



**A**  
**B**  
**C**  
**D**  
**E**  
**F**  
**G**  
**H**  
**I**  
**J**  
**K**  
**L**  
**M**  
**N**  
**O**  
**P**  
**Q**  
**R**  
**S**  
**T**  
**U**  
**V**  
**W**  
**X**  
**Y**  
**Z**

**A**

2D (two-dimensional)

3D (three-dimensional)

A sizes

Active window

Additive color model

AI

Anchor point

ANSI

Anti-aliasing

Artistic text

Ascender

ASCII

Aspect ratio

Attitude

Attributes

Autobackup

Auto panning

Autotrace

AVI

Axis

## **B**

B size

Backup

Baseline

Baseline shift

Bezier curve

Bit depth

Bitmap

Bitmap texture

Black and white

Black point

Bleed

Blend

BMP

Brighten

Brightness

Brightness and Contrast filter

Browser

Bullet

## **C**

Calibration

Calibration bar

Calligraphic

Callout

Cap height

CDR

Cell

Center of rotation

CGM

Channel

Character properties

Character Code

Character set

Check box

Child

Child color

Choke

Chromaticity

Cicero

CIE (Commission internationale de l'eclairage)

Click

Client application

Clipart

Clipboard

Clipping hole

Clone

Closed path

CMY

CMYK

CMYK255  
Color channel  
Color depth  
Color gamut  
Color manager  
Color mode  
Color model  
Color palette  
Color proof  
Color separation  
Color space  
Color temperature  
Color, RGB  
Colorimetric (gamut mapping)  
Combine  
Command  
Command button  
Composite  
Compound blend  
Conical fountain fill  
Constrain  
Continuous tone  
Contour  
Contrast  
Control object  
Control point  
CorelDRAW  
Corel PHOTO-PAINT  
CPT  
Crop  
Crop marks  
Crosshairs  
Cursor  
Curve object  
Cusp node  
Custom colors (palette)

## **D**

Default Artistic text  
Default Paragraph text  
Default printer  
Default settings  
Densitometer  
Densitometer scale  
Descender  
Deselect  
Destination file  
Device driver  
Dialog box  
DIC

Didot  
Direction keys  
Directory  
Dither  
Dithered color  
DLL (Dynamically Linked Library)  
Dot gain  
Double-click  
Downloadable fonts  
DPI  
Drag  
Drag and drop  
Drawing Page  
Drawing Window  
Drive  
Drop cap  
Duotone  
Dupont palette

## **E**

Edge pad  
Em  
Embedded object  
Emboss  
Emulsion  
En  
End node  
Envelope  
EPS  
Equalize filter (auto equalize)  
Extension  
Extrude

## **F**

Feathering  
FH3  
File preview  
Fill color  
Film  
Filter  
Flyout  
FOCOLTONE  
Folder  
Font  
Force justification  
Force line breaks  
Fountain fill  
Four-color process  
Frame or Paragraph Text frame  
Full-color bitmap pattern

[Full-color pattern](#)  
[Full-screen preview](#)

## **G**

[Gamma](#)  
[Gamut](#)  
[Gamut mapping](#)  
[Gaussian](#)  
[GDF](#)  
[GEM](#)  
[GIF](#)  
[Gradient fills](#)  
[Gray component replacement \(GCR\)](#)  
[Grayscale](#)  
[Grayscale image](#)  
[Greeking](#)  
[Grid](#)  
[Group](#)  
[Guidelines](#)  
[Gutter](#)

## **H**

[Halftone](#)  
[Halftone screen](#)  
[Handles](#)  
[Hanging indent](#)  
[Header](#)  
[Highlighting box](#)  
[Hints](#)  
[Histogram](#)  
[HLS](#)  
[Hotkeys](#)  
[HPGL](#)  
[HSB](#)  
[HTML](#)  
[Hue](#)

## **I**

[Icon](#)  
[Image colors \(palette\)](#)  
[Image header](#)  
[Image map](#)  
[Image setter](#)  
[Indent](#)  
[Insertion point](#)  
[Intensity](#)  
[Intercharacter spacing](#)  
[Interlacing](#)  
[Interline spacing](#)  
[Interparagraph spacing](#)  
[Interruptible refresh](#)

[Intersection](#)  
[Interword spacing](#)

## **J**

[Jaggies](#)  
[JPEG \(Joint Photographic Experts Group\)](#)  
[Justify](#)

## **K**

[Kerning](#)

## **L**

[LAB](#)  
[Landscape](#)  
[Layer](#)  
[Layout style](#)  
[Leader tabs](#)  
[Limitcheck error](#)  
[Line art](#)  
[Line style](#)  
[Linear fountain fill](#)  
[Linked object](#)  
[Lino](#)  
[List box](#)  
[Lossless](#)  
[Lossy](#)  
[LPI](#)  
[Luminosity](#)

## **M**

[Marquee box](#)  
[Marquee select](#)  
[Master](#)  
[Master layer](#)  
[Maximize](#)  
[Menu](#)  
[Menu Bar](#)  
[Microsoft® Internet Explorer palette](#)  
[Minimize](#)  
[Mirror](#)  
[Mirror editing](#)  
[Moire pattern](#)  
[Monochrome](#)  
[Multiple select](#)

## **N**

[Navigator](#)  
[Negative](#)  
[Nested group](#)  
[Netscape Navigator™ palette](#)  
[Newspaper-style columns](#)  
[Node](#)

Nudge

## **O**

Object

Object Linking and Embedding (OLE)

On-screen Color Palette

One-point perspective

Opacity

Open path

Open Prepress Interface (OPI)

Orientation

Out-of-gamut color

Overprint

## **P**

Page border

Page Number display

Paint programs

Palette

Paletted color mode

PANTONE Process colors palette

PANTONE Spot colors palette

Paper color

Paragraph text

Parent

Parent color

Path

Path name

Pattern fill

PCD

PCT

PCX

Photo CD

Photoshop PSD

PIC

Pica

PICT

Pitch

Pixel

Pixmap

PLT

PMT

Point

Polygon

Portrait

Positive

PostScript

PostScript textures

PowerClip

Preview selected only



[Primary mouse button](#)

[Printable page](#)

[Process color](#)

[Progressive](#)

[Pure color](#)

## **R**

[Radial fountain fill](#)

[Rasterizer](#)

[Registration marks](#)

[Resample](#)

[Resident fonts](#)

[Resolution](#)

[RGB](#)

[Right-click](#)

[Right mouse button](#)

[Roll-Up](#)

[Rotate](#)

[Ruler crosshairs](#)

[Rulers](#)

## **S**

[Sans serif](#)

[Saturation](#)

[Scale](#)

[Scanner](#)

[Scitex](#)

[SCODL](#)

[Screen angles](#)

[Screen frequency](#)

[Scroll](#)

[Segments](#)

[Select](#)

[Selection box](#)

[Serif](#)

[Server application](#)

[Service bureau](#)

[Skew](#)

[Smooth node](#)

[Snap](#)

[Source file](#)

[Spectral power distribution](#)

[Spectral Signature](#)

[Spectrophotometer](#)

[Spot color](#)

[Spread](#)

[Square fountain fill](#)

[Stacking order](#)

[Start node](#)

[Status bar](#)

[Stretch](#)  
[Style template](#)  
[Styles](#)  
[Subpath](#)  
[Subscript](#)  
[Subtractive color model](#)  
[Superscript](#)  
[Swatch](#)  
[Symbol](#)  
[Symmetrical node](#)

## **T**

[Tab](#)  
[Template](#)  
[Text styles or variations](#)  
[Texture fill](#)  
[TGA](#)  
[Thumbnail](#)  
[Tick divisions](#)  
[TIFF \(Tagged Image File Format\)](#)  
[Tile](#)  
[Tiling](#)  
[Tints](#)  
[Title Bar](#)  
[Toggle](#)  
[Toolbar](#)  
[Toolbox](#)  
[ToolTips](#)  
[TOYO Palette](#)  
[Tracing](#)  
[Transformation](#)  
[Transparent](#)  
[Transparency in inline Internet images](#)  
[Trap](#)  
[Trim](#)  
[True color](#)  
[TrueType fonts](#)  
[TRUMATCH](#)  
[Tutors](#)  
[Two-color pattern](#)  
[Two-point perspective](#)  
[Type Assist](#)  
[Typeface](#)

## **U**

[Undercolor removal \(UCR\)](#)  
[Uniform Colors \(palette\)](#)  
[Uniform Resource Locator \(URL\)](#)  
[Uniform fill](#)

## **V**

Vanishing point

Vector graphics

Vector pattern

Visual selector

## **W**

Weight

Weld

White point

WIN.INI

Window

Wireframe view

WMF

Word spacing

Working page

WPG

WYSIWYG (What-you-see-is-what-you-get)

## **X**

X-height

## **Y**

YIQ

## **Z**

Zoom

**2D (two-dimensional)**

An object that only exists in the dimensions of width and height.

**3D (three-dimensional)**

An object that exists in the dimensions of width, height, and depth.

**A sizes**

Paper sizes measured in metric units. CorelDRAW provides 7 different A sizes ranging from A0 to A6.

**Active window**

The window in which you are working. Any operations you perform apply to the active window.

**Additive color model**

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

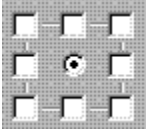


**AI**

The filename extension for vector graphics files created using Adobe Illustrator.

## Anchor point

The point that remains stationary when you rotate, mirror, stretch, or scale an object. This point can be a handle on the object's Selection box or its center of rotation. You can choose an object's anchor point using the Anchor Point control (shown below) on the Transform Roll-Up. The eight check boxes on this control represent the handles on the object's Selection box. The button in the middle represents the object's center of rotation.



**ANSI**

The American National Standards Institute character set. It consists of 256 characters; the first 128 are the same as the ASCII character set.

**Anti-aliasing**

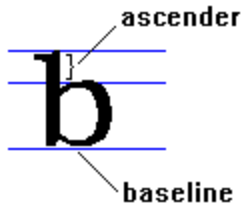
The filtering of a bitmap image to remove jagged edges. Anti-aliasing fills in jagged pixels with intermediate colors or shades of gray, to smooth the transitions between colors.

**Artistic text**

Text type created using the Text tool. Use Artistic text when you want to add single lines of text such as titles or you want to apply graphic effects such as fitting text to a path, creating extrusions and blends, and producing all other special effects. An Artistic text object can contain up to 32,000 characters.

## Ascender

In lowercase letters, the part of the letter that extends above the main body (known as the x-height).



**ASCII**

The character set of the American Standard Code for Information Interchange. This character set consists of the characters available on a standard 128 character keyboard. This includes non-printable control codes such as hard returns and page breaks.

