

## Layout Page

Defines the left limit of the selection area. The limit is measured in the units selected in the Units list box.

Defines the top limit of the selection area. The limit is measured in the units selected in the Units list box.

Defines the width of the selection area relative to the Left parameter. The limit is measured in the units selected in the Units list box.

Defines the height of the selection area relative to the Top parameter. The limit is measured in the units selected in the Units list box.

Defines the units of measurement for the location parameters and preview window rulers.

Displays pre-defined crop sizes. Only valid sizes for the image are listed. Available sizes depend on the maximum allowable scan size and on the orientation of the image. If you rotate an image, new crop sizes may appear.

Defines the number of colors that are reproduced in the final scan. The available options depend on the capabilities of the attached scanner. As you increase the amount of color, the time to complete the scan and the size of the file also increase.

Defines the halftone or dithering scheme used when scanning an image. Halftones allow a scanner to simulate shades of gray using varying densities of black dots. Dithering allows a scanner to create the effect of more colors by combining two adjacent color pixels to produce the effect of a third. Available options depend on the selected color depth as defined by the Depth parameter.

Defines the number of dots per inch (DPI) that the scanner reads from the image. A higher DPI setting creates a clearer scanned image; however, the file size of the image and the time to complete the scan also increase.

Rotates the image counterclockwise in 90-degree increments. This setting allows you to preview, scan and save the image in a different orientation. This setting affects both the final scan and the preview.

Reflects the image on its original vertical axis. If you rotate the image 90-degrees and then enable the Mirror option, the image is mirrored on its original vertical axis, which is now the horizontal axis.

Use this box to choose a custom resolution. Available resolutions vary among different scanner models. If the scanner doesn't provide any custom resolutions, this list box is disabled.

**Custom Page**

Enables or disables the automatic document feeder (ADF). If the scanner isn't equipped with an ADF, this setting is disabled.

Enables a multiple scan mode that allows you to perform two or more consecutive scans using identical settings. However, you must manually change the document on the scanner in between each scan.

Defines the page size that's being fed into the ADF for scanning. Only page sizes that are supported by the scanner are listed. If the scanner isn't equipped with an ADF, this setting is disabled.

Setting changes made in this section only affect the preview image. The settings for the final scan are still determined by the Layout settings.

Defines the number of colors that are displayed during the prescan. The valid options depend on the capabilities of the attached scanner. As you increase the amount of color, the time to complete the prescan also increases.

Defines the halftone or dithering scheme used when prescanning an image. Halftones allow a scanner to simulate shades of gray using varying densities of black dots. Dithering allows a scanner to create the effect of more colors than are defined in the graphic by specifying the colors of two adjacent pixels to provide the visual effect of a third color.

Defines the resolution of the image that's displayed in the Enhanced Preview window. The specified values indicate the scanned resolution in dots per inch (DPI). This box is enabled only if the Enhanced Preview window is selected.

## About Page

Displays information on system resources. Free Page File displays the amount of memory used to store swap files. Swap files are used to store information during processing. If this memory is too low, Corel TWAIN may not be able to process large images. Physical Memory displays the amount of physical RAM installed in your system. Memory Load displays the percentage of available memory currently in use.

Defines the location where Corel TWAIN stores its temporary files. By default this setting is identical to the TEMP= variable specified under DOS. You can change this to point to any other valid directory without affecting any other applications' temporary files.

Allows you to search for and select a directory to use for Corel TWAIN's Temp directory.

Displays version and copyright information for Corel TWAIN.

Enables or disables progress and error logging and specifies the type of logging to be performed. The information provided by the log files isn't intended to provide information to you, but may help Corel Technical Support diagnose your problem.

Disables progress and error logging.

Saves error information to a file.

If you've selected To File and an error occurs, the error information is written to a text file in the selected path.

Allows you to search for, and select a file to use for error logging.

Clears the error log.

# Corel TWAIN Dialog Box

The Corel TWAIN dialog box is divided into two parts: the main preview window and the tab pages. The main preview window displays a preview of the scanned image when you click Prescan. The tab pages provide a variety of settings to help you set up a scan. The tabs that are available depend on the features provided by your scanner.

If you need to edit the image before scanning it into your application, enable the Enhanced Preview setting. The preview image will then appear in the Enhanced Preview window when you click the Prescan button.

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`{button ,AL('dialog;;;;';0,"Defaultoverview",)} Related Topics`

Indicates the manufacturer of the selected scanner.

Indicates the model of the scanner you've chosen from your scanning application.

Indicates the size of the file, in bytes, that's created by the scan, based on the parameter settings you choose on the Layout page.

Indicates the total amount of RAM and virtual memory, in bytes, that's available to Corel TWAIN.

Indicates the amount of unused disk space, in bytes, on the selected drive.

Initiates the final scan of an image and places it in the graphics application.

Initiates a scan of an image and places it in a preview window.

Closes Corel TWAIN and returns to the currently running application.

Launches help.

Measures the width of the image. The units of measure are set on the Layout page.

Measures the height of the image. The units of measure are set on the Layout page.

**Automatic Document Feeder (ADF)**

A mechanical device attached to the scanner that automatically pulls documents from a stack and places them, one at a time, on the scanner.

## About Corel TWAIN

Corel TWAIN is an interface that lets you scan images directly into photo-editing or paint software without accessing any additional applications. Corel TWAIN works by setting up a connection between your scanner and your application. This means that you don't have to access any scanner software. The Corel TWAIN dialog box lets you set up all the necessary scanning parameters and provides access to all your scanner's TWAIN features. If you use TWAIN, instead of your scanner manufacturers scanner driver, some features may not be available. If you have a scanner driver that is shipped with your scanner, you may prefer to use that instead of Corel TWAIN, as that driver would be customized to your scanner's capabilities.

## Scanning images



## Scanning images

### Selecting an original

The quality of your scanned image depends on the quality of the original image. When choosing an original, you should try to avoid images that are badly damaged or stained. Rips and tears in an image may require extensive editing to correct.

You can use Corel TWAIN's features to make minor adjustments to the image. If your image requires major changes, scan the image using Corel TWAIN, then use the powerful image editing tools available in Corel PHOTO-PAINT to make corrections.

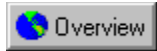
### Improving image quality

To get the best possible scan, you should start with a high quality original. However, if you have to scan a poor quality image, Corel TWAIN provides tools to help improve the look of the scan.

One common problem with images is what professional photographers refer to as "flat" images, meaning that a picture has very little contrast. By adjusting the contrast or brightness when scanning, you can increase the differences between highlights and shadows to give the image the appearance of more depth. These features can also be used to enhance over- or under-exposed images.

Two of the most significant image adjustments that you can make are to the color depth and the resolution. To determine the best settings for these two adjustments, you'll need to consider the following:

- how much detail you need
- will image be printed or viewed onscreen
- if printed, what type of printer will you use
- what [screen frequency](#) will you use
- what is original image type, and final image type (color depth)



## Selecting a source

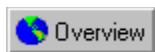
The scanner source is the scanner that you're using to create digital images. You need to hook up your scanner and install the scanner software, following the documentation provided by the manufacturer. Once you've done that, you need to identify the scanner in the your graphics application.

### To select a source

1. In your graphics application, click File, Acquire Image, Select Source.
2. Choose your scanner model name from the list, ensuring that the model is preceded by "Corel."  
A Corel source must be selected in order for you to use Corel TWAIN.
3. Click Select.

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{button ,AL('PRC Scanning images;',0,"Defaultoverview",)} [Related Topics](#)



## Scanning an image

You can use your scanner to produce scanned, digital images of line art, drawings, photographs, and even 3D objects (as long as they fit on the scanner bed!). You can use a graphics application to preview the image you're scanning, scan entire images, selections of images, or multiple images.

Using the Prescan feature, you can preview images before you scan them into your application, allowing you to define the image area to be scanned.

### To preview an image

Prescan is a low resolution preview of your image.

1. In your graphics application, click File, Acquire Image, Acquire.

The Corel TWAIN dialog box appears.

2. Click Prescan.

### To scan an image

1. In your graphics application, click File, Acquire Image, Acquire.

The Corel TWAIN dialog box appears.

2. Click Scan.

### To scan a selection

1. In your graphics application, click File, Acquire Image, Acquire.

The Corel TWAIN dialog box appears.

