

How to Use PhotoLib™ Images

Screen Presentations and Multimedia

PhotoLib™ images can easily be used as part of a business presentation or multimedia. PhotoLib™ images make great backgrounds for presentations or may be added to illustrate a specific point. Simply import the image into a presentation or multimedia program.

- Locate the image using Aldus Fetch.
- If your software supports JPEG format copy the file to your hard disk. You can use Fetch for this ("Copy original"). Then import the file into your application.
- If your software does not support JPEG format convert the file with Picture Decompressor. Alternatively you can copy to the Clipboard and paste into your application.

Calibrating your monitor

For screen presentations or multimedia, the monitor screen is your final output. For the PhotoLib™ images to look their best, it is important to calibrate your monitor to accurately represent color on screen. In some cases, calibration may be done by a utility or a special piece of hardware provided by the monitor manufacturer. Some applications also provide their own calibration software. Consult the hardware and software documentation how to best calibrate your monitor. If neither hardware or software provides you with calibration, you should at least adjust contrast and brightness of your monitor to display the PhotoLib™ images according to your preference.

PhotoLib™ images can be used to create a variety of publications, newsletters, or presentations which may be printed to color or black&white desktop printers or film recorders.

1. Locate the image using Aldus Fetch.
2. If your software supports JPEG format copy the file to your hard disk. You can use Fetch for this ("Copy original"). Then import the file into your application.

3. If your software does not support JPEG format convert the file with Picture Decompressor. Alternatively you can copy to the clipboard and paste into your application.

4. Make sure to have the correct printer driver selected and set-up for the particular device,

5. Print a sample page to ensure that the results are correct.

6. Print the page to the device by following the instructions provide by the software and printer manufacturers.

7. If you are not satisfied with the results (color, brightness, saturation) you should change the settings of your software, the printer driver or adjust the PhotoLib™ image using the appropriate image processing software. Then re-print.

PLEASE READ the chapter "About PhotoLib™ Photographs" in the "Documentation" folder BEFORE PRINTING.

Screen Images versus printed result

You will notice the difference between the way PhotoLib™ images look on your monitor and the way they appear on a printout. There will be differences in appearance of colors and the overall lightness or darkness of the image. This is due to the very different ways a monitor displays a photo and the way a desktop printer creates its output.

Color Printing with computers is a very complex process and is under rapid development. There are no safe rules for all the different possibilities. A lot depends on the software used and your level of experience. If you have any questions please contact us.

Here are a few tips we have found:

- Printing CMYK EPS or CMYK TIFF formats tends to produce better overall results. You may want to convert your images from RGB to this format before printing to a desktop printer. Even though many programs convert RGB to CYMK during printing, making the conversion yourself will allow you to see a better screen representation of your printed output.
- Red hues tend to print over-saturated on some devices. If you are using a photo with a lot of bright red, you may want to use an image processing program to reduce the overall saturation of the red hues.
- PhotoLib™ images with numerical file names should normally be brightness and contrast adjusted before printing - please read the "About PhotoLib™ Images" chapter.

Software is gradually appearing on the market which will allow you to adjust and calibrate your monitor, via various software applications to a printer.

NOTE! Color printing software is currently under rapid development. Almost daily new drivers, system software, software updates and new programs are released. In particular software for printing Kodak PhotoCD scanned images is appearing gradually. PLEASE MAKE SURE TO REGISTER. This will allow us to advise you of major new developments which could have a significant impact on your ability to produce quality output.

Color Separations from PhotoLib™ images

Medium-resolution images are up to 730 x 485 pixels (1 MB file size) and are intended to be used for small size four-colour printing. A good example is the PhotoLib™ CD cover which was printed using the original PhotoLib™ images after four-color separations.

Normally you should use PhotoLib™ high-resolution images for large size four-color printing.

By following the guidelines below you can determine how to get the best results producing four-color separations with the PhotoLib™ images. As always with four-color process printing, it is best to discuss all of the details of your publication and production with a representative of your printer before you create the final film output.