**Aspect ratio**

The ratio of the width of an image to its height (expressed mathematically as  $x:y$ ). For example, the aspect ratio of an image that is 640 x 480 pixels is 4:3. You can change an object's aspect ratio by stretching it in one direction.



**Attitude**

See Orientation.

**Attributes**

Characteristics of an object that control its appearance and can be edited. Shapes like ellipses, for example, have attributes that control their fill, outline, and size. A text object has attributes such as typeface, weight, and character spacing. Also called properties.

**Autobackup**

A feature in Corel applications that automatically creates a second or "backup" copy of a file while you work. You can enable or disable Autobackup, set the time interval at which the file is saved, and set the directory in which backup files are stored. The backup file is named "Autobackup\_of\_filename," but it is deleted when you close the file and replaced with a backup file called "Backup\_of\_filename".

**Auto-panning**

A feature that automatically scrolls the Drawing Window when you drag beyond its borders. You can enable or disable Auto-panning using the Auto-panning control in the Options Dialog box.

**Autotrace**

A feature in CorelDRAW that automatically generates a line drawing from an imported bitmap image.

**AVI**

The filename extension (Audio Video Interleave) for a Windows video file.

**Axis**

A hypothetical linear path. The x, y, and z axes (width, height, and depth, respectively) define the coordinates of the axis in three-dimensional space. The axis about which an object rotates is its axis of rotation. In CorelDRAW, an object's axes are parallel to its Selection box, a hypothetical box that appears around an object or group when it is selected.

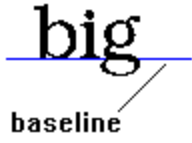
**B size**

Paper size measured in metric units. CorelDRAW provides 5 different B sizes ranging from B1 to B5.



## **Baseline**

The imaginary line that aligns the bottom of the main body of a text string.



**Backup**

Each time you save a file in a Corel application, an additional backup file is created. These files can be saved in any directory you want. The backup file will be named "Backup\_of\_filename".

**Baseline shift**

A setting that raises or lowers the baseline of text. By shifting the baseline, you can create subscript or superscript effects.

**Bezier curve**

A path defined by the position of four control points — points that extend from nodes along curves, mask marquees, and complex object marquees — that are located at the ends of the tangents of the vertices. The length and angle of the tangents describe how a path deviates from linear between its vertices.

## Bit depth

The number of binary bits that are 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). The number of color values a given bit depth can produce is equal to 2 to the power of the bit depth.

Some 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

**Bitmap**

An image composed of a series of pixels or dots that arranged to represent an image. Scanners and paint programs such as Corel PHOTO-PAINT generate bitmap images. In contrast, CorelDRAW creates images using vector objects, which are graphics that represent shapes as a series of lines and curves. Corel applications can import and export files in bitmap format.

**Bitmap texture**

Adjustable preset fills that are available from the Texture Fills dialog box. These include variable fills that look like clouds, water, gravel, minerals, and dozens of other substances. Bitmap textures display on your screen and print to virtually any type of printer.

**Black and white**

A 1-bit color mode that stores images as two solid colors — usually black and white — with no gradations. This mode is useful for line art and simple graphics.

"Black and white" photographs contain many shades between black and white and are better handled in the grayscale color mode.



**Black point**

A color printing term that describes the blackness level relative to either a 4-color and a 3-color black. A 4-color black is produced by printing 100% cyan, 100% magenta, 100% yellow, and 100% black. A 3-color black is produced by using 100% of only the CMY inks, and is therefore not as dark.

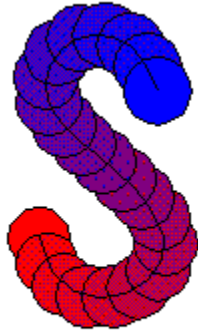
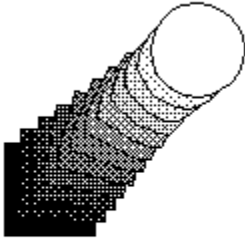
**Bleed**

In commercial printing, the part of a layout that extends beyond the edge of the area to be printed. A bleed lets you extend an image to the edge of the page.

## Blend

A special effect that is created by merging one object with another through a progression of intermediate shapes and colors. The following examples show a basic blend and a blend on a path. In both cases, the blended objects are the start and finish (i.e., bottom and top) objects in the progression.

### Basic Blend



Blend on a path

**BMP**

The filename extension for Windows bitmap files. Corel applications can import and export BMP files.

## **Brighten**

A type of lens you can create using the Lens Roll-Up. A Brighten lens adds a specific level of brightness to objects. Place Brighten lenses over bitmaps to create interesting effects.

**Brightness**

In the HSB color model, the component that determines the amount of black in a color.

**Brightness and Contrast filter**

The Brightness and Contrast filter is used to lighten or darken a picture (brightness) or to alter the distinction between light and dark areas (contrast). Intensity affects the brighter areas of a picture by making them brighter or darker.

**Browser**

Computer software that interprets HTML tags, displays Web pages, runs Java programs, and more. A browser can be used to view Web pages (HTML documents).



**Bullet**

A dot or other character used to differentiate between, or to add emphasis to, items in a list. You can choose a bullet style in the Styles Roll-Up. If you want to change the symbol used for a bullet, use the controls on the Effects tab in the Format Text dialog box.



**Calibration**

Adjusting a mechanical device, such as a monitor, printer, or scanner, to display, print, and capture colors as accurately as possible. In Corel applications, calibration is performed using the Corel Color Manager.

**Calibration bar**

Strips of color printed with an illustration. The calibration bar is used as a reference to calibrate a monitor so that it displays colors as they appear in the printed output.

## **Calligraphic**

An effect created with the Outline tool. Objects are given an outline that varies in thickness and gives curved objects a hand-drawn appearance.



**calligraphic  
letter "a"**

**Callout**

Lines used to point to components in a drawing. A callout line can consist of one or two segments. You can draw callout lines using the Callout tool, which appears on the Property Bar when you select the Dimension tool from the Curve flyout.

**Cap height**

The distance from the baseline to the top of an uppercase character.

cap height The diagram shows the word "Corel" in a serif font. A horizontal blue line is drawn across the top of the uppercase letter 'C'. A vertical red double-headed arrow is positioned to the left of the 'C', extending from the top of the blue line down to the baseline of the text. The text "cap height" is written to the left of the arrow.

**CDR**

The filename extension for the vector-based file format created using CorelDRAW.

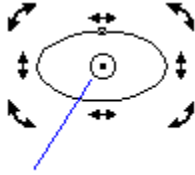
**Cell**

In the Object Data Manager, the basic unit in which data is stored. You can enter information in cells either directly or by assigning values using the Object Data Roll-Up.



## Center of rotation

The point around which an object rotates. You can reposition the center of rotation either by using the mouse or by specifying exact values in the Rotation Roll-Up. To display an object's center of rotation, double-click the object.



**center of rotation**

**CGM**

The filename extension for Computer Graphics Metafile. CGM files are vector graphics files. CorelDRAW can import and export this file type.

**Channel (Color)**

A channel is an 8-bit grayscale version of your image that functions like a plate used in the commercial printing process: each channel represents one level of color in your image. When all of the channels are printed together they produce the entire range of colors in the image.

For example, an RGB image is composed of three channels (red, green, and blue). When all three channels are printed or displayed together, they create the entire range of colors in the image.

**Character properties**

Characteristics that determine the appearance of text — for example, typeface, style, and size. You can specify character properties for Artistic text and Paragraph text using the Property Bar, Text tool bar, and the Format Text dialog box.

**Character code**

The number that corresponds to a character in a character set, such as the ASCII or ANSI character sets.

**Character set**

The letters, punctuation marks, and special characters in a font. Accents and mathematical symbols are examples of special characters.

**Check box**

A square box in a dialog box or Roll-Up used to enable or disable an option. An option is enabled when an X or check mark appears in the check box, and it is disabled when the check box is empty. Click inside a check box to enable or disable the option.

**Child**

An object that is linked to another object (its parent) in a hierarchy. When the parent is moved, the child and all other objects also move.



**Child color**

CorelDRAW's new Color Styles Manager allows you to link colors (called a "parent/child" relationship). Using the Color Styles Manager, you can create a "parent" color and link a number of "child" colors to the parent. Any changes made to the parent color in a style are also reflected in the child colors. After you define a color style, you can use the Color Styles Manager to apply it to any object.

**Choke**

In commercial printing, a form of trapping created by extending the background object into the foreground object.

**Chromaticity**

Chromaticity defines the hue and saturation, or chroma levels, of your monitor.

**Cicero**

A unit of measurement equivalent to 12 didots. One inch equals 5.63 ciceros.

**CIE (Commission internationale de l'eclairage)**

A color chart widely used as a standard to describe the range of color seen by the human eye.

**Click**

To press and release a mouse button.

**Client application**

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

**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 is used to hold cut or copied information. The Clipboard stores information until it is pasted into a diagram or replaced by another object that has been cut or copied.

**Clipping hole**

A transparent hole in a curve object through which underlying objects are visible. You can create clipping holes by combining overlapping objects using the Combine command.

**Clone**

A copy of an object or an area of an image that is linked to the original object. Most changes made to the original object (the master) are automatically applied to its clones.

You can also clone a special effect that is applied to an object and apply it to other objects. Objects with cloned effects take on all changes that are made to that effect in the master. You can clone an object and its effects using the Clone command in the Edit menu.

**Closed path**

A path that completely encloses an area because the path's start and end points are connected. You can apply fill attributes to any closed path.

**CMY**

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

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 similar to CMY, but the addition of black (K) produces truer deeper tones.

## CMYK

The CMYK model is a subtractive color model. A subtractive color model produces color when light is reflected off an object or surface. The reflected light determines what color we see when we look at that object. For example, a perfectly white surface reflects all wavelengths of light. A black surface absorbs all wavelengths. The pink flamingo (shown below) reflects pink and red wavelengths and absorbs all others.

The three primary colors in the subtractive color model are cyan, magenta, and yellow. Two primary colors, when mixed, produce the secondary colors: red, green, and blue (the opposite of the RGB model). Combining all three primaries produces black.

**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.

**Contour**

A special effect created through the addition of evenly spaced concentric lines inside or outside the borders of an object. These lines use the same shape as the outline of the original object, but they are smaller or larger depending on where they are created.

The spaces between contour lines are filled with colors that follow a progression from the original object to the last shape created. If there is a difference in color between the contour lines and the original object's outline, a second progression occurs. You can modify both color progressions to get the look you want.