2. Click Prescan.

3. In the preview window, drag the selection box around the area you want to scan.

4. Click Scan.



#### Tip

- To enter precise measurements for the selection box, type values into the Left, Top, Width, and Height boxes.

### To scan with an Automatic Document Feeder

1. In your graphics application, click File, Acquire Image, Acquire.

The Corel TWAIN dialog box appears.

2. Click the Custom tab.

3. Enable either the Feeder or ADF (Automatic Document Feeder) check box, if applicable.

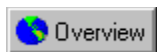
Your scanner must support the ADF function for the ADF or Feeder option to be available. Refer to the scanner manufacturer's documentation for more information.

4. Choose a page size from the list box.

5. Click Scan.

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{button ,AL('PRC Scanning images';,0,"Defaultoverview"),} [Related Topics](#)



## Rotating images

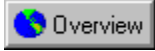
You can rotate an image by either 90, 180 or 270 degrees in TWAIN. When you rotate your image using TWAIN, the preview window displays the results quickly, but when you actually scan the image, the transformation may take considerable time. If your graphics application supports image rotation, you may consider making the transformation there.

### To rotate an image

1. Click the Layout tab.
2. Choose a rotation angle from the Rotation list box.

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{button ,AL('PRC Scanning images';,0,"Defaultoverview",)} [Related Topics](#)



## Adjusting color depth

Color Depth determines the range of colors and tones that are available in an image. It is usually measured by the number of colors displayed (e.g. 256 colors, or 16 million). Each color depth has advantages and limitations:

If scanning	Then use this color depth
line art	black and white
<a href="#">duotones</a>	grayscale
to print to a black and white printer	grayscale
high quality color photos	16 million

### To adjust color depth

1. Click the Layout tab.
2. Choose a color depth from the Depth list box.

As you decrease the color depth, some details may be lost. You may want to use a higher color depth for detailed images even if it has a small color range. Scanning at a higher color depth may also save you the trouble of having to do extensive color correction in a photo-editing package.



#### Tip

- Keep in mind that the image will only appear as good as your output sources will allow. It may be a waste of disk space to scan an image at a high color depth if the monitor or printer you're using is not capable of producing such a wide range of color.

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{button ,AL('PRC Scanning images';0,"Defaultoverview",)} [Related Topics](#)

## Adjusting resolution

It is important to choose the appropriate resolution at which to scan your image. But how do you determine this? You usually don't need to scan your image at the highest possible resolution; this only increases your file size and slows down the printing or display of the image onscreen. The following guidelines may help you determine the best scanning resolution for your image:

When scanning for	Use
<a href="#">halftone</a> print images	1.5 to 2 times the <a href="#">screen frequency</a> , or refer to the printer manufacturer's documentation to find the printer's line screen frequency
<a href="#">continuous tone</a> print images	the printer resolution; refer to the printer manufacturer's documentation to find the printer's line screen frequency
black and white images	the printer resolution; refer to the printer manufacturer's documentation to find the printer's line screen frequency
display onscreen/Internet	72 or 96 dots per inch

Enlarging your image will also impact on the resolution. When possible, try to scan at 100% of the image size, and modify the size in a graphics application such as Corel PHOTO-PAINT.

### To adjust resolution

1. Click the Layout tab.
2. Choose a resolution from the Resolution list box.

It is not always necessary to choose the highest possible resolution to get a good quality scan. If the image has little detail or is only black and white, you can use a lower resolution. This helps reduce the size of the file, as images scanned at higher resolutions require more disk space.

### To adjust resolution when displaying images on the Internet

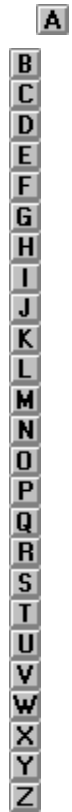
1. Click the Layout tab.
2. Choose custom from the Resolution list box.
3. Use the scroll arrows to select either 72 x 72 or 96 x 96 dots per inch.



#### Tips

- If scanning an image to be displayed on the Internet, choose a resolution of 72 or 96 dots per inch.
- Check the scanner manufacturer's documentation to find the optical resolution of the scanner.
- The most important thing to remember when choosing a resolution is that you want to get the highest possible image quality without making the file any larger than necessary.





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**Active window**

The window that contains the image on which you are currently working.

**Additive color model**

A color model, such as RGB, that is based on the behavior of colors of light; these models work by adding colors together to produce white.

See also Subtractive Color Model

**Alpha (alpha channel)**

See Mask Channel

**Anti-aliasing**

Anti-aliasing is a method of smoothing the edges of shapes, objects, and mask selections. Anti-aliasing creates intermediate pixels that smooth the transition between colors and sharp edges.

**Aspect ratio**

The aspect ratio of an image is the ratio between its width and height. For example, the aspect ratio of an image whose dimensions are 640 x 480 pixels is 4:3. You can change an image's aspect ratio by stretching or truncating (shortening) either its width or height.

## **AVI**

The filename extension (which stands for Audio Video Interleave) for a Windows video file. .AVI files include video and animation.

## Bit depth

The number of binary bits used to define the shade or color of each pixel in an image. For example, a black and white image has a pixel depth of 1 bit (1 or 0 in binary terms). To determine the number of color values a given bit depth can produce: 2 to the power of the bit depth.

Other common bit depths:

4-bit:	16 colors (e.g. standard VGA)
8-bit grayscale:	256 shades of gray.
8-bit color:	256 colors.
24-bit:	16 million colors.
32-bit:	4.3 billion colors.

## Bitmap

An image composed of grids of pixels or dots. Scanners and painting programs, such as Corel PHOTO-PAINT, generate this type of image. By contrast, CorelDRAW creates images using vector objects — shapes that are stored as mathematical equations.

**Bitmap fill**

A bitmap fill is created from any bitmap image. The images that work best are those that are patterned and can tile to create a contiguous pattern, like river stones, coins, or bricks. Bitmap textures can print to any printer.

**Black and white**

A 1-bit color mode with two possible colors: black or white. This mode is useful for line art and simple graphics.

**Bleed**

One of the brush tool settings. The Bleed control works in conjunction with the Sustain Color control to determine the way in which paint is applied throughout the brush stroke. A brush stroke with a bleed value will, during the course of a brush stroke, run out of paint and simply smear the background colors (as though you were painting with a wet brush).

**BMP**

The filename extension for Windows bitmap files.

**Brightness**

In the HSB color model, the component that determines the amount of black in a color.  
See also Hue and Saturation.

**Browser**

Computer software that interprets HTML tags, displays Web pages, runs Java programs, and more. You use the browser to view Web pages.

**Calibration**

Adjusting a monitor, printer, or scanner to display, print, and capture colors more accurately.

**Calibration bar**

Strips of color printed with an illustration. Used as a reference for calibrating a monitor so that it displays colors as they appear in the printed output.

**CDR**

The filename extension for CorelDRAW, a vector-based drawing program.

**CERN**

Birthplace of the World Wide Web. Developed a Web server system.

If you are creating an image map, it is not really important to know what CERN is, but you do need to know whether the server you are using runs CERN or NCSA, as different codes are used in the map files. Contact your server administrator to find this information.

**CGI**

Common Gateway Interface. Command protocol between the server and a program. There is a CGI program for image maps; if you are creating server-side image maps, then you need to have the image map CGI program on the server. Confirm with your server administrator that you can create server-side image maps.

**CGM**

The filename extension for Computer Graphics Metafile, a vector graphic file format.

## **Channel**

A channel is an eight bit grayscale image in which information is stored. PHOTO-PAINT uses two types of channels: color channels and mask channels.

Color channels are automatically generated when you open or create an image. There are as many color channels in an image as there are color components in the image's color model. Each channel contains the color information for its color component which, when combined with all other color channels, creates the entire range of colors in the image. Think of them as plates in a commercial printing press that are superimposed to produce the final product.

Mask channels, also called Alpha channels, are created by the user to store masks. A mask that is saved in a channel can be removed from the Image Window but remains accessible time and time again. Mask channels make it possible to work with several masks in a given image.

See also Color Channel and Mask Channel.

**Check box**

A small square in a dialog box which you use to enable and disable options. An option is enabled when an X or a check mark appears in the check box, and is disabled when the check box is empty.

**Client application**

A client application is an OLE (Object Linking and Embedding) compatible application that contains OLE objects (e.g., pictures, charts, text) that were created in other OLE applications. Not all OLE applications can be clients. If you are uncertain about whether an application is capable of performing as a client, check its documentation.

