

Troubleshooting & Tips in Scanning

Experience in scanning is your best teacher. By experimenting with various scanner settings and techniques you will learn how to produce excellent quality images and optimize your scanning time.



[Troubleshooting Guide](#)



[Tips for Scanning](#)



[After scanning, I want to...](#)

Limit the image size when possible

Scanning a small image requires much less hard disk space and processing time than a large one. Note the predicted file size in KB (kilobytes) and compare it to your available hard disk space. If the file produced for the image you scan will be larger than the available disk space, your scan will be faulty. To control file size, make sure to select only the area you want to keep before you start scanning. Here are some other things you might try to limit the file size:

1. If your scanner supports sharpening, try scanning at a lower resolution with sharpening.
2. Save True Color or Grayscale images as JPEG (*.JPG) files.





Note: Although PhotoImpact reads bitmap and vector files, you can only save files in a bitmap format.

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[Other scanning tips](#)

Scan in the same color mode as the output device

For most accurate reproduction, scan your images using the same data type as that of the final intended output device. Here are some examples:

- **OCR Text** Black and white.
-  **Line art** Black and white.
-  **Laser printer** Grayscale.
-  **Monitor 256/True color** (depending on the video driver).
-  **Post production** True color (CMYK).

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[Other scanning tips](#)

Scan good quality images and text

You always lose some information when you scan. But by carefully choosing your images and settings, you can minimize problems. For example, don't try to scan extremely light or dark images or those with very low contrast.

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Scan photographs instead of printed pictures

Images from magazines or books are composed of tiny dots. The typical resolution for color typesetting is 180 or 300 dpi, so scanning at higher resolutions produces no better results. As a matter of fact, they may even be worse. The scanner often sees white dots in between the printed color dots. To preserve accurate toning details, scan photographs instead of printed materials.

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Highest resolution is not always the best selection

High resolution images take enormous amounts of disk space. If the image is scanned at higher resolution than what it is displayed at, that does not mean the result is going to be better. The standard color typesetting resolution is 180 dpi and a standard photograph ranges from 400 to 600 dpi. Similarly, exceeding the resolution capabilities of your output device or monitor will result to a no gain image quality. A standard VGA monitor display resolution in Windows is 72 dpi (Windows large fonts) or 96 dpi (Windows small fonts).

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Experiment with different settings

Scan images using different settings. Compare the results on your screen to select the one that suits your needs. PhotoImpact has many functions to help you enhance your scanned images until you are satisfied with the results.

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If you have trouble in getting your scanner to work in PhotoImpact...

When using PhotoImpact to acquire an image, make sure that your TWAIN driver, (provided by the scanner vendor), is correctly installed. This TWAIN driver sends the acquire command from the application to the scanner and processes scan data from the scanner to be given to the application. Also, you need to select the data source first before starting the scanning process. There may be more than one device attached to your computer and you need to specify which one to use. These steps will help you get started.

1. Check if the scanner power switch is on.
2. Check if there are any loose connections between your computer and the scanner. Try scanning again.
3. If it still doesn't work, choose "Acquire: Select Source" from PhotoImpact's File menu.
4. Check if your scanner's model name is on the data source list. If not, install the TWAIN driver to Windows 95 and then repeat step 3 to check if it was installed correctly. (If you still can't find your scanner's model name, please contact your scanner vendor for more information on how to correctly install the TWAIN driver in Windows 95.)
5. From the File menu, choose "Acquire: Image."
6. Specify the destination for the acquired image, calibration scheme to apply, and select the post processing options to apply in acquiring.
7. Click Acquire to start scanning.

{button ,AL("Reference1",0,"","troub")} [Other common scanning problems](#)

If you're getting a "TWAIN error" message...

There are three systems that interact with each other when you scan an image: the TWAIN-compatible input device, the TWAIN driver, and the TWAIN-compatible application. Each has its own set of conditions that must be met before you can successfully scan an image. Most of the time the TWAIN-driver is not properly installed and this is what's causing the problem. Try the following steps first before contacting your vendor.

1. Check if the scanner power switch is on.
2. Check the connection between your computer and the scanner and then try scanning again.
3. From the File menu, choose "Acquire: Select Source" to see if your data source name is listed. If yes, select it. Otherwise, install your TWAIN driver and try scanning again.
4. If it still doesn't work, please contact your scanner vendor for information on how to install the TWAIN driver in Windows 95 or an update and how to avoid hardware conflict with the scanner interface adapter.