## **Color channel**

A channel is an 8-bit grayscale version of your image. A channel functions like a plate used in the commercial printing process: each channel represents one level of color in your image. When these channels are printed together they produce the entire range of colors in the image.

Channels are automatically generated by Corel 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 pixels to produce the colors of the image. When all color channels are combined the entire range of colors in the image are displayed.

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

**Color depth**

See Bit depth.

**Color gamut**

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

## **Color Manager**

If you plan to use a scanner or a color output device with CorelDRAW, it is extremely important that you calibrate your system using Corel Color Manager. Apart from ensuring accurate color production and managing color conversions, it can make the printing process run more smoothly.

Corel Color Manager works with CorelDRAW to manage the production of color by all the devices in your system. The user interface allows you to select profiles for your devices from Color Manager's extensive lists, or to create your own device profiles using sophisticated calibration tools.

## **Color mode**

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

- **Black and White**(1-bit)
- **Grayscale**(8-bit)
- **Duotone**(8-bit)
- **Paletted**(8-bit)
- **RGB color**(24-bit)
- **LAB color**(24-bit)
- **CMYK color**(32-bit)

**Color model**

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

**Color palette**

A range of colors used to select 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 other palettes you create yourself.

A palette is different from a color mode.

**Color proof**

See Composite



**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 color in the original image. In the case of a CMYK image, four separations (one for each cyan, magenta, yellow, and black) must be made.

**Color space**

A geometric representation of color gamut on a color model.

**Color temperature**

A measure of the relative warmth of a color expressed as degrees on the Kelvin temperature scale. Warm colors fall toward the red end of the spectrum; whereas, cool colors fall toward violet the violet end.

**Color, RGB**

The additive color model that is used by 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 that is necessary to reproduce spot colors. Corel applications remap colors that are outside of the printer's gamut to the edge of the gamut, while 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.

**Combine**

A tool that joins multiple objects to create a single object. This object becomes a curve object, even if its components aren't curve objects. If the combined objects overlap, the overlapping areas are removed to create clipping holes. Clipping holes allow you to see objects that are behind.

**Command**

A word or control that, when selected or clicked, initiates an action. Commands can be accessed either from a menu or by clicking buttons on a toolbar.

**Command button**

A button in a dialog box or toolbar that is used to carry out an action such as resetting values or opening a dialog box.



**Composite**

In commercial printing, a preliminary output of a design that includes all image, line art, and text elements. Color composites are often printed on color PostScript printers to check the artwork before color separations are produced for four-color process printing. Also called a "comprehensive", "proof", or "comp".

**Compound blend**

A blend created by blending the start or end object from one blend into a blend with another object. This term also refers to a blend that's been divided into two or more components by using the Split command in the Blend Roll-Up.

**Conical fountain fill**

A type of fountain fill that shows a progression of colors that radiate in a circular path from the center of the object. You can apply custom or built-in conical fountain fills that use either a direct progression from one color to another or a cascade of different colors.

**Constrain**

To restrict object movement to a particular plane, axis, or angle. The primary way of constraining is to hold down CTRL while transforming or creating an object.

**Continuous tone**

An image represented by smooth graduated tones from one color to another as in a photographic print. Continuous tone images must be converted to dots and pixels before they can be reproduced on mechanical devices.

**Contrast**

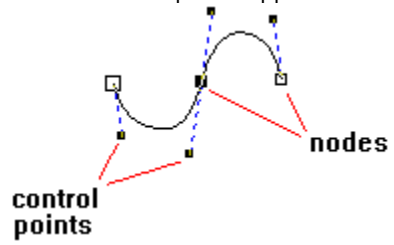
The difference in tone between the dark and light areas of an image. Higher contrast values indicate greater differences between dark and light and fewer gradations between them.

**Control object**

A term used in CorelDRAW to refer to the original object in an extrusion. Changes made to this object "control" the appearance of the extruded surfaces.

## Control point

In CorelDRAW, points that extend from nodes along curves, mask marquees, and complex object marquees that are being edited with the Shape 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 Shape tool.





## **CorelDRAW**

CorelDRAW is a vector-based drawing program that makes it easy to create professional artwork from simple logos to intricate technical illustrations. CorelDRAW 7's enhanced text handling capabilities and writing tools also allow you to create text-intensive projects such as brochures and reports with greater ease than ever before.

If you're new to the world of CorelDRAW, you'll soon discover how the new interactive tools and the program's continuous feedback enable you to get up to speed in no time. If you've used CorelDRAW before, you'll soon find out how the new tools and enhanced features give you even more power to design and publish all your graphics.

## **Corel PHOTO-PAINT**

Corel PHOTO-PAINT is a powerful bitmap-based image editing and painting program that is ideal for retouching photographs, for editing images and video files, and for creating original artwork. Corel 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 Corel PHOTO-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 grayscale images, splicing movies, and applying 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 Corel PHOTO-PAINT images. CPTs are bitmaps — graphics that represent shapes as a series of pixels or dots that are arranged to represent an image. CorelDRAW can import and export files in this format, including those that contain color and grayscale information.

## **Crop**

To reduce the visible area of an imported bitmap . When you crop a bitmap prior to importing it into DRAW, the imported bitmap consists only of the area within the cropping frame. If you are not certain of how much you want to crop, you can crop the bitmap more precisely within CorelDRAW using the Shape tool. This feature is very powerful. You can add nodes, remove nodes, and convert lines to curves to create many interesting effects.

**Crop marks**

Alignment marks that appear at the four corners of a printed page. Crop marks make it easier to trim the paper to the proper size and appear only when the page size is smaller than the paper used by the printer. You can enable or disable crop marks using the Print Options dialog box.

**Crosshairs**

The pair of intersecting lines that can be dragged from the spot where the rulers meet to set the ruler origin.

**Cursor**

Indicates the position of the mouse or equivalent pointing device on the computer screen. Use the cursor to point to the place you want to draw or the object you want to select. The shape of the cursor changes depending on the tool or command you select.

## **Curve object**

An object that can be any shape. Curve objects have nodes (the points on a path that determine its shape) and control points (points that extend from nodes to further define a path's shape) that you manipulate to change the object's shape. Curve objects can be drawn with the Freehand tool, Bezier tool, Spiral tool, and Natural Pen tool. You can also convert text and objects drawn with the Rectangle tool, Ellipse tool, and Polygon tool into curve objects by using the Convert To Curves command in the Arrange menu.



**Cusp node**

A cusp node (a point on a path that determines its shape) lets you edit the segments on either side of the node independently. Use a cusp when you want to add a sharp bend to a curve.

**Custom Colors (palette)**

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

**Default Artistic text**

A text style that is automatically applied to Artistic text when the text is created. You can change the default style or apply a different style by using the controls on the Styles Roll-Up.

**Default Paragraph text**

A text style that is automatically applied to Paragraph text when the text is created. You can change the default style or apply a different style by using the controls on the Styles Roll-Up.

**Default printer**

The device that your computer uses to print when you click File, Print. You can have only one default printer selected at a time.

**Default settings**

Preset options built into CoreIDRAW. Default settings you can change in DRAW include outline and fill attributes for new objects, page size and orientation, and whether the rulers, status line, and on-screen palette are turned on or off.

Each new drawing you open in CoreIDRAW uses the default settings.

**Densitometer**

A device used to measure the opacity of a translucent colorant. Used for printer calibration.

**Densitometer scale**

Scales that are printed on each page of a color-separated image to help you gauge the accuracy, quality, and consistency of the output. You can print these scales by choosing an option in the Printer's Marks and Prepress Settings dialog box.



**Descender**

In lowercase letters, the parts of the letters g, p, q, y, and sometimes j, that extend below the baseline.  
{descendr.bmp}

**Deselect**

To click on white space or to select another object to move the focus of the next command or action away from the currently selected object.

**Destination file**

The file into which an embedded or linked object is being inserted.

**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 and drags into actions.

**Dialog box**

A window that is displayed when additional information is needed to perform an action or command. For example, when you choose the Save command to save a drawing for the first time, the Save dialog box appears, prompting you to indicate a file name and location.

**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.

**Didot**

A unit of measurement equivalent to 1.07 U.S. points. One inch equals 67.567 didots.

## **Direction keys**

A selection of specific keys on the keyboard. Direction keys include the arrow keys (←, →, Ⓜ, Ⓨ), and the HOME, END, PAGE UP, and PAGE DOWN keys that appear on the numeric keypad.

The arrow keys move selected objects in small steps (called nudging). They also move the insertion point (a vertical bar that indicates where text will be inserted) when you type or edit text on-screen or in a dialog box.

The HOME and END keys select the start and end nodes (the points at the end of lines and curved segments) on a curve object when the Shape tool is selected. They also move the insertion point in a block of text to the beginning or end of a line.

Press the PAGE UP or PAGE DOWN keys (make sure the NUM LOCK key is off) to move either back or forward, one page at a time.



**Directory**

A named section of computer disk space used to store and organize your documents, programs, and other files. For example, you could create a directory called LOGOS for storing logo designs. In Windows 95, directories are known as "folders".

**Dither**

The process of approximating pixel colors when you reduce the color depth of an image. Dithering can improve transitions between colors when a 24-bit image is reduced to an 8-bit format.

**Dithered color**

Color that are simulated by putting dots of another color very close together. Windows uses dithering to display colors that the graphics adapter can't display.

**DLL (Dynamically Linked Library)**

A set of small computer programs (also called routines or macros) that can expand the functionality of a script language.

**Dot gain**

When an image is printed on a printing press, the enlargement of the dots that make up a bitmap can cause the image to appear darker than intended.

**Double click**

To press and release the left mouse button twice in quick succession.

**Downloadable fonts**

Fonts stored on disk that, unlike printer-resident fonts, must be transmitted to the printer before you can print your document.

**DPI**

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



**Drag**

To move the mouse while holding down the left mouse button. Releasing the button completes the action.

**Drag and drop**

To drag an object to a new location using the mouse — for example, to drag an object from one drawing into another. You can also use drag and drop to import files created using other applications.

**Drawing Page**

The portion of the Drawing Window that will appear on the printed page. This area is enclosed by a rectangle with a shadow effect below it and to its right. Although you can draw anywhere in the Drawing Window, only objects on the Drawing Page appear in your print jobs.

**Drawing Window**

The window contains a CorelDRAW drawing. You can draw anywhere in the Drawing Window, but only objects that are on the Printable Page (indicated by a rectangle with a drop shadow) will print.

**Drive**

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

**Drop cap**

A Paragraph Text formatting option. The initial letter of a paragraph that is displayed inset into the body of the text. Drop caps often appear at the beginning of each chapter in a book.

**Duotone**

An 8-bit color mode that uses 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).