**Client-side**

Client-side image maps are not dependent on a server to process the map information, but the user's browser must support image map display. It is always possible that your audience will not have a suitable browser to view the map.

**Clipart**

Ready-made images that can be brought into Corel applications and edited if required. Corel applications offer thousands of Clipart images in many different formats. You can purchase additional images, including some in bitmap format, from commercial suppliers.

**Clipboard**

A temporary storage area that contains information you have cut or copied. You can paste the contents of the Clipboard into other programs (provided that program supports that type of information). Information remains on the Clipboard until you replace it with the information from another cut or copy command.

**CMY**

A subtractive color model made up of cyan, magenta, and yellow.

Use this color model if the drawing or image will be produced on a CMY device, such as a 3-ink printer. C, M, and Y values range between 0 and 255. This color model is available only through the Color Roll-Up.

**CMYK**

A subtractive color model made up of cyan(C), magenta(M), yellow(Y), and black(K).

Used in most full-color commercial printing, CMYK is like CMY, but the addition of black (K) allows for truer low tones.

See also Subtractive Color Model.

**CMYK255**

A subtractive color model created by assembling different densities of cyan, magenta, yellow, and black pigments on a surface. C, M, Y, and K values range from 0 to 255.

## **Color channel**

A channel is an eight-bit grayscale version of your image which functions like a plate used in the commercial printing process: each channel represents one level of color in your image, which, when printed together with all the channels, produces the entire range of colors in the image.

Channels are automatically generated by PHOTO-PAINT when you create or open an image file. Each component of the image's color model has its own color channel. An RGB image, for example, has three separate color channels, one for each color component i.e. red, green, and blue (RGB). Individual channels include the information on how much red, green, or blue is used in each image pixel, to produce the colors of the image. Combining all color channels displays the entire range of colors present in the image.

Color channels are visible in the Channels Roll-Up, and can also be displayed in separate Image Windows by using the Split command in the Image menu.

**Color depth**

Color Depth determines the range of colors and tones that are available in an image, and is usually measured by the number of colors displayed, e.g., 256 colors, or 16 million colors.

The color depth you select for your image will affect the file size, as well as the quality of the final product. Corel TWAIN allows you to choose from the following color depths: 16 million (24-bit), 256 colors(8-bit), 256 grays (8-bit), and black and white(1-bit). The number of bits a color uses dictates both the horsepower it requires from your system as well as the number of colors or shades it is capable of producing. One bit can either be on or off, so 1-bit color is capable of producing just two pixel depths: 0 (off) results in a white pixel, and 1 (on) results in a black pixel. On the other end of the scale, 24-bit color has more than 16 million possible pixel depths (colors), and requires a great deal more memory.

**Color Gamut**

The range of colors that a mechanical device can either produce or perceive.

## **Color Manager**

Corel Color Manager is an application which works with your Corel software to ensure that color is being plotted as consistently as possible by the devices in your system.

Once it is familiar with your color-producing devices, Color Manager is able to perform the following functions within your Corel applications: Color Manager

- fine tunes scanned input based on your scanner's characteristics.
- ensures that onscreen simulation of printer colors is accurate.
- enables the gamut alarm.
- manages color channels.
- handles color printing and separation.
- regulates conversion between color modes.

**Color mask**

A mask applied to an image based on pixel color. The mask protects only the pixels that fall within the color range you specify, or protects all colors that do not fall within the defined color range. Color masks can be very complex in shape yet are easily created. They are an alternative selecting an area to edit by defining its shape. To create color masks, use the Magic Wand Mask tool, the Lasso Mask tool or the Color Mask command.

**Color mode**

Refers to the color characteristics of an image — the color mode determines how images are displayed and printed in Corel applications.

- Black and White (1-bit)
- Grayscale (8-bit)
- Duotone (8-bit) -Uses 256 shades of up four inks to reproduce grayscale images.
- Paletted (8-bit) -
- RGB color (24-bit).
- Lab color (8-bit)
- CMYK color

**Color model**

A color model is a chart used to define a range of colors.

**Color Palette**

A range of colors used for the selection of individual colors.

This term is used in two ways in Corel applications: it refers both to the actual toolbar you use to make your selections and to color collections such as TRUMATCH or palettes you create yourself.

A palette is different from a color mode.

**Color separation**

In commercial printing: the process of splitting colors in a composite image to produce a number of separate grayscale images, one for each primary in the original. In the case of a CMYK image, four separations must be made: one of cyan, magenta, yellow, and black

See also Color Channel.

**Color space**

A geometric representation of color gamut on a color model.

**Color table**

A tool in PHOTO-PAINT for editing to colors in a paletted image.

**Color, RGB**

The additive color model that is used by full color computer monitors to produce the colors you see. Colors are created by adding varying degrees of red, green, and blue light.

**Colorimetric (gamut mapping)**

The colorimetric chroma mapping necessary for the reproduction of spot colors. Corel applications remap colors outside of the printer's gamut to the edge of the gamut, preserving colors inside the gamut to ensure more accurate spot-color reproduction.

If you are printing an object that is mostly vector drawings, or Corel PHOTO-PAINT graphics and text, choose a colorimetric System Color Profile.

See also Photographic and Gamut Mapping

**Complex mask**

A mask whose selection consists of several areas defined using various mask tools. All areas were added to the first selection created, using a mask mode that allows complex masks to be created such as Additive and XOR modes. A complex mask can also be made from the original mask's selection, from which areas have been removed using the Subtractive mode.

**Composite channel**

The first channel listed in the Channels Roll-Up. It combines all color channels for the current image's color model to represent the image in full color. When viewing an image in the Image Window, you are seeing its composite channel. In the Roll-Up, it is identified by the name of the color model for example, RGB channel, CMYK channel.

**Conical fill**

A type of fountain fill in which the color changes from the start color to the end color following a conical pattern.

**Continuous tone**

An image (usually photographic) represented by smooth graduated tones from black to white. Continuous tone images must be converted to dots and pixels for reproduction on mechanical devices.

**Contrast**

The difference between the dark and light tones of an image. Higher contrast values indicate greater differences between dark and light with fewer gradations between them.

**Control point**

Points extending from nodes along curves and line segments that are being edited with the Path Node Edit tool. Control points determine the angle at which the curve passes through the node. Control points appear when you select a node or segment with the Path Node tool.

**CORELAPP.INI**

A text file with configuration information for all installed Corel applications. This file is in the COREL\CONFIG folder and can be edited by double-clicking on it in Windows Explorer. Changes you can make include increasing the Toolbox and color-palette size so that they appear larger on high-resolution monitors.

**COREFLT.INI**

A text file with information about the import and export filters used by all installed Corel applications. This file is in the COREL\CONFIG folder and can be edited by double-clicking it in Windows Explorer. Aside from adding pens and color definitions used by the HPGL filter, there's little reason to edit this file.

**Corel OCR-TRACE**

A program supplied with CorelDRAW that traces bitmap images. The result is a vector graphic that you can import into CorelDRAW for editing.

## **Corel PHOTO-PAINT**

Corel PHOTO-PAINT is a powerful bitmap image editing and painting program that is ideal for retouching photographs, editing images and digital movie files, and for creating original artwork. PHOTO-PAINT combines a vast array of special effects filters with impressive painting, masking, and object handling tools to allow you to produce effects ranging from the simple to the sublime.

Using PAINT, you can make subtle changes such as adjusting the lighting, sharpening the focus, or removing scratches; or you can make drastic changes such as removing people and things, swapping details between images, adding text and objects, adjusting color, colorizing black-and-white and gray-scale images, splicing movies, and applying weird and wonderful combinations of special effects. Preview windows allow you to see what the effect will look like before you commit, and PHOTO-PAINT's undo capabilities allow you to change your mind.

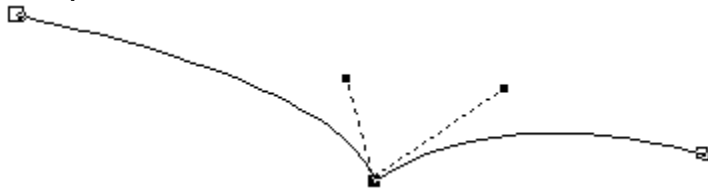
**CPT**

The filename extension for bitmap files created by Corel PHOTO-PAINT.

**Crop**

Cropping an image involves cutting away unwanted areas without affecting the resolution or dimensions of the information that remains.