{button ,AL("Reference1",0,"","troub")} [Other common scanning problems](#)

If your scanned image quality is poor and filled with horizontal lines...

Chances are your scanner is not calibrated. Calibration is the process of correcting the scanner to account for differences between the monitor, scanner, and the printer. Try the following:



Check your scanner calibration test image and software routines that are provided by most scanner vendors. Make sure that this is correctly set.



For hand-held scanners, try scanning slower and steadier. Make sure that the image to scan is placed on a flat surface.


{button ,AL("Reference1",0,"","troub")} [Other common scanning problems](#)


If your scanned image has a lot of spots...




Images that require a lot of colors need to be scanned at a higher resolution to blend colors more smoothly.

1. Check your scanner resolution. Your settings may be low for your output device.
2. Check your monitor display settings. If you are at 256-Color mode settings, change it to HiColor mode(16-bit) or True Color mode (24-bit) for 16.7 million colors.

 [How to calculate resolution for output devices](#)

 [How much resolution is enough](#)

 [Other common scanning problems](#)

If your scanned image's colors are incorrect...



Most desktop color scanners scan images by using red, green, and blue light sources, but most color printers generate images by using cyan, yellow, magenta, and black inks. As the image data is translated from one device to another, the resulting colors may shift and become unacceptable. Even when working with monochrome images, details visible in the shadows and highlights may be lost when printed out. Check your scanner calibration test image and software routines that are provided by most scanner vendors. Make sure that you have the correct settings.

{button ,AL("Reference1",0,"","troub")} [Other common scanning problems](#)

If your scanned image has jagged edges and lacks details...

Scanning at too low resolutions commonly cause this problem. Since scanning loses information during the process, lower resolution settings will detect even less image data. Check the resolution settings, they may need to be set higher.



[How to calculate resolution for output devices](#)



[How much resolution is enough](#)

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If your scanned image display is too large or too small on the screen...

Images displayed on the screen are related to the monitor's resolution settings. To change your display resolution:

1. Right click on an empty space on your desktop.
2. From the Windows Display Properties dialog box, select the Settings tab.
3. From the Desktop area, drag the slider to higher resolution for small sized images or lower resolution for larger ones.



[How to calculate resolution for output devices](#)









[How much resolution is enough](#)

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If your scanned image has patterns...



They are caused by scanning a previously halftoned image or changing the size of a scanned image in an application. Try the following suggestions:

-  Avoid sharpening when halftoning.
-  Scan halftone images in the right direction to avoid rotating after scanning.
-  Select halftone diffusion to scan previously halftoned images when using a desktop printer as an output device.
-  Lower the resolution by a small amount when scanning grayscale or color images.
-  Place one or more sheet protectors on the scanner glass when scanning original artwork. Put the image to scan face down on top of the sheet protectors.
-  Try using scaling in your scanner to change the image size before bringing it into an application.

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[Other common scanning problems](#)

If you're scanning an image that's taking too long...

The scanning process time depends on the produced file size of the image being scanned, scanner settings, and your computer configuration such as the RAM, CPU, hard drive, and bus speed. Try the following steps to control the speed without changing your computer configuration:

1. Check the file size of the pre-scanned image. Larger files take longer processing time.
2. Select only the portion needed.
3. Choose the best resolution settings.



[Limit the image size when possible](#)



[How to calculate resolution for output devices](#)







[How much resolution is enough](#)

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How much resolution is enough

When scanning, the relationship between your scanner and the output device to use is important in determining the resolution. The following suggestions may be helpful in deciding:

-  Scan for the intended output device. For monitors, use 72 dpi (Windows large fonts)-96 dpi (Windows small fonts), laser printers 300-600 dpi, and photo-quality 1200-2400 dpi.
-  Scan at higher resolution (2x the original) when doing extensive image processing to work with as much information as possible.
-  Scan at higher resolution when enlarging the image to scan.
-  Scan at 1.5 to 2x the intended halftone screen's lines per inch when sending the file to a post production house to create halftones.

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[Other scanning tips](#)

If your scanned image is too light or too dark...



1. Check if your scanner have a brightness control feature. If yes, use it to adjust the brightness. If none or if after adjusting you're still not satisfied with the result, continue with the next step.
2. Check your scanner calibration to adjust the color differences between your scanner and the output devices.
3. Use the scanner calibration test image and software routines that are provided by most scanner vendors.