The use of 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 and 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 to CMYK for printing. Colors can be displayed by name or swatch through the Color Options menu.



**Edge pad**

Determines how much of a fountain fill is taken up by its start and end colors. The ends of a fountain fill will often be obscured by the edges of circular or irregular objects. Padding the edges will allow more of the end colors to show.

**Em**

A unit of measurement used in typesetting that is exactly as wide as the point size being used. There are approximately 72 points (pts) to an inch and exactly 12 points to a pica.

**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 Corel WordPerfect document.

**Emboss**

The process of creating 3-dimensional relief on a 2-dimensional surface.

An Emboss effect filter evaluates tonal values and exaggerates edges between dark and light areas, darkens shadows, and brightens highlights to give the appearance of texture and greater depth.

**Emulsion**

The light-sensitive coating material on a piece of film.

**En**

A typesetting unit of measure equal to half the width of an em (which is exactly as wide as the point size being used).

**End node**

The small square that appears at the end of an open path when you select the path with the Shape tool. The end node is smaller than the start node.

## Envelope

A feature (accessible from the Effects menu) that allows you to distort the shape of an object. Distortion is created by dragging nodes on an imaginary box (the envelope) that is placed on top of the object.





**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.

**Equalize filter (auto equalize)**

A filter that automatically redistributes shades of color. Equalization makes the darkest colors black, the lightest colors white, and equally distributes the colors in between.

**Extension**

The characters following the period in a filename. These characters identify the type of information in the file. The BMP extension, for example, indicates that the file contains a bitmap; while the CDR extension indicates that the file contains a vector graphic created using CorelDRAW.

## Extrude

A feature that allows you to give objects a three-dimensional (3D) look by creating the illusion of depth. Controls available in the Extrude Roll-Up (and on the Property Bar) allow you to change the direction and depth of the extrude, the position of the vanishing point, its placement in 3D space, and the color of the extrusion. You can also apply up to three light sources to the extruded group.



**Feathering**

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

**FH3**

The filename extension for vector graphics files created using Aldus Freehand 3.

**File preview**

In the Open and Import dialog boxes, a small bitmap representation that lets you see what the selected file contains. Also called a thumbnail.

**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 for the Fill tool in the Tool Settings Roll-Up, in the on-screen Color Palette, or in the image itself by right-clicking a color with the Eyedropper tool.



**Film**

In commercial printing, a photo-sensitive transparent sheet onto which images are transferred as either a 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 that can be used to print 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, to import a CorelDRAW image into Corel PHOTO-PAINT, the image must be converted from a vector file into bitmap form. When you select a file format in the Export dialog box of CorelDRAW, you are automatically activating the appropriate filter program to take care of the translation.

**Special Effects filters** process image information and alter the image according to preset specifications 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 to create a smooth, slightly blurry effect with less detail.

## Flyout

A tool that, when selected, displays two or more additional tools. Tools that have a flyout have a small triangle located in the bottom right corner of the tool button. To access the flyout either click this triangle or click and hold the mouse button down anywhere on the tool. The example shown below can be accessed by clicking and holding down the Polygon tool.



**FOCOLTONE**

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

**Folder**

A named section of computer disk space 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 Windows 3.x, folders are known as "directories".

**Font**

A single style, weight, and size of a typeface, such as Times Roman bold, 10 point. Times Roman 12 point is a different font.

**10 point**

**18 point**

**36 point**

**Force justification**

Stretches the last line of a paragraph to the right margin. This is distinct from full justification. Full justification (also called "justification") modifies the spacing between characters and words so that edges on both the left and right margins of a block of text are even.

## **Force line breaks**

You can "force" a line break in a paragraph by pressing **SHIFT + ENTER**. Force line breaks cause text to wrap to the following line without starting a new paragraphunlike with hard returns that are created when you press **ENTER**.

No spacing is added between lines that are separated by a force line break. In effects such as a bulleted paragraph, a bullet doesn't appear on the line that follows a force line break. The next bullet appears when you press **ENTER**.



**Fountain fill**

A complex fill that displays a progression between two colors that follow a linear, radial, conical, or square path. By using fountain fills — also known as gradient or graduated fills — you can create a direct blend from one color to another or a cascade of different colors. You can also use pre-generated fountain fills to create neon tubes, metal cylinders, and a variety of similar effects.

**Four-color process**

The four-color printing process uses four colors (cyan, magenta, yellow, and black (CMYK)) to represent all of the colors in your artwork. The final colors — called process colors — are produced using four overlaid halftone screens — one for each CMYK color.

**Frame or Paragraph text frame**

The rectangle that contains a block of Paragraph text created with the Text tool.

**Full-color bitmap pattern**

A full-color bitmap is a regular color picture (such as you might get with an electronic photograph). They can vary widely in complexity. It is best to use simpler bitmaps for fill patterns, because complex bitmaps are very memory-intensive and slow to draw. The complexity of a bitmap is determined by its size, resolution, and color depth.

**Full-color pattern**

See Vector pattern.

**Full-screen preview**

A view option that displays a fully detailed version of your drawing without any of the user interface showing. You can switch to the preview screen by choosing Full-Screen Preview from the View menu or by pressing F9. Pressing any key returns you to the Drawing Window.

**Gamma**

A measure of overall contrast expressed as a ratio of input to output ranges.

Adjusting gamma values for your image will affect midrange values most; whereas dark and light values change more slowly.

## Gamut

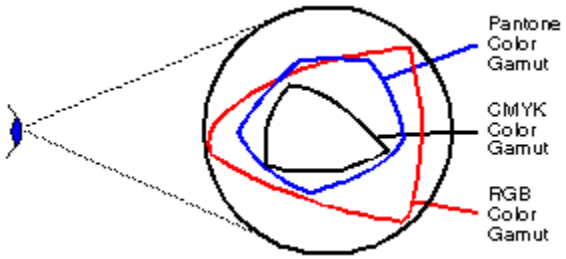
A range of possibilities or capabilities, especially the range of colors that a mechanical device can either produce or perceive.





## Gamut mapping

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



**Gaussian**

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

**GDF**

The filename extension for vector graphics files — graphics that represent shapes as a series of lines and curves — created by IBM mainframe computers. Corel applications can import .GDF files and export them as .PIF files, which can then be translated to .GDF format by the mainframe computer.

**GEM (Graphics Environment Manager)**

A menu-driven interface used by some programs. Also a filename extension for files created by programs such as GEM Artline. Corel applications can import files in this format.

**GIF (Graphics Interchange Format)**

A bitmap file format with the extension .gif.

Originally developed by CompuServe, GIF's (pronounced "jiff") are designed to take up a minimum of disk space and to be easily read and exchanged between systems. This format is commonly used for publishing images of 256 colors or less to the Internet.

Corel applications can import files from and export files to this format.

**Gradient fill**

See Fountain fill.

**Gray Component Replacement (GCR)**

A technique in which equal amounts of cyan, magenta, and yellow are removed and replaced with black ink. This technique produces better color saturation and contrast and saves ink costs.

## **Grayscale**

An 8-bit color mode that stores and displays images using 256 shades of gray that range 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 that uses the grayscale color model. Grayscale images — especially photographs — are commonly referred to as "black and white".

Grayscale values 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.

**Greeking**

Represents text using either dummy type that has no meaning or a series of straight lines. Greeking increases screen drawing speed when text is too small to be legible on the screen itself. Greeking does not affect print quality.

**Grid**

A series of evenly spaced horizontal and vertical dots that are used to help draw and arrange objects. You can use the controls on the Grid and Ruler Setup dialog box to set the grid's parameters. For greater accuracy, you can also have objects in your illustration snap to the grid when they are moved or drawn.

**Group**

A set of objects that behave as a single unit. Most operations you perform on a group apply equally to each of its components.

**Guidelines**

Non-printing lines that you can use to help you align objects. You can place horizontal, vertical, and/or slanted guidelines in the Drawing Window either by dragging from the rulers or by using the controls in the Guidelines Setup dialog box. By enabling the Snap to Guidelines option, you can force objects to snap to the guideline when they are drawn or moved near the guidelines.

**Gutter**

The space between columns of paragraph text.

**Halftone**

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 before it can be printed on conventional devices and printing presses. Halftones are often referred to as PMT's.

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

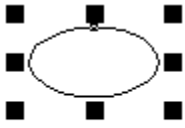
**Halftone screen**

A halftone screen creates the illusion of shading on printing presses by breaking up shaded images into many tiny dots. The size of the dots determines the different levels of shading (i.e., the bigger the dots, the darker the shade).

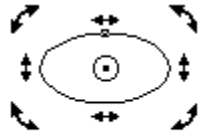


## Handles

A set of eight black squares that appear at the corners and sides of an object when the object is selected. By dragging individual handles, you can scale, resize, or mirror an object. If you double-click on a selected object, the handles change to arrows that permit you to rotate and skew the object.



**Sizing handles**



**Rotating & skewing handles**

**Hanging Indent**

A format applied to Paragraph text in which the first line of text begins farther to the left than subsequent lines. Hanging indents are used for bibliographies, glossary terms, and bulleted and numbered lists.

**Header**

An optional bitmap image that is created when you save a CorelDRAW file or export it in .EPS format. If you include an image header, you can see a representation of the file contents in programs such as Corel Ventura Publisher and Aldus PageMaker.

**Highlighting box**

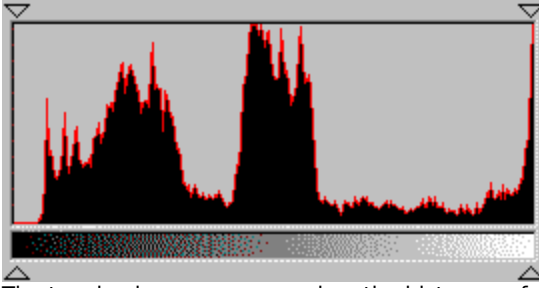
See Selection box.

**Hinting**

A method of defining exactly which pixels are turned on to improve the appearance of fonts at small point sizes and low screen and/or printer resolutions. Hinting is automatically applied to the TrueType and Adobe Type 1 fonts supplied with CorelDRAW.

## Histogram

A chart that represents the range of tonal values in a bitmap image.



The tonal values are arranged on the histogram from dark to light; the "spikes" represent the relative number of pixels at any given level. When you adjust tonal values, you can change the level and distribution of dark and light areas of an image by moving the threshold sliders left or right.

## **HLS**

Hue, lightness, and saturation are the components of the HLS color model, which is 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).

## **HLS**

The HLS model is a variation of the HSB model and contains three components: hue, lightness, and saturation. The lightness component is similar to the brightness component in the HSB model. Hue and saturation are the same as in the HSB model.