### Cusp node



A node that allows you to move the two control points independently. Moving one control point does not affect the other one in any way. Use a cusp node when you want to add a sharp bend to a curve.

**Custom Colors (palette)**

A palette composed of colors chosen by the user in the Color Roll-Up or Uniform Fill Dialog box.

**Default settings**

Preset options built into a program.

**Defringe**

A command that replaces the color of pixels along an object's edge with the color of pixels inside an object's boundary.

**Device driver**

A program through which a computer and devices such as a mouse or printer communicate. A mouse driver, for example, displays a pointer on the screen and translates clicks into actions.

## **DIC**

Offers colors that are available through the DIC Color Guide, DIC Color Guide Part II, and DIC Traditional Colors of Japan. Colors in these palettes are created by mixing DIC brand inks. Reproduction through Corel applications is achieved through the CMYK color space. Colors can be displayed by name or swatch through the Color Options menu.

**Disable**

An option is disabled when there is no check mark beside it.

**Displacement Map**

An image used to determine the distortion pattern of a second image. Values from the displacement map are used to map negative and positive displacement of the original image.

**Dither**

Randomization of pixels on devices or images using a limited Color Palette to simulate continuous tone progressions.

Screen dithering is a method of enhancing the display of monitors that are capable of 16-bit color or less. It works by averaging the depth of pixels in a given area to create additional colors or shades of gray (depending on whether you are working with color, grayscale or black-and-white images). Error diffusion provides the best results by spreading color approximations over several pixels. Ordered dithering is performed at a faster rate than error diffusion by approximating colors using fixed dot patterns.

Image Dithering is a method of enhancing the appearance of photographic images which use a limited Color Palette.

**DPI**

A measure of a printer's resolution in dots per inch. Typical desktop laser printers print at 300 dpi, while image setters are capable of printing at resolutions of 1270 or 2540 dpi. Printers with higher DPI capabilities produce smoother and cleaner output.

**Drive**

A device in a computer that spins disks used to store information. Personal computers normally have a fixed-disk drive labeled C or D (called a hard drive), and one or two floppy-disk drives labeled A and/or B. In addition, many computers have a CD-ROM drive.

**Duotone**

An 8-bit color mode using 256 shades of up to four tones.

In commercial printing: a duotone is a modified grayscale image printed using inks of two colors—generally black with an accent color, although any two colors can be used. More generally, this term also refers to tritones (three inks) and quadtones (four inks).

Using two colors of ink, instead of four, significantly reduces the costs of printing while still providing a wide range of colors to choose from. The duotone feature is ideal for adding an accent color to a photograph or for extending the tonal ranges of inks.

**Dupont palette**

Offers colors that are available through the DuPont® Spectramaster solid color library. This library was developed to provide a paint color selection and matching tool for industrial coatings and colorants. Colors are based on Lab and are converted to RGB for display and CMYK for printing. Colors can be displayed by name or swatch through the Color Options menu.

**Embedded object**

Information from a file created in one program (the source program) that has been inserted into a file in another program (the destination program). For example, you can embed a graphic created in CorelDRAW into a Microsoft Word document.

See also [Linked object](#) and [Object Linking and Embedding \(OLE\)](#).

**Emboss**

Emboss refers to a filter that causes areas to appear raised in relief. This is achieved by suppressing the color in the area and outlining it with a selected color.

## **EPS**

The filename extension for Encapsulated PostScript files. Corel applications can import and export .EPS files. CorelDRAW can export to the generic .EPS format, as well as to EPS files with clipping paths. DRAW can also import objects containing .EPS files. The .EPS files CorelTRACE creates can be imported by programs such as Corel VENTURA and Aldus PageMaker.

**Feathering**

The gradual blending of pixels between a mask selection or object and the surrounding background. Feathering produces a softer, more natural-looking edge.

**Fill color**

The color used by the Fill tool to "paint" areas on images. The fill color also determines the color inside the rectangles, ellipses, and polygons you draw. You can choose the fill color in the Tool Settings Roll-Up for the Fill tool, in the on-screen Color Palette, or from the image itself by holding down SHIFT while-clicking a color with the Eyedropper tool.

**Film**

In commercial printing: a photo-sensitive transparent sheet onto which images are transferred either as positive or negative. These sheets are then used by a commercial printer to create printing plates. An option in the Print Options dialog box lets you create film negatives for printing on an image setter.

## **Filter**

The general name for a program that translates digital information from one form to another.

**Import/Export filters** convert files from one format to another. For example, in order to import a Corel DRAW image into Corel PHOTO-PAINT, it must be converted from a vector file into bitmap form. By selecting a file format in the Export dialog box of DRAW, you are automatically activating the appropriate filter program which takes care of the translation.

**Special Effects Filters** process image information and alter it according to preset specifications in order to produce a special effect. For example, the Median filter in PHOTO-PAINT analyses all the pixels in an area of your image and applies an average color across the area, creating a smooth, slightly blurry effect with less detail.

**Flat drop-off**

A drop-off in either the Boss or Glass effect filters that is a straight diagonal line starting at the bevel area and ending on the image.

### **Floating selection**

A copy of the current mask selection. It is enclosed by a marquee and includes the image pixels. It floats on a plane above the image so that it can be moved without any consequence on the underlying image. You can paste clipboard data as a floating selection in an image.

As soon as you choose the Mask Brush or Mask Transform tool, it is defloated; the pixels are merged with the underlying image. The reason is that those tools are used to edit the shape of the mask itself, not the floating pixels included in its marquee. The content of the floating selection must therefore be dropped onto the underlying image before changes can be performed on the mask marquee. You can also defloat it by choosing the Defloat command in the Mask menu.

**FOCOLTONE Colors**

A color system that provides a range of spot colors built with the process colors, cyan, magenta, yellow, and black (CMYK). The FOCOLTONE colors are organized so that you can choose FOCOLTONE colors with at least 10% of one process color in common with another FOCOLTONE color. This minimizes the need for trapping, making it a good Color Palette for color separations.

**Folder**

Folders are used to store and organize your documents, programs, and other files. For example, you could create a folder called LOGOS for storing logo designs. In previous versions of Windows, folders were called directories.

**Font**

A set of characters in a given typeface and point size (see below). For example, 10 point Times Roman. Most fonts are available in families that include different weights or styles such as bold and italic.

10 pts 18 pts 36 pts

**Fountain fill**

A fill progressing from one color to another, or through a series of colors, using a series of intermediate steps. Fountain fills are also called gradient or graduated fills. PHOTO-PAINT also offers a tool called the Gradient Fill tool, which allows you to select a transparency level as one of the end colors.

**Four-color process**

In commercial printing: the four-color printing process reproduces full color artwork with four colors: cyan, magenta, yellow and black (CMYK).

See also Color Separation.

## Gamut

A range of possibilities or capabilities, esp. the range of colors that a mechanical device can either produce or perceive.



Color Film



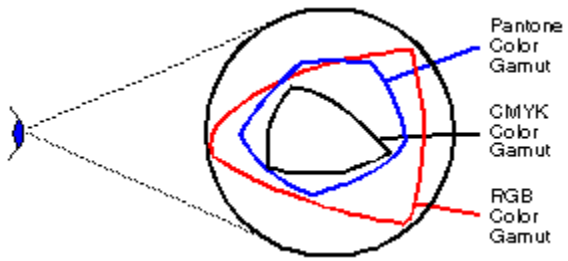
Offset



Newspaper

## Gamut mapping

The electronic assessment of the gamut of devices in your system and the reassignment of out-of-gamut colors to others that can be reproduced. Gamut mapping is handled by Corel Color Manager for all Corel graphics applications. Colorimetric for spot colors and vector-based art, and photographic for bitmap art. See also Color Space.



**Gaussian**

Refers to gaussian distribution, which applies an effect using bell-shaped (gaussian) distribution curves rather than straight lines.

**Gaussian Blur**

Blurs the image according to a gaussian distribution, which spreads pixel information outward using bell-shaped curves.

**Gaussian drop-off**

The drop-off has an "S" shape; it starts and ends with a round and gradual slope that becomes steep in the middle. It results in a smooth and less noticeable transition between the bevel and the rest of the image.

**GIF**

The filename extension for files in a bitmap format that is commonly used to store digitized color photographs. Corel applications can import files in this format.

**Gradient**

An effect created by blending one color or transparency value into another through a series of intermediate steps.