Determining image resolution

To produce a high-quality separation of a color image you need to ensure that there is enough data to create the proper halftone dots. There are three factors that determine the quality of printed images:

Image Resolution, measured in pixels per inch (ppi). This is the amount of data stored within the image file. Larger files can produce better results but require more time by the computer and imagesetter to process. The amount of data available is dependant on image resolution and image size. An image at 72ppi and 20x20 inches contains approximately the same information as an image at 300ppi and 5x5 inches.

Resolution by itself does not indicate quality!

PhotoLib™ images are stored with 72ppi for best screen viewing.

Printer Resolution, measured in dots per inch (dpi). This is the amount of

detail the printer or imagesetter will produce such as 1270 or 2450dpi. The higher the dpi the better the ability the printer has to create accurate halftone.

Screen Frequency (or screen ruling), measured in lines per inch (lpi). This determines the visual quality of the final printed picture. As you increase the lpi, the picture will show more detail and appear sharper. Other factors such as type of press and paper stock contribute to what screen frequency should be used.

We recommend the image resolution to be twice the screen frequency of the color separations. For example if you want to print the image at 150lpi, the image resolution should be 300ppi. Remember the following guideline:

$\text{recommended ppi} = \text{desired lpi} \times 2$

You should resample the PhotoLib™ image to the desired resolution and size. This will assure that the resampled image contains the right amount of information. Too little information would result in a poor quality. Too much information would result in excessive processing and imaging time.

To determine the required image resolution for a particular size of the final image, use the following formula:

$\text{lpi} \times 2 \times (\text{final width} / \text{original width}) = \text{optimum ppi}$

Some image processing software such as Adobe Photoshop will do these calculations automatically for you.

Making images larger

You should avoid to print images at a larger size than the information contained in the image allows you to. But there are some tricks which make this possible with some trade-off in quality:

- Use a lower screen frequency
- Resample the image to a higher resolution. Many image processing programs will allow you to do that. The software will add data to your image by interpolating the colors of adjacent pixels in the image. This can cause the image to appear out of focus and blurred. To compensate for this you may want to apply a sharpening filter.

- Use a lower lpi to ppi ratio, such as 1.5 to 1.

Ensuring the best results

There are many factors which affect the quality of four color printing. Care and experience make a lot of difference to the finished result.

Calibrate your system

Your system and your environment can determine the quality of your results. Here are some general guidelines we recommend:

- Calibrate your monitor daily. Use the method recommended by your monitor manufacturer or/and the software you are using
- Calibrate your desktop printer as recommended by your printer manufacturer. Without proper calibration the results will not be of much use.
- Calibrate the imagesetter daily. This is the most critical part as the film output will be used to create printing plates.

Proof your results

Four color printing is a very expensive process and mistakes can be very costly. One of the best ways to avoid mistakes is to proof your work through the various stages of the production cycle. Here are two important types of proofs you should make as you create your publication:

- Print to a desktop printer to check the overall publication for errors and to obtain general color information. While the actually printed piece will vary substantially from that of a desktop color printer, you can use desktop information to obtain general information about the colour images.
- After creating the color separations, have a Chromalin, Matchprint or other proof created which uses the actual film separations. This is the most reliable proof you can use and we recommend that you use this type of proof for every four-color job you create. The representative from your commercial printer will be able to explain any differences you might expect from this proof and your actual printed piece.

Select the right service bureau

If you plan to work with a service bureau to create your color separations, here are some questions to ask:

- Ask to see samples of some four-color images they have separated
- Do they have an imagesetter dedicated to film output?
- How often do they calibrate the imagesetter?

You should also check to see how the service bureau wants you to deliver

your files. You may be asked to deliver your files in one of two ways:

Firstly - In the file format of the program that created it. If you use a DTP program such as Aldus PageMaker or QuarkXPress, the service bureau may simply want you to give them a copy of your PageMaker or QuarkXPress file. Remember that these programs maintain links to high-resolution image files. This means that you will need to provide a copy of every image file you are using along with the DTP file. Check the documentation of your page layout program for further details regarding file linking.

Secondly - As a PostScript file. Some service bureaus prefer that you provide a PostScript version of your file that has all of the separation information included in it. If this is the case, make sure your images are properly linked to your page layout program before you create the PostScript file. Also double check all of the separation settings to ensure the correct results.