**Hot keys**

A key or combination of keys that activates a command. Hot keys (also called keyboard shortcuts or accelerator keys) give you quick access to commands that you use frequently. You can change built-in keyboard assignments or assign new key combinations to any command. You can also create sets of keyboard assignments to use with different types of operations.



**HPGL**

A file format (Hewlett Packard Graphics Language) created by programs such as AutoCAD. This format is used to print drawings on plotters. CorelDRAW can import and export HPGL files that have the extension .PLT (PLoT).

## **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.

## HSB

The HSB model approximates the way that the human eye perceives color. In the HSB model, color is defined by three components: hue, saturation, and brightness.

Hue refers to the name of the color, for example, red or green. Saturation defines the intensity of the color, how deep or vibrant the color is. Brightness defines how much white is added to or removed from the color.

## **HTML**

HTML (Hypertext Markup Language) is the World Wide Web authoring standard. HTML is comprised of markup tags that define the structure and components of a document. The tags are used to tag text and integrate 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.

**Icon**

A pictorial representation of a tool, object, file, or other program item. An item is selected by clicking, or sometimes double-clicking, on its icon. For example, double-clicking the CorelDRAW icon on your desktop starts CorelDRAW.

**Image colors (palette)**

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

**Image header**

See Header.

**Image map**

A hypergraphic that is linked to a URL in an HTML document. When you click an image map, the browser displays the HTML document named in the URL. An image map graphic is made up of a bitmap (the image) and a series of coordinates describing the location of the hotspots on the bitmap (the map).



**Image setter**

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

**Indent**

A Paragraph text formatting option. An indent positions text a specific distance from the left and/or right frame borders. Indents are often used to indicate the beginning of a paragraph. You can either indent an entire paragraph or only the first line.

**Insertion point**

A vertical bar that indicates where text will be inserted when you type. The insertion point appears when you click the Drawing Window with the Text tool, draw a frame using the Text tool, or open a dialog box that requires you to type in information.

**Intensity**

Intensity is a measure of the brightness of the light pixels in a bitmap image compared with the darker mid-tones and dark pixels. An increase in intensity increases the vividness of whites while maintaining true darks.

**Intercharacter spacing**

The amount of spacing between characters of text. Intercharacter spacing is also called letter spacing and kerning. You can adjust intercharacter spacing either interactively with the Shape tool or manually by typing values in the Spacing tab in the Format Text dialog box.

**Interlacing**

A method of having the image appear on-screen in its 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.

**Interline spacing**

The amount of white space between the baseline of one line of text and the baseline of the adjacent line of text. Interline spacing is also called "leading." You can adjust interline spacing either interactively with the Shape tool or manually by typing specific values in the Spacing tab in the Format Text dialog box.

## **Interparagraph spacing**

The amount of spacing between paragraphs. A paragraph is created each time you press ENTER in a Paragraph text frame. You can adjust interparagraph spacing by typing values in the Spacing tab in the Format Text dialog box.

If the interparagraph spacing between two adjacent paragraphs differs, the larger of the two values applies. For example, if the first paragraph has an After Paragraph spacing value of 50.000 % of character height and the next paragraph has a Before Paragraph spacing of 55.000 %, the interparagraph spacing would be 55.000 % of character height.



**Interword spacing**

The amount of spacing between words of text. You can adjust interword spacing either interactively with the Shape tool or manually by typing specific values on the Spacing tab in the Format Text dialog box.

**Interruptible refresh**

A feature in CorelDRAW that stops the screen during a redraw whenever either the mouse button or a key is pressed. If you are working on a complex drawing, interruptible refresh can save time by allowing you to select tools and commands without waiting for the screen to redraw completely. You can enable or disable Interruptible Refresh by using the control provided on the Display tab of the Options dialog box.

**Intersection**

A feature that lets you create a new object from the area where two or more objects overlap.

## Jaggies

A stair-step effect that often occurs when text and bitmap images are resized. When you enlarge the bitmap, it appears that each pixel is enlarged because extra pixels are added. This makes the graphic look jagged and distorted. If you reduce the size of the bitmap, it also causes distortion, because pixels are eliminated to shrink the bitmap to its new size.

Vector images are defined by two points joined mathematically by lines. As a result, you can resize vector graphics without having to worry about jaggies.



**JPEG (.JPG)**

A bitmap file format.

Established by the JPEG (Joint Photographic Experts Group), this format is an international standard for compressed photographic images; it offers compression with almost no lossiness at ratios up to 20 to 1. Because of their essentially lossless compression and small file size, JPEG's -- as the images in this format are called (pronounced "jay-pegs") -- are widely used in Internet publishing.

**Justify**

An alignment option for Paragraph text. Full justification (also called "justification") modifies the spacing between characters and words so that the edges on both the left and right margins of a block of text are even.

**Kerning**

To adjust the spacing between two consecutive characters. With certain letter pairs, such as AV, moving the letters closer together improves their appearance on the printed page. You can either kern text interactively with the Shape tool or manually by typing specific values in the Format Text dialog box.

## **LAB**

The color model that was developed by Commission Internationale de l'Eclairage (CIE) and is 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 gamuts of both the CMYK and the RGB color models.

### **Lab**

One of the major problems with using any of the previous color models is that color display can vary from device to device. This is not only true for monitors created by different manufacturers, but also for those created by the same manufacturer. The problem is that monitors differ in their response to an applied voltage and will drift with time.

The L\*a\*b model is a refinement to the original CIE (Commission Internationale de l'Eclairage) model. The L\*a\*b model attempts to remove device-dependence and is based on the way the human eye perceives color. It contains a luminance (or lightness) component (L) and two chromatic components: the a component (green to red) and the b component (blue to yellow).



**Landscape**

A page oriented so that the horizontal dimension of the page is greater than the vertical dimension.



**Layer**

One of a series of transparent planes on which you can place objects in a drawing. You can control how objects in your drawing overlay one another by moving the layer and the objects they contain. You can also choose to lock layers as well as make them invisible and non-printable. Use layers to help you organize different components of complex drawing.

**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.

## **Leader tabs**

A row of dots placed between text objects to help the reader follow a line across white space. Leaders are often used in tab stops especially before text that is flush right, such as in a list or table of contents. The leaders can be changed to any character in the current font. Refer to the following example of a line in a Table of Contents:

Formatting Text . . . . . 152

A leader tab automatically creates the dots that precede the number.

**Limitcheck error**

A PostScript printing error that occurs when a drawing contains too many line segments or a bitmap that is too large for the printer to reproduce.

**Line art**

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

**Line style**

The collection of attributes that are assigned to an object's outline. You can assign custom line styles or choose from a number of presets that apply a solid, dashed, dotted, or dashed-and-dotted line style.

**Linear fountain fill**

A type of fountain fill that shows a progression of colors in a straight line. You can apply custom or built-in linear fountain fills that use a direct progression from one color to another or a cascade of different colors.



**Linked object**

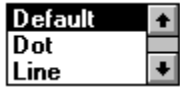
Objects are considered to be linked in Object Linking and Embedding (OLE) when information from one file (the source file) is inserted into another file (the destination file) and the link to the source file is maintained. Changes made to the information in the source file are automatically made to the information in the destination file.

**Lino**

Short for Linotronic, a line of PostScript image setters that is used for high-resolution printing. Over the years, the term has come to mean any type of image setter used by service bureaus that output to film.

### List box

A control that allows you to select from a list of options. If the list cannot accommodate all available options, scroll bars are provided. List boxes are found on toolbars and Roll-Ups and in dialog boxes.



**Lossless**

The process of compressing and decompressing that 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. The density of dots on PMT's, and film output of continuous-tone images from imagesetters is measured in lpi.

**Luminosity**

A value corresponding to the brightness of a color.

**Marquee box**

A box with a dotted outline that appears when you click and drag diagonally to select either multiple objects or nodes on a curve. CorelDRAW selects the objects that are enclosed within the box when you release the mouse button.



**Marquee select**

A method of selecting objects (or nodes) using the Pick tool or the Shape tool. To marquee select, you click and drag to enclose objects in a dotted rectangle called the marquee box.

**Master**

An object that has been copied using the Clone command. Most changes you make to the Master object are automatically applied to the clone.

**Master layer**

A layer containing information that you want to appear on every page of a multi-page document. For example, you can use master layers to place a header or footer on every page.

**Maximize**

To enlarge an Application Window to full-screen size.

**Menu**

A list of commands that appears when you click a name in the Menu Bar.

## Menu Bar

The bar near the top of the Application window that contains the names of the program menus. Click a menu name to display a list of commands used to access various functions.



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

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

**Minimize**

To reduce an Application Window to an icon in the task bar.



**Mirror**

To flip an object horizontally, vertically, or diagonally. You can mirror an object by using the controls in the Scale and Mirror Roll-Up or by holding down CTRL and dragging a side handle across the object.

**Mirror editing**

A type of node editing that allows you to maintain the symmetry of an object created with the Polygon tool. Each node of an object created with the Polygon tool is associated with other nodes. All the corner or point nodes are associated with each other, and all the side or interior nodes are associated with each other.

When you edit a node on an object created with the Polygon tool (e.g., move it or change it to a curve), all the associated nodes reflect this edit. For example, if you move a corner node toward the center of a pentagon, all the corner nodes also move toward the center.

**Moire pattern**

Undesirable wave patterns that are created in an image by conflicting dot patterns. A moire pattern is created when halftone screens of two different frequencies are superimposed on 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 is different than the dpi frequency of the scanned image.

These patterns can be especially damaging when they occur in color separations. It is crucial to set the screen angles and frequencies of your halftone screen correctly to avoid this problem.

**Monochrome**

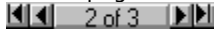
An image containing a single color, usually black.

**Multiple select**

A method of selecting multiple objects with the Pick tool or multiple nodes with the Shape tool. Hold down SHIFT and click the objects or nodes you want to select.

## Navigator

The Navigator helps you move through your document quickly. Displayed in the bottom, left corner of the Application Window, the Navigator shows the total number of pages in your drawing and the number of the currently displayed page. You can move to any page in your document with a single mouse click or quickly add blank pages without interrupting your work.



**Negative**

An image in which the values in the original are reversed so that black areas appear white, white areas appear black, and colors are represented by their complements. CorelDRAW can print color separations as negatives if Film Negative is selected in the Print Options dialog box.

**Nested group**

The grouping of two or more groups so that they behave as a single object.



### **Netscape Navigator™ palette**

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

**Newspaper-style columns**

Columns in which text wrapping causes text to flow down from paragraph to paragraph in the first left column. The text flow continues to the top of the next right column. This pattern is repeated on subsequent pages.