## **Grayscale**


An 8-bit color mode that stores and displays images using 256 shades of gray from black to white. Each color is defined as a single value between 0 and 255, where 0 is darkest (black) and 255 is lightest (white).

A grayscale value can also be thought of in terms of the other color models: in RGB, a grayscale value corresponds to equal amounts of all RGB colors; in CMYK, a grayscale value corresponds to zero C, M, and Y values with a positive K value; in HSB, a grayscale value corresponds to zero H and S values with a positive B value.

**Grayscale image**

An image which uses the grayscale color model. Grayscale images—especially photographs—are commonly referred to as "black and white."

## Grid

A grid is just that  a grid that overlays your image so you can know exact coordinates as you work. You can adjust the amount of space between the horizontal and vertical lines in the Grid and Ruler Setup dialog box, and select a color and style for the grid in the Options dialog box. The Snap to Grid option (found under the Tools menu) constrains the cursor to the grid points.

**Group**

A set of collected objects. Grouping enables a set of simple objects to behave and be edited as one.

**Halftone**

In an image that has been converted from a continuous tone image to a series of dots of various sizes to represent different tones (see halftone screen). A photograph must be converted into a halftone in order to be printed on conventional devices and printing presses. Halftones are often referred to as PMTs.

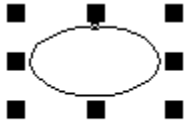
On laser printers that cannot print different sizes of dots, the halftone is produced by printing different numbers of dots in a given area.

**Halftone screen**

In photo reproduction: a grid pattern of lines used to convert a continuous tone image into dots of various sizes. A halftone screen's resolution, or screen frequency, is expressed in LPI.

In CorelDRAW, halftone screens are specified for spot colors by choosing PostScript from the Outline Color, Uniform Fill, or Fountain Fill dialog boxes. Process-color screens are set in the Print Separations dialog box under Custom Halftone.

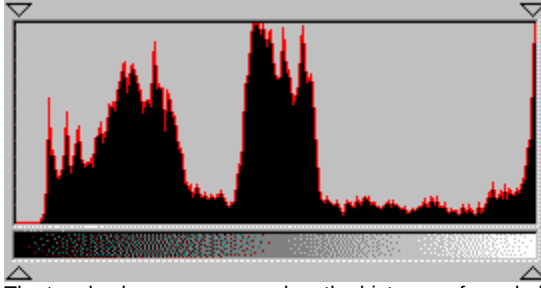
### Highlighting box



The invisible rectangle, with eight handles, that encloses a selected object or mask selection. When you move or otherwise transform an object or selection, a dotted rectangle representing the highlighting box appears instead of the object or selection.

## Histogram

A horizontal bar chart representing the range of tonal values in a bitmap image.



The tonal values are arranged on the histogram from dark to light, the "spikes" representing the relative number of pixels at any given level. In adjusting tonal values, you can adjust the level and distribution of darks and lights by moving the threshold sliders left or right,

## **HLS**

Hue, lightness, and saturation are the components of the HLS color model, a variation on HSB and an alternative to RGB. Hue determines color (yellow, orange, red, etc.), lightness determines perceived intensity (lighter or darker color), and saturation determines color depth (from dull to intense). The circular visual selector defines the H value (0 to 360) and the S value (0 to 100); the vertical visual selector defines the L value (0 to 100).

## **HSB**

Hue, Saturation, and Brightness are the components of the HSB color model. This model is the closest approximation to how humans perceive color.

- Hue: a measure of the "color" of the colors in your image (e.g. green is a hue).
- Saturation: a measure of the depth of color in your image (the "richness" of a color).
- Brightness: an expression of the overall percentage of white in your image.

## **HTML**

Hypertext Markup Language. The World Wide Web authoring standard. HTML is comprised of markup tags. You use the tags to tag text and integrated resources (such as images, sound, video, and animation) when creating a Web page.

HTML has changed radically over the last few years. The number of HTML tags has grown, allowing Web authors to greatly enhance the design of pages.

**Hue**

Hue is the main attribute in a color that distinguishes it from other colors. Blue, green, and red, for example, are all hues. See also Saturation and Brightness.

### **Image Colors (palette)**

A palette composed of all the colors that appear in your image.

**Image Map**

Image maps are graphics that have clickable areas which link the user to another Web page. The user clicks on the clickable area within the graphic, and is automatically linked to the designated page.

**Image setter**

A generic term for printers capable of printing text and graphics (line art and photographs) on film or photographic paper at resolutions greater than or equal to 1200 dpi.

**Intensity**

Intensity is a measure of the brightness of the lighter pixels in a bitmap image as it relates to darker mid-tones and dark pixels. Increasing intensity increases the vividness of whites while maintaining true darks.

**Interlacing**

A method of having the image appear on-screen in entirety, but at a low, blocky resolution, as soon as the image appears on-screen. As the image data loads, the image quality improves from unfocused to clear.

## Jaggies



A common term for jagged edges in a bitmap. Jaggies can be reduced with anti-aliasing.

**JPEG (Joint Photographic Experts Group)**

An international standard for image compression that offers compression with almost no losses at ratios up to 20 to 1.

**Lab**

The color model developed by Commission internationale de l'eclairage (CIE) based on three parameters: lightness (L), and two chromaticity ranges: a (green to red) and b (blue to yellow). The square, two-dimensional visual selector defines the a and b coordinates from -60 to 60; the vertical visual selector defines the L value from 0 to 100. This model is device-independent, and encompasses the color gamut of both the CMYK and the RGB color models.

**Layout style**

The way a multi-page document is organized for printing. CorelDRAW provides preset layout styles for several types of publications, including books, booklets, and tent cards.

**Line art**

In traditional graphic arts, an illustration containing only black and white.

**Linear fill**

A fountain fill that progresses from one color to another following a linear pattern.

**Linked object**

In Object Linking and Embedding (OLE), information from one file (the source file) that has been inserted into another file (the destination file) while maintaining a link to the source file. Changes made to the information in the source file are automatically made to the information in the destination files.

See also Object Linking and Embedding (OLE) and Embedded object.

**Lossless**

The process of compressing and decompressing does not distort the image. It is identical to the image that you originally created.

**Lossy**

In the process of compressing the graphic, some of the image quality is lost. If you choose a high quality compression, very little of the image information is lost that is noticeable by the human eye. The lower the quality of compression, the poorer the image quality will be.

**LPI**

Lines per inch. The screen frequency used for halftone screens for photos and tints is described in lpi.

**Luminosity**

A value corresponding to the brightness of a color.

**Marquee**

The dashed line that looks like marching ants, used by PHOTO-PAINT to represent the boundary of a mask selection or an object, in an image. By default, object marquees are blue and mask marquees are black.

**Mask**

A layer over the entire image that is used to define areas in the image that are protected from editing changes and those that are editable. The editable area(s) is called the selection. The mask marquee separates the selection from the protected areas. In regular masks, the selection is defined by creating a shape in the image. In a color-sensitive mask, the selection and protected area include pixels whose color is either in or out of the defined color tolerance range.

**Mask channel**

A temporary storage area for masks. When you create a mask channel, PHOTO-PAINT makes a copy of the current mask and stores it in a channel where you can access and re-use it in the image as many times as you wish . You can also save a mask channel to a file or open a previously saved channel into the current image.

**Mask modes**

States to which you set PHOTO-PAINT when creating or editing masks. There are four mask modes: Normal, Additive, Subtractive, and XOR. They are used to fine-tune an existing mask by adding or removing areas from its current selection in a variety of ways. The behavior of the mask tools is affected by the mode currently enabled. The resulting mask is called a complex mask.

**Maximize**

Maximizing your work area hides the title and Menu Bars, but allows you to continue editing your image (you can still access all the menus using keystrokes).

**Menu**

A list of commands that appears when you choose a name in the Menu Bar. The Menu Bar appears below the Title Bar, which is across the top of the window.

**Menu Bar**

The bar near the top of the window that contains the names of the program's menus.

**Merge mode**

The method by which the selected paint, object, or fill color combines with the colors in the image. Normally, when you apply color to a page or merge an object into the background, the applied color(s) simply replace the original colors in the image. PHOTO-PAINT's merge modes give you an alternative to just replacing colors. For instance, choosing the Add merge mode combines the paint and paper colors to produce a brighter resultant color. PHOTO-PAINT offers 16 to 21 merge modes, depending on the color depth of the image, for you to experiment with.