{button ,AL("Reference1",0,"","troub")} [Other common scanning problems](#)

How to calculate the resolution for output devices

The relationship between your scanner and output device is important in choosing the right resolution. Scanners reproduce grayscale and color variations by increasing the amount of data for each pixel (or dot) in a picture. Printers however, simulate grayscale and color variations by arranging dots into larger ones called halftone cells. Desktop laser printers generate 53 halftone cells per inch, whereas high-resolution image setters print up to 133 halftone cells per inch. While printer dots are typically measured in dots per inch (dpi), halftone cells are measured in lines per inch (lpi). Use this formula in calculating the resolution to use in scanning grayscale and color images for your output device.

1. Multiply the lpi (lines per inch) setting of your output device by one and a half.
2. Set the result to be the dpi setting for the scanner. For example, if your final output device is a desktop laser printer, that will be 53×1.5 to get the dpi setting for the scanner. In this example, the appropriate dpi is 80. (Round off decimals.)

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[Other scanning tips](#)

Benefits of a 30-bit internal scanner (vs. 24-bit)

Some scanners provide a 30-bit scanning capability for color images, and 10-bit scanning capability for grayscale images. This feature allows you to capture additional data of the image to scan.



The additional data captured results in better image quality. However, most software applications, including PhotoImpact, support only 24-bit files.



Shadow detail is captured better. This is useful when scanning darker images. It also improves the results when the original image is poorly exposed.



Gaps resulting from the tone mapping process are minimized.


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[Other scanning tips](#)

In scanning, the tones of the original image are mapped to the modified tones in the scanned image. When the range of input tones is smaller than the output tones, this results in gaps in mapping of the scanned image. Gaps cause color problems in the scanned image and are most apparent in grayscale images. A 30-bit internal scanner's range of input tones exceeds the range of output tones, thus eliminating gaps in the mapping process, resulting in more continuous and high-resolution tones in the scanned image.

Create an additional area around the scanned image

After acquiring an image, you may want to create additional spaces for frames, shadows, or other information. Here's how:

1. From the Format menu, choose "Frame & Shadow." 
2. Choose a color or texture for the frame and set its width.
3. Choose a color and direction for the shadow.
4. Increase the x offset to make the shadow larger horizontally; reduce to make the shadow smaller.
5. Increase the y offset to make the shadow larger vertically; reduce to make the shadow smaller.
6. Choose a color and size for the canvas.
7. Click OK.

PhotoImpact resizes the base image to include the added items.

Note: For further information, please refer to the PhotoImpact On-line Help or your manual.



{button ,AL("Reference2",0,"","troub")} [Other post-scanning procedures](#)

Change the background/foreground color of my scanned image

When changing colors in your scanned image, please do the following:

1. From the Tool panel, select the "Magic Wand."
2. Select the area where the color is to be changed. If the selected area to change is too complex, select a different area with less color and then right click to choose "Invert."
3. Press *Ctrl+F* to select the color as replacement.

Note: For further information about changing colors, please refer to the PhotoImpact On-line Help or your manual.

{button ,AL("Reference2",0,"","troub")} [Other post-scanning procedures](#)

Paint some colors on my Black & White / Grayscale scanned image

There is a way of putting some colors on a Black & White/Grayscale image. Here's how:

1. Open the image in the PhotoImpact workspace.
2. Convert your Black & White/Grayscale image into an RGB true color format. This allows your file to support and contain colors.
3. After conversion, you will be able to colorize your image.

Note: For further information about changing colors, please refer to the PhotoImpact On-line Help or your manual.

{button ,AL("Reference2",0,"","troub")} [Other post-scanning procedures](#)

Join two images

When you can't fit your entire image in one scanning, consider splitting the image with overlapping portions and then joining them by following these steps:

1. Make sure both images you want to join are grayscale or RGB true color images and open in the PhotoImpact workspace.
2. Select one of the images to join. (It doesn't matter which.)
3. From the Edit menu, choose "Stitch."
4. Select the other image for stitching.
5. Drag the images so that they are in the right order.
6. Select the Manually option and check "Auto fine tune."
7. Press the Shift key and click on a reference point in the original image.
8. Press the Shift key and click on a point in the other image that should be close to the point you clicked on in step 7.
9. Click OK.



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[Other post-scanning procedures](#)












If your image to scan is too big for your scanner










When scanning an image that doesn't fit in your scanner, try splitting it into portions and then use PhotoImpact to join them together.




Join two images


{button ,AL("Reference1",0,"","troub")} [Other common scanning problems](#)


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