**Node**

The points at the end of line and curve segments. You can alter the shape of a line or curve by dragging one or more of its nodes.

**Nudge**

To move an object in increments by using the arrow keys on the keyboard. You can adjust the nudge increment — the distance the object moves each time you press an arrow key — by using either the Property Bar or the Options dialog box.

**Object**

A generic term that refers to any item you create or place in a drawing. Objects include lines, shapes, graphics, and text.

**Object Linking and Embedding (OLE)**

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

### **On-screen Color Palette**

The Color Palette can be found along the right side of the screen. The Color Palette 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 top 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.



**One-point perspective**

An effect created by lengthening or shortening one side of an object to create the impression that the object is receding from view in a single direction. You can create one-point perspective by using the Add Perspective command in the Effects menu.



**Opacity**

Refers to the ability to see through an object. In CorelDRAW, you can adjust an object's level of opacity either by using the Interactive Transparency tool or by applying a Transparency lens. You can use these features to make the object vary from opaque to transparent.

**Open path**

A line or curve of which the start point and the end point are not connected. If you apply a fill to an open path, it will not be visible unless the path becomes closed.

**Open Prepress Interface (OPI)**

A method that positions high-resolution bitmaps on the printed page by using low-resolution replicas.

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

**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.

**Out-of-gamut color**

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

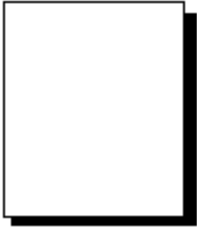
**Overprint**

Overprinting is a method of color trapping. Color trapping is necessary when you print on a color commercial press to avoid white gaps between adjoining colors that are not aligned properly.

Normally, portions of an object that are obscured by another object are not printed. However, if the top object is set to overprint, the obscured portions of any underlying objects will also print. This eliminates potential white gaps between different colors. 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).

## **Page border**

In the Drawing Window, the page border is the rectangle with the drop shadow that represents the printable portion of the current drawing. This area is also called the printable page. You can turn the page border on and off through the Page Setup command in the Layout menu.



**Page number display**

Displayed in the bottom left corner of the window (inside the Navigator), the page number display shows the total number of pages in your drawing and the number of the currently displayed page. You can move to any page in your document by using the Go To Page dialog box, which can be accessed by clicking the page number display.

2 of 6



**Paint programs**

A generic term referring to computer illustration programs that store graphics as bitmaps — a graphic image format that represents shapes as a series of pixels or dots that are arranged to represent an image. Corel PHOTO-PAINT and Windows Paintbrush are examples of paint programs. CorelDRAW, which store images as a series of lines and curves, is a vector-based program.

**Palette**

See On-screen Color Palette

**Paletted color mode**

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

It is useful to convert a complex image to paletted color mode to reduce its file size, especially for internet publishing. Paletted color mode also allows you to use the Color Table.

**PANTONE Hexachrome 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 process colors palette**

Colors that are available through the PANTONE process color system, which is based on the CMYK color model. The first 2000 colors are two-color combinations; the remainder are three- and four-color combinations. Colors are based on CMYK and, therefore, can be printed without 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 Matching System**

Colors that are available through the PANTONE Matching System (also known as PANTONE spot colors). Because 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 CorelDRAW, you can use spot colors freely. In Corel PHOTO-PAINT, you can only use spot colors in CMYK images to affect duotones. Colors can be displayed by name or swatch through the Color Options menu.

**Paper color**

A feature that allows you to display an approximation of the paper color you plan to use when you print your document. The color you choose is for viewing only; it doesn't appear in printed copies of the document.



**Paragraph text**

The text type you create when you use the Text tool. Use Paragraph text when you want to add large blocks of text for ads, brochures, and other text-intensive projects. Paragraph formatting features enable you to flow text between frames and columns, create bulleted lists, set tabs and indents, and add drop caps.

**Parent**

An object that is linked to another object (its child) in a hierarchy. When the parent is moved, the child and all other objects also move.

**Parent color**

The Color Styles Roll-Up allows you to create styles based on colors, and link colors together in a "parent-child" relationship. Any changes that are made to the parent color in a style are also reflected in the child colors.

You can create parent colors quickly and easily by dragging colors from your image. You can also have CoreIDRAW scan your image and create parent colors automatically.

**Path**

The basic component from which objects are constructed. Paths can be open (e.g., a line or curve) or closed (e.g., a circle or polygon). They can also constitute a single line or curve segment or many segments joined together.

**Path name**

Location of a folder or file on your system. For example, Corel application files are stored in the path C:\COREL\ by default. This means that the files are stored in a folder called COREL on the C: drive.

**Pattern fill**

Pattern fills are pregenerated, symmetrical images that can easily be tiled. You can import bitmaps or vector graphics for use as pattern fills, or you can create simple two-color bitmap patterns. The effect you create is similar to the one you create by applying wallpaper to a wall. There are three types of pattern fills – two-color bitmap, full-color bitmap, and vector pattern.

**PCD**

The filename extension for Eastman Kodak Photo-CD images. Corel applications can import .PCD files.

**PCT**

The filename extension for vector graphics files (in PICT format) created by applications on Macintosh computers. Corel applications can import PICT 1 (black and white) and PICT 2 (color) files and export PICT 2 files. CorelDRAW also supports PICT bitmaps.



**PCX**

The filename extension for bitmap files created by paint programs such as PC Paintbrush. CoreIDRAW can import and export files in this format including those that contain color and grayscale information.

**Photo CD**

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

Corel PHOTO-PAINT can open Photo CD images and convert them into formats that CorelDRAW can import.

**Photoshop PSD**

A bitmap image file format with the extension .PSD.

Created in Adobe Photoshop, PSD files are used frequently by DOS and Windows applications. Corel applications can import and export .PSD files.

**PIC**

A vector file format with the extension .PIC.

PIC files are created by some presentations programs and Lotus 123. Corel applications can import and export .PIC files.

**Pica**

A unit of measurement used primarily in typesetting. One pica equals 12 points (approximately 1/6 of an inch).

**PICT**

An image file format used frequently in application that run on Macintosh computers. This file format can use up to four channels: red, green, blue, and alpha. Corel applications can import an export PICT files.

**Pitch**

The aspect of an object's orientation that describes its angular deviation along its vertical (top-to-bottom) axis.

**Pixel**

Short for picture element. Pixels are dots on a computer or television screen that combine to form an image. Computer images are created as an array pixels that have a specific color.



**Pixmap**

An image formed as an array of pixels.

**PLT**

The filename extension for vector graphics files conforming to the HPGL format. These are primarily files created by programs such as AutoCAD to print drawings on plotters. Corel applications can import and export .PLT files.

**PMT**

In commercial printing, a term often used for a halftone. They are called PMTs because the devices in scanners that are used to produce them are called Photo Multiplier Tubes.

**Point**

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

**10 point****18 point****36 point**

## Polygon

A shape with three or more sides. In CorelDRAW, you can create simple polygons (e.g., pentagons) or complex, multi-sided polygons (e.g., stars) using the Polygon tool. The examples shown below can all be created using the Polygon tool.



**Portrait**

A page oriented so that the vertical dimension of the page is greater than the horizontal dimension.



**Positive**

A reproduction of an image in which dark, light, and color values are the same as in the original image.

**PostScript**

PostScript is a page-description language used to send instructions to a PostScript printer. All the objects in a print job (e.g., curves and fills) are represented by lines of PostScript code that the printer uses to reproduce 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 either print or to update on the screen. Therefore, PostScript fills are displayed as the letters "PS" rather than as the actual texture.

## 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 the contents object. You see only the contents that fit inside the container object.



**Preview selected only**

A view option that, when used with the Full-Screen Preview command, displays a fully detailed version of selected objects without any of the user interface showing. When Preview Selected Only is disabled, Full-Screen Preview displays all objects on the current page

**Primary mouse button**

Normally the left mouse button. If, however, you've swapped mouse buttons, the right mouse button becomes the primary button.

**Printable page**

The portion of the Drawing Window that will appear on the printed page. This area is enclosed by a rectangle with a drop shadow. Although you can draw anywhere in the Drawing Window, only objects on the printable page appear in your print jobs.



**Process color**

In commercial printing, colors that are produced from a blend of cyan, magenta, yellow, and black. This is different from a spot color, which is a solid ink color printed individually (one printing plate is required for each spot color).

**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; whereas color artwork is often proofed on thermal color printers. High-quality proofing systems such as Chromalin (Du Pont) or Matchprint (3M) can be used to proof color separations.



**Pure color**

Any color that can be assumed by the individual pixels on a computer screen. 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.

**Radial fountain fill**

A type of fountain fill that shows a progression of colors in a series of concentric circles that radiate from the center of the object. You can apply custom or built-in radial fountain fills that use either a direct progression from one color to another or a cascade of different colors.

**Rasterizer**

A program that converts vector graphics files into bitmap files that can be printed on a non-PostScript printer.

**Registration marks**

Crosshairs or other marks that are used to align the film produced from color separations. CorelDRAW automatically adds registration marks outside the printable page when you print color separations to a PostScript printer. Registration marks can also be printed on non-PostScript printers.

**Resample**

To change the size and resolution of a bitmap image.

**Resident fonts**

Typefaces permanently stored in the printer's memory.

**Resolution**

In printing, a term referring to the number of dots per inch (dpi) that a printer is capable of printing. Typical laser printers have resolutions of 300 dpi; whereas image setters have resolutions of 1200 or 2400 dpi. The higher the dpi capacity of a printer, the smoother its output and the greater number of grayscales it can reproduce.

## **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.

## **RGB**

The RGB model is an additive color model in which three primary colors of light (red, green, and blue) are combined in varying intensities to produce all other colors. Two primary colors, when mixed, produce the secondary colors: cyan, magenta, and yellow. The RGB model is considered an additive color model since adding all three primary colors together creates white. Additive color models are used for television, video monitors, desktop scanners, film recorders, and any color system that mixes light to generate colors.

The screen on your monitor is coated with red, green and blue phosphor dots. Each dot can be a different brightness. Because the dots are so close together and so small, the color you see on your screen is the result of mixing the light from all three dots.



**Right-click**

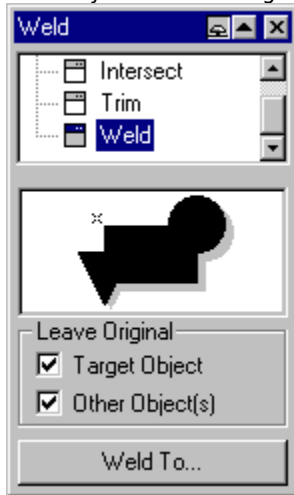
To press and release the secondary mouse button (the right button, according to Windows default settings).