**Mesa drop-off**

The drop-off is a curve that begins abruptly (almost a 90-degree angle) and ends with a rounded gradual slope.

### **Microsoft® Internet Explorer Colors palette**

An 8-bit palette of 256 colors used by the web browser, Microsoft® Internet Explorer. By using only colors on this palette, you ensure that your image colors will display clearly on systems using this browser.

**Moire pattern**

Undesirable wave patterns in an image created by conflicting dot patterns. These occur when halftone screens of two different frequencies are superimposed in the same image. For example, if you scan a halftone image, you will likely see moire patterns on your monitor screen because the original halftone screen will be different than the dpi frequency of the scanned image.

**Monochrome**

An image containing a single color, usually black.

**NCSA**

National Center for Supercomputing Applications. Developed a Web server system.

If you are creating an image map, it is not really important to know what NCSA is, but you do need to know whether the server you are using runs CERN or NCSA, as different codes are used in the map files. Contact your server administrator to find this information.

### **Netscape Navigator (TM) Colors palette**

An 8-bit palette of 256 colors used by the web browser, Netscape Navigator™. By using only colors on this palette, you ensure that your image colors will display clearly on systems using this browser.

**Nib**

In PHOTO-PAINT, the nib is the tip of the brush you use to apply effects with any of the brush tools. The Nibs Roll-Up contains preset nibs you can choose from to suit the style of brush you want. You can also customize an existing nib in the Tool Settings Roll-Up for any of the brush tools.

**Nodes**

Square points located at the end of each line and curve segment that make up a path. There are three types of nodes: smooth, symmetrical and cusp.

**Noise**

In bitmap editing: refers to random pixels on the surface of a bitmap resembling static on a television screen.

**Noise Filters**

Filters in PHOTO-PAINT used to add or remove noise from an image.

**Object**

An object is an independent bitmap that is layered above the base image. Objects can be created by using the mask tools and then choosing the Create From Mask command (Object menu).

## **Object editing modes**

PHOTO-PAINT offers three different modes in which you can select, edit, delete and organize objects in your image. They are called Multi (default), Single, and Layer. You select the mode in the Objects Roll-Up (View menu). Extensive information is provided in the Working with Text and Objects section of the PHOTO-PAINT documentation.

- Multi mode makes it possible to edit several objects at once using a variety of brush and painting tools. It includes a lock feature that protects all locked objects from change.
- Single mode automatically locks all objects in the image except one. You can change which object is editable in the Roll-Up. Only one object can be edited at a time.
- Layer mode places the editable object in the image on a transparent layer that covers the entire image; any change applied to the object in this mode only affects this transparent layer, not the underlying image.

**Object Linking and Embedding (OLE)**

A method of bringing data objects from one Windows application into another.

See also [Linked object](#) and [Embedded object](#).

### On-screen Color Palette

Along the bottom of the screen, you will find the Color Palette. This is used to apply outline and fill colors.

To choose a fill color, select an object and click the Color Palette with the left mouse button. To choose an outline color, click it with the right mouse button. Clicking the X that appears at the left end of the palette removes the object's fill if you click with the left mouse button, or outline if you click with the right button.



**Opacity**

Opacity refers to the ability to see through something. If an area is 100% opaque, you cannot see through it. Levels under 100% increase the ability to see through objects. The opposite of transparency.

See also Transparent.

**Opaque**

The inability to see through an image or object. The opposite of transparent.

**Open Prepress Interface (OPI)**

A method for placing high resolution bitmaps on the printed page, while using low resolution replicas for placement.

Two images are created using a high-end scanner. A high-resolution version (which is kept on file), and a low-resolution equivalent. The low resolution image is imported into your documents, using them "for position only" (FPO). Working with FPO images keeps your document size smaller and speeds up screen redrawing time. When you send your artwork back to the service bureau for final imaging to film, your high resolution files are put in place, resulting in a final product with a high-resolution.

**Orientation**

The direction in which objects are displayed on the page. For example, a page oriented so that the horizontal dimension is greater than the vertical dimension is said to have a landscape orientation.

See also Landscape and Portrait.

**Out-of-gamut color**

A color that is beyond the capabilities (outside the gamut) of a given device.

**Overlay (mask)**

A red-tinted transparent sheet superimposed over the entire image used to differentiate the areas of the image that are protected by the current mask from the editable ones (selection).

**Overprint**

In commercial printing: printing a second color over an area that has already been printed to avoid white gaps where adjoining colors are not aligned properly. Overprinting is part of the process of creating traps in color-separations. You can also use it to overprint selected spot colors for certain visual effects.

This option is best used when the top color is much darker than the underlying color, otherwise an undesirable third color might result (e.g., red over yellow might result in an orange object).

See also Trap.

**Paint Color**

Paint Color is the color used by the Paint tool to apply color, and used by the Line and Shape Tools as an outline color.

**Paint mode**

Paint modes determine the way the paint is applied to the colors that already exist in your image. For example, the Normal paint mode simply replaces the base color with the paint color, whereas the Add mode creates a result color by adding the values of the paint and base colors.

**Paint program**

A generic term referring to computer graphics programs that store digital images as bitmaps. Corel PHOTO-PAINT is a paint program. Programs such as CorelDRAW, which store images as a series of lines and curves, are called draw programs.

**Palette**

See Color Palette.

**Paletted color mode**

An 8-bit color mode that stores and displays images using up to 256 colors.

Converting a complex image to paletted color mode is useful for reducing file size, especially in preparation for Internet publishing. Paletted color mode also allows you to use the Color Table.

**PANTONE® HEXACHROME (TM) palette**

Colors that are available through the PANTONE® Hexachrome system, which is based on the CMYK color model but adds two additional inks for a total of six inks and a broader range of colors.

**PANTONE® MATCHING SYSTEM Colors**

A palette that uses colors available through the PANTONE® Matching System (also known as PANTONE® Spot Colors). Since spot colors correspond to solid inks and are not CMYK-based, each unique color applied to an object results in an additional color separation plate. In Corel DRAW, you can use spot colors freely. In PHOTO-PAINT, you can use spot colors only in CMYK images to affect duotones. Colors can be displayed by name or swatch through the Color Options menu.

**PANTONE® Process Colors palette**

A palette that uses colors available through the PANTONE® Process Color system, which is based on the CMYK color model. The first 2,000 colors are two-color combinations; the remainder are three- and four-color combinations. Colors are based on CMYK, and therefore do not add additional color separation plates. Colors can be displayed by name or swatch through the Color Options menu.

**PANTONE® Spot colors palette**

See PANTONE® Matching System.

**PANTONE® process colors**

Colors that are available through the PANTONE® Process Color system, which is based on the CMYK color model. The first 2,000 colors are two-color combinations; the remainder are three- and four-color combinations. Colors are based on CMYK, and therefore do not add additional color separation plates. Colors can be displayed by name or swatch through the Color Options menu.

## **Paper Color**

Paper Color refers to the color of an image's background.

Although normally white, the Paper Color in Corel PHOTO-PAINT can be set to any color you wish. The Paper Color is set in the Create a New Image dialog box, but can also be changed by selecting a color from an image by clicking the Eyedropper tool while holding down the CTRL key. Note that the color you specify as Paper Color will only affect new image files; it is not applied to the current image.

**Path**

The line or series of lines you draw using the Path Node Edit tool. A path, both open and closed, can be converted into a mask marquee or highlighted with a border of color using the controls in the Tool Settings Roll-Up for the Path Node Edit tool.

**PCX**

The filename extension for bitmap files created by paint programs such as PC Paintbrush.

**Photo CD**

A process developed by the Eastman Kodak company that converts 35mm film negatives or slides into digital (RGB) format and stores them on a compact disc (CD).

**Photographic (gamut mapping)**

The gamut mapping necessary for the reproduction of photographs. Corel PHOTO-PAINT uses a photographic color mapping to compress colors into your printer's gamut of colors. This technique preserves the tonal characteristics and relationships of colors in the photographs you are trying to print. This way, photographs reproduce with enhanced contrast and color variation.

See also Colorimetric

**PHOTOPNT.INI**

A text file with configuration information about Corel PHOTO-PAINT. This file is in the COREL\PHOTOPNT folder and can be edited by double-clicking it in Windows Explorer. Changes you can make include the interval between backup file creation and the directory in which these backup files are stored.

