scan at 75 DPI, start there and increase in small increments until you have the detail you want for your design.
- For images that are black and white line images, scan them at a black and white setting and not grayscale. If your images are done in blue or mixed colors but are line images, select the black and white setting on your scanner, unless you need the colors in the lines for design purposes.
- Most scanners have a preview option that will allow you to see what the scanned image will look like before scanning into the software. Use this option to select the settings that you need and scan the image into **Generations®** program.
- You know that image that you have always wanted to turn into embroidery? Unless it is a simple image, that is not the one to use to start learning both the scanner and the tools in Generations®. Remember you have to learn two programs instead of just one when scanning in images.
- Please respect the copyright laws when scanning images and creating embroidery designs.



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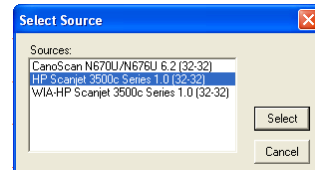
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Now we are ready to practice scanning a color image into the **Generations®** program.

1. Place the printed image of the apple on the scanner.
2. Open the Generations® program and click on **File** and then **Select TWAIN Source**.

3. A small window will open showing the scanning and possibly any digital camera TWAIN drivers installed on your computer.



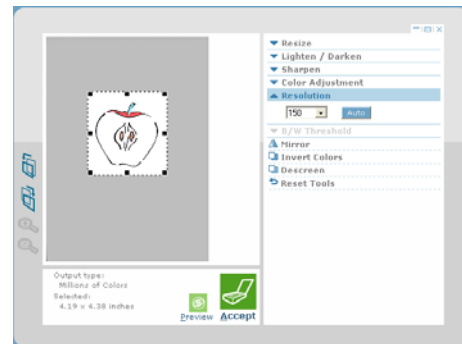
4. Select your scanner **TWAIN** driver and click OK.

5. Click on the **Acquire Image from TWAIN Source**  icon and your scanner software will open the program.

Your scanner screen may look different than mine depending on the brand of scanner you have.

6. Select only the area needed for the design to be scanned.

7. Set your scanner to scan a color image at the **lowest DPI or resolution available**. Check the scan image to see that you have the detail you need in the image using the **preview feature** in your scanner software.



8. Change the **DPI to a higher** setting if the detail desired for the design is not being seen by your scanner and preview the image again.

Remember scanned images are generally larger files than clipart images. And the higher the DPI setting the larger and more colorful the image will be when scanned.

9. When you have determined the **DPI needed**, scan your image into the **Generations®** program. The status bar will display on your screen from your scanner software.

Right now the scanner software is in charge.

If you are not sure where these setting are or how to use the setting for your scanner program, please refer to the manual or help files that came with your scanner. In your scanner manual or help files, they



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may explain, on the newer scanner how to control colors and image properties there as well.

10. The image will be inserted into the **Image Processing** and you may select which the method you would like to use to edit the colors and generated the design.

You can insert more than one scanned image into the same design window.

Try playing with your scanner selection and scanning in only half the apple to and add an apple slice to the design.

There is no rule that you have to scan the whole image into the program.



Want to try your hand scanning a black and white image.


Draw or trace an image using and pencil.

After you have traced it with the pencil, take a black or blue marker and draw carefully over the lines.

The marker line should not be too thin so you will want to find a marker with a 1.0mm point or 1.5mm point. Scrapbook markers are great for this purpose and you can find these at the local craft store.

You can use some of the pattern books for embroidery, iron on transfers or painting. There are many things that can be used to create an embroidery design for **personal** use.

For our example, we are using a drawing by Jan Way. This image can be found in the **Angel Patch Collection** published by Grace Productions and is available at the local craft stores in the wood painting pattern section.

1. Place the line art image on the scanner.
2. Open the Generations® program and click on the **Acquire Image from TWAIN Source**  icon and your scanner software will open the program. *Your scanner screen may look different than mine depending on the brand of scanner you have.*
3. Select only the area needed for the design to be scanned.
4. Set your scanner to scan a black and white image or line art image.

All screen shots for this project are from the **Generations®** software program.

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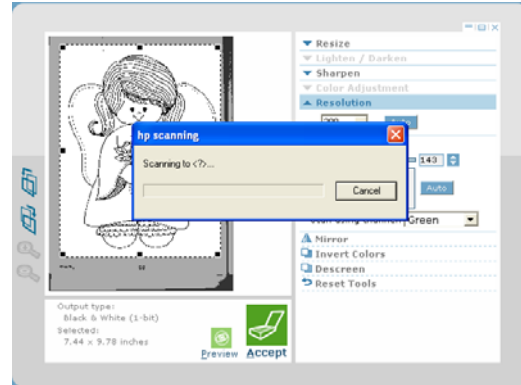
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5. You can start with a higher DPI for black and white images. Try a setting of 300 DPI and see if you can capture all the detail you need for this image.

6. Use the preview feature in your software to preview what the scanner will see before scanning into the program.

7. Change the **DPI to a higher** setting if the detail desired for the design is not being seen by your scanner and preview the image again.

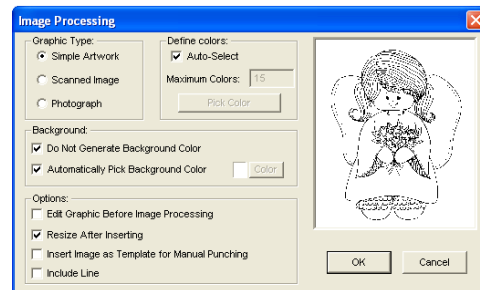


Remember scanned images are generally larger files than clipart images. And the higher the DPI setting the larger the image will be when scanned.

8. When you have determined the **DPI needed**, scan your image into the **Generations®** program. The status bar will display on your screen from your scanner software.

Note: Some scanner software programs have a threshold option similar to the thresh settings in the Generations® program. This is a nice option to use to allow you to scan an image a lower resolution (smaller file size) and still allow you get all the detail you need on the black and white image.

9. The image will be inserted into the image processing but will not be recognized as a scanned image. It will be selected as a **Simple Artwork** image since it is only black and white.



10. Click on the **OK button** and insert the image into the **Generations®** program.

After clicking OK to insert the image, it may take a bit longer than a regular clipart image would due to the size of the image file. Don't worry; this is normal for large images.

11. **Resize** the image but no so small that the program will not be able to recognize the areas.



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Remember the image is line art. The image used here was inserted into the program at an approximate size of 500+millimeters. It was resized to 300 millimeters so that the lines will be wide enough for the program to see and generate.

12. **Generate** to place stitches in the design.
13. Check on the **stitch sequence strip** for any small areas that have been generated that need cleaned up and delete them using the instructions from the first part of this lesson.
14. Edit the design lines as needed to smooth them or change the shape of them.
15. **Resize** the design using the resizing options in the program to the desired size and **generate** to place new stitches in the design.

You can add lettering and edit the image as needed or desired. The image used in this example, was used to create a redwork design, but we could have filled the design with stitches by right clicking on one of the white areas and placing stitching in the areas.

*Once you get the knack of your scanner and the settings needed to insert good color or black and white images, you'll find that there is no limit to the designs you can create in the **Generations®** software.*