**Right mouse button**

Also referred to as the secondary mouse button. You can, however, swap mouse buttons so that the left mouse button becomes the secondary button.

## Roll-Up

A floating dialog box that contains a set of related controls. Unlike other dialog boxes, Roll-Ups remain on the screen after you apply changes. This allows you to make adjustments without having to reopen the Roll-Up. When you are not using a Roll-Up, you can minimize it (or "roll it up") to leave only the Title Bar visible.



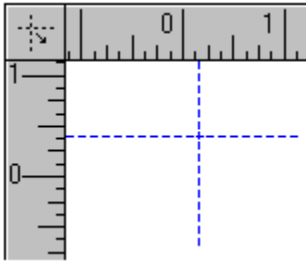
**Rotate**

To reposition and reorient an object by turning it around its center of rotation. You can rotate an object by dragging the rotation handles, by using the Property Bar, or by using the Rotation Roll-Up.

See Center of rotation.

### Ruler crosshairs

The pair of intersecting lines that can be dragged from the spot where the rulers meet. Used to set the 0,0 points on the rulers.



**Rulers**

Measuring tools that are displayed on the left side and along the top of the Editing Window. The rulers help you size and position the objects in your drawing.

## Sans serif

A font or typeface such as Helvetica that lacks serifs (the short strokes at the ends of individual letters). Helvetica and Arial are examples of sans serif fonts.



**Saturation**

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



**Scale**

To change the size of an object by either using the Scale And Mirror Roll-Up or dragging a corner handle from the Selection box. Scaling sizes an object horizontally, vertically, or both.

**Scanner**

A device that converts images on a page into digital information.

**Scitex**

An export format that saves drawings in a 32-bit color format that can be processed or modified for output by high-end image setters and film recorders. SCITEX is ideal for color-separated images because it is a native, 32-bit CMYK format.

**SCODL**

A file format used by film recorders to make slides. CorelDRAW can export files in SCODL (SCD) format.

**Screen angles**

When printing color separations, the angles at which each of the four process colors are printed. Setting the screen angles and frequencies of your halftone screen correctly is critical to avoid undesirable moire patterns.

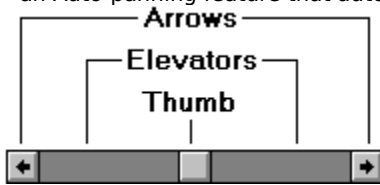
**Screen frequency**

Screen frequency, also called screen ruling and halftone frequency, is a measure of a halftone screen in lines per inch (lpi). Screen frequency is related to, but is not the same as printer resolution.

A laser printer with a resolution of 300 dpi might produce an acceptable screen at 60 lpi. A high-resolution image setter may be capable of producing a 150-line screen.

## Scroll

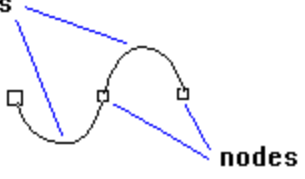
To shift the view in the Drawing Window to see portions of a drawing that are outside the current viewing area. In CorelDRAW, you can scroll by using the scroll bars along the edges of the Drawing Window. DRAW also provides an Auto-panning feature that automatically scrolls the Drawing Window when you drag beyond its borders.



## Segments

Lines or curves between nodes in a curve object.

**segments**



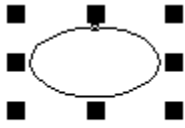


## **Select**

To choose either an object with the Pick tool or a node with the Shape tool. Selected objects display eight handles; whereas selected nodes display control points — points that extend from nodes along curves, mask marquees, and complex object marquees. After an object is selected, you can choose a command or perform an action to edit the object.

## Selection box

An invisible rectangle with eight visible handles that appears around any object you select with the Pick tool. By dragging individual handles on an object's Selection box (also called a Highlighting box), you can scale or stretch the object.



When you move or otherwise transform an object or mask, a dotted rectangle representing the Selection box appears in place of the object.

## **Serif**

The short strokes at the ends of individual letters in fonts such as Times Roman and Bookman. Sans serif fonts such as Arial and Helvetica lack these strokes.



**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, and 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.

**Service bureau**

In commercial printing, a commercial business that is separate from the printer and 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 slant an object either by using the Rotation Roll-Up or by dragging a side handle that is revealed when you double-click on an object.

**Smooth node**

A Bezier node where the control points are always directly opposite each other. When you move one of these control points, the other also moves. However, you can vary the length of the control points independently. Smooth nodes produce a smooth transition between line segments.

**Snap**

To force an object that is being drawn or moved to align automatically to a point on the grid, a guideline, or to another object.



**Source file**

The file that contains information that is being embedded or linked using Object Linking and Embedding (OLE).

**Spectral power distribution**

The power of each wavelength in a source of white light. Because white light consists of all wavelengths, we can create a spectral signature based on a measurement of each wavelength.

**Spectral signature**

The power of each wavelength measured individually in a reflective or radiant object.

**Spectrophotometer**

An instrument that measures the spectral reflectance or transmittance of an object. Used for both monitor and printer calibration. Also used to sample colors for use in graphics applications.

**Spot color**

In commercial printing, a solid ink color that is printed individually (one printing plate is required for each spot color).

This is different from a process color, where each color is expressed as a combination of four separate inks.

**Spread**

A type of trap that is created by extending the foreground object into the background object. Corel applications provide both an Overprint feature which allows you to create spreads, and an Autotrapping feature which creates them automatically.

**Square fountain fill**

A type of fountain fill that shows a progression of colors in a series of concentric squares that radiate from the center of the object. You can apply custom or built-in square fountain fills that use either a direct progression from one color to another or a cascade of different colors.

**Stacking order**

The sequence in which objects are drawn on the screen. This order determines the relationship between objects and, therefore, the appearance of your drawing. The first object you draw appears on the bottom; the last object appears on the top. You can use the Order commands to place the objects where you want them.



**Start node**

The large square that appears at the beginning of an open path when you select the path with the Shape tool. The start node is larger than the end node.

**Status Bar**

An on-screen display area that shows information about such things as objects, ongoing operations, and mouse position. You can specify the Status Bar's contents, appearance, and location within the Application Window.

**Stretch**

To size an object horizontally and/or vertically either by using the Size Roll-Up or by dragging one of the middle handles on an object's Selection box.

**Style template**

A collection of styles that work together to govern the overall appearance of a drawing. Every CorelDRAW drawing is based on a template. You can choose one of CorelDraw's preset templates or create your own custom template.

**Styles**

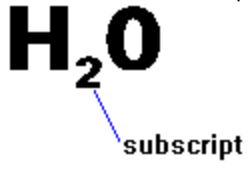
A set of attributes that controls the appearance of a specific type of object. In CorelDRAW, there are three basic style types: Graphic styles, Artistic text styles, and Paragraph text styles. You can use the styles in any of CorelDRAW's templates or create and save your own custom styles.

**Subpath**

Paths that are part of a single object. You can create an object that has several subpaths by using the Combine command in the Arrange menu.

## Subscript

Characters that are positioned below the baseline of the other characters in a line of text.



**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. The bandwidths that are reflected depend on the density of the pigments. Pigments subtract (by absorption) the bandwidths of white light that do not contribute to the specified color.



## Superscript

Characters that are positioned above the x-height of the other characters in a line of text.

Corel<sup>TM</sup> superscript

**Swatch**

A series of squares containing colors in the Color Palette.

**QA: Please verify technical accuracy.**

**Symbol**

A predesigned curve object that is available from the Symbols Roll-Up. Symbols are vector objects that can be edited like other objects.

**Symmetrical node**

A Bezier node where the control points are always directly opposite each other. Symmetrical nodes produce the same curvature on both sides of the node. The lengths of control points are always the same.

**Tab**

A set amount of space that is inserted in a line of text when you press the TAB key on the keyboard. You can set tab placements by using the Format Text dialog box.

**Template**

See Style template.

**Text styles or variations**

Variations within a typeface or font. Some common styles include Roman (regular or normal), bold, italic, and bold italic.



**Texture fill**

A texture fill is a fractally generated fill (a random, two-color fill) that you can use to give your objects a natural appearance. Texture fills add significantly to the size of your file and the time it takes to print. Therefore, you may want to avoid filling numerous or large objects with texture fills.

**TGA**

A bitmap image file format which uses the extension .TGA. Corel applications import and export files in .TGA format.

**Thumbnail**

A small bitmap image that lets you preview either a file before you open or import it or a fill before you apply it. You'll find thumbnail previews in the Open and Import dialog boxes as well as the PostScript Texture and Texture Fill dialog boxes.

**Tick divisions**

Evenly spaced division marks found between markers ("ticks") on the horizontal and vertical rulers. You can use the Grid And Ruler Setup dialog box to specify whether you want 8 or 10 division marks between each tick.

**TIFF (Tagged Image File Format)**

A graphic file format, with the extension .TIF, used for bitmap images.

These images can be edited in, created in, and/or exported from Corel PHOTO-PAINT. CorelDRAW can import TIFFs.

**Title**

To use multiple pages to print a drawing that is larger than the printer's paper size.

**Tiling**

The technique of repeating a small image across a larger surface. By decreasing the tile size of a fill, you increase its density.

**Tints**

Lighter shades of a spot color — colors that correspond to solid inks and are not CMYK-based — that are created by adjusting the percentage Tint value in either the Outline Color or Uniform Fill dialog boxes.



## **Title Bar**

The bar along the top of the Application Window that contains the name of the application or file, the Maximize and Minimize buttons, and the Close button. Dialog boxes and Roll-Up windows in Corel applications also have Title Bars but not Maximize and Minimize buttons.



**Toggle**

Alternately enabling and disabling a program function.

**Toolbar**

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

## Toolbox

A collection of buttons (normally found on the left side of the Application Window) that is used for quick access to common tools used to perform such tasks as selecting and drawing objects and choosing outline and fill attributes.



**ToolTips**

Small pop-up "bubbles" that provide information about icons and buttons on the Toolbars, Toolbox, and Status Bar and about options on the Menu Bar. ToolTips appear when you position the mouse cursor over any button.

**TOYO palette**

Colors that are available through the TOYO 88 Color Finder system. The range of colors 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 to CMYK for printing. Colors can be displayed by name or swatch through the Color Options menu.

**Tracing**

Following the outline of a bitmap to turn it into a vector-based graphic that can be edited without distortion.

**Transformation**

Changing an object's orientation or appearance without altering its basic shape. Types of transformations include positioning, rotating, scaling, mirroring, sizing, and skewing. In CorelDRAW, you can transform objects by using either the mouse, the Transform Roll-Up, or the Property Bar.