**Pixel**

Pixels, whose name is derived from the term Picture Element, are dots arranged on grids that combine to form an image. Computer images are created as an array of such dots, each having a specific color. See also resolution and bit depth.

**PMT**

In commercial printing: a term often used for halftones. They are called PMTs because of the devices in scanners that can be used to produce them: Photo Multiplier Tubes.

**Point**

A unit of measure used primarily in typesetting for designating type sizes. There are approximately 72 points(pts) to an inch and exactly 12 points to a pica.

10 pts   18 pts   36 pts

In CorelDRAW, a point is a Bezier vertex or control point.

**Point size**

Typographic unit of measurement equal to 1/72 inch.

10 pts   18 pts   36 pts

**Portrait**

A page oriented so that it prints from left to right across its shortest dimension.

### PowerClip

A feature that allows you to place objects (called contents objects) inside other objects (called container objects). If the contents object is larger than the container object, CorelDRAW automatically crops it. You see only the contents that fit inside the container.



**PostScript**

PostScript is a page description language used to send instructions to a PostScript device about how to print each page. All the objects in a print job (e.g., curves and fills) are represented by lines of PostScript code that the printer uses to produce your work.

**PostScript textures**

A type of pattern fill designed using the PostScript language. Some textures are extremely complicated and require several minutes or more to print, or to update on the screen. Therefore, PostScript fills display as the letters "PS" rather than with the actual texture.

**Preset brush type**

A preset brush type is a combination of brush attributes such as size, shape, transparency, and texture. A number of preset brush types have been provided for each category of brush to produce different effects when using any of the brush tools. For example, the Pencil brush has two preset brush types: HB and 2B. The difference between the two preset types is that the 2B pencil brush type has a larger nib and more texture, producing a thicker, grainier stroke.

**Process color**

In commercial printing: color produced by the process of blending levels of cyan, magenta, yellow and black This is different from a spot color, which is a solid ink color printed individually (one plate per spot color).

See also Four-color process.

**Progressive**

A method of having the image appear on-screen in entirety, but at a low, blocky resolution. As the image data loads, the image quality improves from unfocused to clear.

**Proof**

To print a trial version of a graphic to see how it will look when output in its final form. Laser printers are commonly used to proof monochrome artwork while color artwork is often proofed on thermal color printers. High-quality proofing systems such as Chromalin (Dupont) or Matchprint (3M) can be used to proof color separations.

**Protected area**

Section(s) of the image that is protected by the current mask. It is not affected by editing changes, such the application of paint or a special effect performed on the image. When looking at an image using the mask overlay, the protected area is represented by the overlay's color, red by default. The transparent areas of the overlay correspond to the editable area(s) that make up the selection.

**Pure color**

Any color that individual pixels on a computer screen can assume. On a monochrome screen, there are only two pure colors, black and white. Color screens typically display 16 or 256 pure colors. Newer video cards will display 32 or 64 thousand colors, and 24-bit cards display 16.7 million colors.

See also Dithered color.

**Radial fill**

A fountain fill that creates a gradual transition from one color to another following a concentric circular pattern.

**Radio button**

A round or diamond-shaped button in a dialog box that turns an option on or off. When two or more options are available, only one can be selected. They are also called option buttons.

**Reduce Tolerance (path)**

Control found in the Tool Settings Roll-Up and in the Property Bar for the Path Node Edit tool. The value typed in this box must be between 1 and 10; it controls the extent of automatic reduction of nodes on a curve. The higher the value, the more nodes are removed from the path or the section of the path you select. A high value may result in significant changes in the path's shape after Auto-reduce has been used.

## **Resolution**

Resolution is an umbrella term that refers to the amount of detail and information an image file contains, as well as the level of detail an input, output or display device is capable of producing. When you work with bitmaps, resolution affects both the quality of your final output and the file size.

The resolution you choose for your image will usually move with your file – that is, whether you print a bitmap file to a 300 dpi laser printer or to a 1270 dpi imagesetter, it will always print at the resolution you set when you create the image.

If you want your final output to look like its onscreen counterpart, you have to understand the relationship between the resolution of your image and the resolution of your various devices before you begin to work. Once you do, you will be able to produce effective, consistent results.

**RGB**

RGB, an additive set of colors based on the light primaries red green and blue, refers to a color mode, and to a color model.

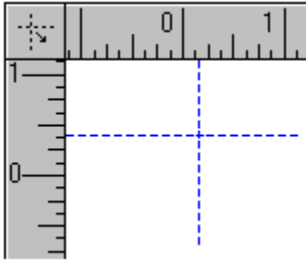
The RGB color mode is a 24-bit method of processing images which uses 16 million colors to store and display images.

The RGB color model is a color model which defines colors using light primaries. Because of this, it is the model used for monitor display.

**Roll-Up**


A Roll-Up is a dialog box that contains the same sorts of things as most dialog boxes – command buttons, boxes, etc. However, unlike most dialog boxes, you can keep Roll-Ups open while you continue to work. If you need to maximize your workspace but wish to keep the Roll-Up open, roll it up by clicking the arrow in the Title Bar. This leaves just the Title Bar visible. Click the arrow again to unroll it.

### Ruler crosshairs



The point where two rulers meet.

## Rulers

Rulers are exactly what you expect them to be  rulers that appear along the side and/or top of your work area to help you keep track of the actual size and location of parts of your image. You can set the unit of measure using the Grid and Ruler Setup dialog box.

**Saturation**

Saturation is the purity of a color. The HSB color model uses Saturation as a component that determines the purity or intensity of a color. The more colors used to mix a color, the duller the color looks.

See also Hue and Brightness.

**Scanner**

A device that converts images on a page or transparency into digital form. Corel applications can import scanned images (also called bitmaps).

**Screen frequency**

Screen frequency, also called screen ruling and halftone frequency, is a measure of a halftone screen in lines per inch (lpi). A screen frequency ruling of 150 lpi is 22,500 (150<sup>2</sup>) halftone dots per inch (dpi). The frequency of lines of dots contained within a given halftone screen is used to reproduce a continuous tone image as a halftone image via an offset printing method.

**Secondary mouse button**

Normally the right mouse button. However, if you've swapped mouse buttons, the left mouse button becomes the secondary button.

**Segment (path)**

Section of a path located between two consecutive nodes. A path is a series of segments

**Selection**

Section of the image that is not protected by the current mask thus available for editing. The selection is affected by the use of painting and editing tools, special effects, and image commands. When you apply the mask overlay, the selection is represented by the transparent areas of the overlay.

**Server application**

A server application is an OLE (Object Linking and Embedding) compatible application that is used to create OLE objects (e.g., pictures, charts, text). These OLE objects can be placed in other OLE applications. Not all OLE applications can be servers. If you are uncertain about whether an application is capable of performing as a server, check its documentation.

**Server-side**

Server-side image maps are not dependent on any browser to process the map information, but the server must be able to recognize the code in the map file. NCSA and CERN use different codes, so you do need to know whether the server you are using runs CERN or NCSA. Contact your server administrator to find this information.

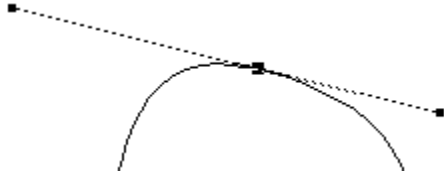
**Service bureau**

In commercial printing: a commercial business separate from the printer that prepares documents and/or artwork for commercial printing. Generally a service bureau will be able to prepare halftones, separations, and proofs using high-resolution PostScript devices.

**Skew**

To change an object's shape by dragging one of the side handles that appear when you double-click it.

### Smooth node



A type of node through which curves pass smoothly rather than at sharp angles. The node, and its two control points are always on a straight line. The control points can each be at a different distance from the node. Node types are selected from the Path Node Edit Tool Settings Roll-Up.

**Snap**

To force an object to move next to a grid line or guideline. You can turn Snap to Grid or Snap to Guideline on and off in the Tools menu.

**Spot color**

In commercial printing: a solid ink color printed individually--one plate per spot color.

This is different from a process color.

See also Four-color process.

**Spread**

One of the brush tool settings. The Spread control determines the distance between the dabs of a brush stroke.

**Square fill**

A fountain fill that creates a gradual transition from one color to another following the pattern of concentric squares.

**Status Bar**

An area at the bottom of most Corel application screens that shows information about the action in progress.

**Stretch**

To resize an object horizontally or vertically by dragging the handles that appear around its highlighting box when you click it.

**Subtractive color model**

A color model, such as CMYK, that is based on the behavior of light reflected from pigments on the page. When white light strikes the surface, only specific bandwidths are reflected, depending on the density of the pigments; the pigments subtract (by absorption) the bandwidths of white light that do not contribute to the specified color.

See also Additive color models.

**Swap disk**

A swap disk is hard disk space used by software applications to store temporary files not currently in use. PHOTO-PAINT provides an option for selecting two swap disks. This artificially increases the amount of memory available on your system. It also makes PHOTO-PAINT use the space in bigger increments than Windows, which is better for handling bitmap images.

**Swatch**

A series of squares containing colors in the Color Palette.

A swatch book contains hundreds of samples for comparing and selecting colors.

### Symmetrical node



A symmetrical node is a node that constrains the angle between its two control points to 180 degrees. The two control points are both the same distance from the node. Use this node when you want the same curvature on both sides of the node.

See also node.

**Texture fill**

A texture fill is a mathematically generated pattern with customizable attributes. Unlike the tiling bitmap fills, textures fill a designated area with a single image. The many presets include water, minerals, clouds, and dozens of others.

**Threshold**

In PHOTO-PAINT: refers to a level of tolerance for tonal variation in a bitmap image.

For example, when converting your image to black and white, the threshold you set will determine how many tonal values will be converted to black and how many will become white.

Threshold settings are also used in color-sensitive masking and the application of some Effects filters.

**Threshold (path)**

Control available when creating a path from a mask. Threshold values range from 1 to 10, and determine the size of the angle required between sections of a mask for a node to be created at the intersection of the sections. A low value means has a tendency to produce more cusps, therefore more nodes on the resulting path than using a high value.

**Tightness (path)**

Control available when creating a path from a mask marquee. Tightness values range from 1 to 10, and determine how close the shape of the path will be to the shape of the marquee. The higher the value, the more the new path resembles the marquee; it will have more nodes than a path with a lower tightness value.

**Tiling**

The technique of repeating an image across a larger surface to cover it. Tiling is often used to create a patterned background for World Wide Web pages.

**Tint**

Or "color cast": refers to the application of a specific semi-transparent color over an image.

**Thumbnail**

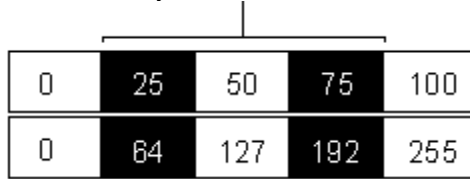
A small bitmap image that lets you preview a file before opening or importing it, or a fill before you apply it. You'll find thumbnail previews on the Open and Import Dialog boxes as well as the PostScript Texture and Texture Fill Dialog boxes.

**Toggle**

Any option that has mutually exclusive settings. For example, Show Rulers under the View menu toggles between showing and hiding the rulers.

## Tolerance

Tolerance is an adjustment for controlling the color sensitivity of the Lasso Mask tool, Magic Wand Mask tool, Fill tool and Color Replacer tool. Tolerance is also used in the Color Mask dialog box to determine which pixels will be selected or protected when creating the color mask. Tolerance values range from 0 to 100. A pixel is included if its grayscale value falls within the defined tolerance. Grayscale values are defined on a scale ranging from 0 to 255.



0	25	50	75	100
0	64	127	192	255

The first row in the illustration represents the scale of tolerance values. The second row shows the corresponding values in the grayscale scale. If you define a tolerance of 25, and click a pixel in the image that is 50% black, 50% black becomes the seed color, i.e. the color on which the color range is defined. All colors that are in the 50% black plus or minus 25 range, are included. In other words, all pixels that are 25% black (50 minus tolerance of 25) to 75% black (50 plus tolerance of 25) are also selected (as illustrated above).

In grayscale terms, a pixel that is 25% black has a grayscale value of 64 (25% of 255); 75% black is 192 (75% of 255). This means that pixels that have grayscale values from 64 to 192 are included.

You can choose a tolerance value in one of two modes:

- **Normal**

Creates a selection, applies a fill, etc., based on the color similarity of adjacent pixels in the color mode of the image you are working with. The tolerance value you choose controls how discriminating the color selection will be.

- **HSB**

Creates a selection, applies a fill, etc., based on Hue, Saturation, and Brightness levels of adjacent pixels. The levels you set control how discriminating the HSB selection will be.

**Toolbar**

A group of buttons that provides quick access to a series of related commands. In CorelDRAW, you can use any combination of the preset Toolbars, or create your own containing the buttons and button arrangements you find most efficient.

**Toolbox**

The toolbar that appears by default on the left side of the screen, which contains such tools as the Fill, Paint, Undo, Effects, and Clone tools.

### **TOYO palette**

Colors that are available through the TOYO COLOR FINDER system. The range of colors offered here includes those created using TOYO process inks and those that are reproduced using TOYO standard inks. These colors are defined using the Lab color space and are converted to RGB for display and CMYK for printing. Colors can be displayed by name or swatch through the Color Options menu.

**Transformation**

Changing an object by moving, stretching, scaling, or rotating it.

**Transparent**

The ability to see through an object, image, or mask. The opposite of transparent is opaque. Setting lower levels of transparency causes higher levels of opacity and less visibility of the underlying objects/masks/image.

**Trap**

In commercial printing: the process of adding a slight overlap between adjacent areas of color to avoid gaps caused by registration errors. You can create a trap in Corel PHOTO-PAINT if you are printing color separations.

**True color**

Some video cards are capable of displaying true, or 24-bit color. True color cards display 16.7 million colors as pure colors. On a monochrome screen, there are only two pure colors, black and white. Color screens typically display 8, 16, or 256 pure colors. See also Dithered color and Pure color.

**TRUMATCH Colors**

A color-matching system for specifying process colors. The TRUMATCH® color system is based on the CMYK color model and, therefore, colors do not add additional color separation plates. Colors are organized by hue (red to violet), saturation (deep to pastel), and brightness (adding or removing black). Colors can be displayed by name or swatch through the Color Options menu.

**Uniform fill**

A solid color, black, white, or shade of gray used to fill objects or parts of an image. You can select uniform colors from the Uniform Fill dialog box.

**Uniform Colors (palette)**

An independent palette (not based on a color-matching system or your image) which provides 256 colors uniformly spread between red, green, and blue.

## URL

Uniform Resource Locator. A URL is a "smart address"; the URL tells the Web server what kind of information to get and where to get it from, so that a new Web page at a new location is displayed.

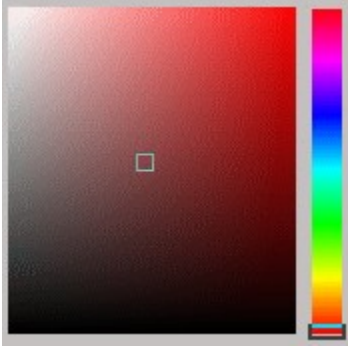
**http://www.website.com/family.html**  
Type of resource      Internet address      document name and path

**Vector graphics**

Graphics created in programs such as CorelDRAW where shapes are represented as a series of lines and curves. Vector graphics are also referred to as object-based graphics or line art. This contrasts with bitmap graphics which are created pixel by pixel in paint programs and by scanners.

### Visual Selector

A graphic representation of a color model which includes an indicator for selecting colors.



**Well**

A series of squares containing colors in the Color Palette.  
See also Swatch.

**White point**

In Color Manager: setting a white point value defines the color temperature of "pure" white for your monitor. The "heat" (red component) or "coolness" (violet component) of measured in degrees Kelvin.

**WIN.INI**

A file containing Windows settings and preferences for screen color, mouse double-click speed, fonts, printers, etc. You can change the WIN.INI settings by editing this file with the Windows Notepad or other ASCII text editor.

**Wizard**

An automated assistant that helps make each task simple and trouble free. The wizard asks you questions and then performs the appropriate actions based on your answers.

**Workpath**

The path currently displayed in the Image Window which has not been saved to disk.

## YIQ

A color model used in television broadcast systems (North American video standard - NTSC). Colors are split into a luminance value (Y) and two chromaticity values (I and Q). On a color monitor, all three components are visible; on a monochrome monitor, only the Y component is visible. The square, two-dimensional visual selector defines the I and Q values, and the vertical visual selector defines the Y value. All values are scaled from 0 to 255.