**Transparent**

The ability to see through an object or image. You can make an object transparent either by using the Interactive Transparency tool or by applying a Transparency lens.

**Transparency (in inline Internet images)**

In Web pages, all bitmapped graphics are rectangular and obscure the background color of the Web window unless you create a transparent background. Saving a graphic as GIF in CoreIDRAW, allows you to specify one color in your inline graphic as a transparency color. Each pixel that has that color value is rendered transparent, allowing the background color of the Web browser to show through. Note that transparency cannot be achieved with HTML tags.

**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.

**Trim**

To reshape an object by removing the area that is overlapped by another object. The object you trim retains its fill and outline attributes but has the overlapping area removed.

**True color**

Some video cards are capable of displaying true, or 24-bit color. True-color video 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.

**TrueType fonts**

Fonts that print as vectors or bitmaps depending on the capabilities of your printer. TrueType fonts print as they appear on screen and can be resized to any height.

**TRUMATCH**

A color-matching system used to specify process colors. The TRUMATCH color system is based on the CMYK color model and, therefore, extra 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.

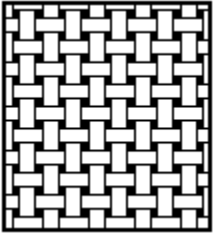
**Tutors**

Interactive help tools that give you step-by-step instructions on selected features. If you prefer, you can choose to have a tutor apply a feature for you. You can access Tutors either by clicking the CoreITUTOR button on the Toolbar or by clicking Help, CoreITUTOR.



### **Two-color pattern**

Fill composed of repeating bitmap images. CorelDRAW supplies a collection of two-color patterns to which you can add your own custom patterns.



**Two-point perspective**

An effect created by lengthening or shortening two adjacent sides of an object to create the impression that the object is receding from view in two directions. You can create two-point perspective by using the Add Perspective command in the Effects menu.

**Type Assist**

A feature that automatically displays the full form for abbreviations as you type. You can use Type Assist to capitalize certain words or to correct common spelling and typographic errors automatically. For example, Type Assist could replace "asap" with "as soon as possible" and "hte" with "the."

**Typeface**

A set of numbers, letters, and symbols of a single design such as Avant Garde, Garamond, or Bookman. Most typefaces are available in different variations or type styles. Some common styles include Roman (regular or normal), bold, italic, and bold italic.

Compare with *font*.

**Undercolor removal (UCR)**

In color printing, a technique that reduces the amount of cyan, magenta, and yellow ink in shadows and neutral areas of an image by replacing them with an appropriate amount of black. This reduces the total area of ink coverage (TAC). TAC is defined as the sum of the dot percentages of all four inks (CMYK) that contribute to a printed color.

Another technique, called Gray Component Replacement (GCR), also substitutes black for CMY inks, but does so over a greater color range.

**Uniform Colors (palette)**

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

**Uniform fill**

Uniform fills are even-colored, or solid, fills that can be applied to any closed-path object. You choose between color models, Color Matching Systems, and color mixers to fill objects with solid colors. (The default display is the CMYK color model and the custom palette.)

You can also create Color Styles based on uniform colors.

## Uniform Resource Locator (URL)

A Uniform Resource Locator (URL) is a unique address that defines where a document is found on the Internet. An example of a URL is <http://www.corel.com/visitors/welcome.htm>. A URL is made up of four components.

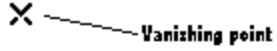
**http://www.website.com/family.html**  
Type of resource      Internet address      document name and path



## Vanishing point

A marker that appears when you select either an extrusion or an object to which perspective has been added. With an extrusion, the vanishing point marker indicates either the depth (parallel extrusion) or the point at which the extruded surfaces would meet if extended (perspective extrusion). With the Perspective Effect, the marker indicates the point (or points) at which the nonparallel lines would meet.

In both cases, the vanishing point is indicated by an X.



**Vector graphics**

Graphics created in programs such as CorelDRAW in which 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.

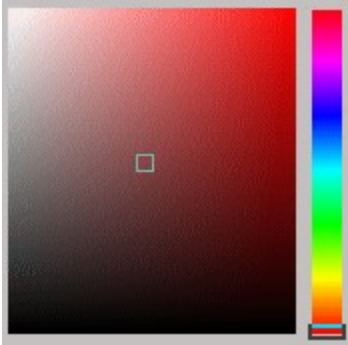
**Vector pattern**

A vector pattern is a picture composed of lines and fills, instead of dots of color like a bitmap. These pictures are smoother and more complex than bitmap images and are generally easier to manipulate.

You can select a vector pattern from a variety of pregenerated patterns that are included with CorelDRAW or import any CorelDRAW file to use as a vector pattern. Unlike two-color and four-color bitmap patterns, there is no limit to the number of colors that can be included in a vector pattern.

### Visual selector

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



**Weight**

The thickness of outlines you assign to objects by using the Outline tool. Sometimes used to refer to different type styles (e.g., normal, light, bold).

**Weld**

A feature that allows you to join several objects to create one object with a single outline.

**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 such things as screen color, mouse double-click speed, fonts, and printers. You can change the WIN.INI settings by editing this file with the Windows Notepad or any other ASCII text editor.



**Window**

A rectangular box in which applications are displayed on the screen. Most Application Windows have a Title Bar and Menu Bar along the top and a scroll bars along the side and/or bottom.

**Wireframe view**

One of CoreIDRAW's five View Quality options. In Wireframe View, objects display in skeleton form without fills or outlines. Because the screen redraws faster in this view, you may want to use it when you for edit complex drawings.

**WMF**

The filename extension for a Windows Metafile. Corel applications can import and export .WMF files.

**Word spacing**

The space that separates groups of characters. Corel applications recognize that a group of letters is a word by the existence of Space character between the groups of letters. A negative value decreases spacing; whereas a positive value increases spacing.

**Working page**

In the Drawing Window, the rectangle with the drop shadow that represents the printable area of your drawing.



**WPG**

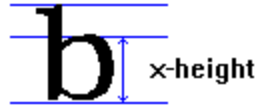
The filename extension for WordPerfect graphics files that are in vector-graphic format. CorelDRAW can import and export these files. When importing or exporting this format, note that .WPG files can contain bitmaps as well as vector graphics.

**WYSIWYG (What-you-see-is-what-you-get)**

A term that describes a program's ability to provide an accurate on-screen representation of what an image or document will look like when it is printed.

## **X-height**

The part that makes up the main body of a lowercase letter. The x-height is equal to the height of a lowercase x.





## **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.

## YIQ

The YIQ model was developed with the invention of the color television and was designed to be backwards compatible with black and white television. The Y component contains the luminance information and the I and Q components contain the chroma (or color) information. The Y component contains all the information required to construct a black and white television image (or grayscale). Tuning circuits in your color television separate and recombine the luminance and chroma information back into its RGB so that the image can be displayed on your television screen.

**Zoom**

To enlarge or reduce the image of a document or graphic on the screen. Zooming does not change the actual size of the text or graphics.

# Color Manager

# Introduction to Corel Color Manager

## Corel Color Manager

Corel Color Manager is an application that works with your Corel software to ensure that color is consistent across the different devices in your system.

You can use Corel Color Manager in one of two ways. You can quickly set up Corel Color Manager to work with your system by choosing your devices from the list boxes provided. You can also use Corel Color Manager's sophisticated calibration tools.

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

- fine tune scanned input based on your scanner's characteristics
- ensure that on-screen simulation of printer colors is accurate
- enable the gamut alarm
- manage color channels
- handle color printing and separation
- regulate conversion between color modes

### **New in Version 7.0**

- the Kodak ColorSync 2.0 system, a precise and widely used color standard for device profiling
- an easier method to build or edit your system profile
- the ability to set separate devices for composite proofs and separations
- hundreds of new customized device profiles

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**{button ,AL(`OVR Color Manager Help;OVR Color Manager;',0,"Defaultoverview",)} Related Topics**

## Device calibration

Calibration is the process of tuning a device to ensure that it is performing its function accurately.

Calibration provides the following benefits:

- the best possible color production from your devices
- devices that are adjusted to suit the lighting conditions of your work environment
- compensation for fading colors due to the age of your equipment

Corel Color Manager can help you calibrate the devices in your system by adjusting their output to match a standards set by manufacturers, industry conventions, or other devices. Corel Color Manager also supports a number of third-party calibration devices such as densitometers and colorimeters which offer you an even greater level of precision.

### Profiles

Once your device is calibrated to your satisfaction, Corel Color Manager builds a mathematical model of the device called a device profile. A device profile is a file which defines the nature of a device for Corel Color Manager. All the device profiles for your system are in turn compiled into a system profile.



#### Note

- Device profiles are stored in the International Color Consortium (ICC) standard as .ICM files.
- The .ICM profiles for the Tektronix printers were created by Pantone, Inc. and provided to Corel Corporation courtesy of Tektronix.

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**{button ,AL(`OVR Color Manager Help;OVR Color Manager';0,"Defaultoverview",)} Related Topics**

## Why use Corel Color Manager?

Your eyes are able to process millions of shades and tones of color so effortlessly that you don't need to think about how you distinguish between the color of a green apple and the color of a fern leaf; you simply see that they are different. If you then wanted to work with a photograph of those two objects, you'd want the scanned image on your monitor to look exactly as it did in the original, and you'd want to see two accurate and clearly distinguished shades of green in the final output.

Why, in reality, doesn't it always work that way? There are a number of factors affecting color production.

### Color gamut

Any device that detects or produces color is limited to the colors in its color gamut. For example, since the human eye can detect the color purple, it is within our gamut; whereas ultraviolet is outside our gamut. Typically, desktop devices can produce a far narrower range of color than the eye can detect, and since each device uses a different technique, color model, or set of inks, each has its own gamut which might not include colors included by the other devices.

### Color space

A color space is a geometric representation of gamut, containing all of the colors in a device's color gamut plotted as points on color models like RGB or L\*A\*B\*. When different color spaces are "mapped" to the same model, it becomes easy to see where the capabilities of different devices differ.

Corel Color Manager acts as a mediator between your hardware and all of the Corel graphics applications you use. It uses the CIE standard to map the color spaces of individual devices together to plot a common color space for your system. The result is that all of your devices can speak the same color language, and more importantly, they produce the same colors.

#### **Note**

The following values define the color space of Corel Applications

Chromaticity values: Red: 0.639 (x), 0.33 (y). Green: 0.3 (x), 0.599 (y). Blue: 0.149 (x) 0.0599 (y).

Temperature: 6500K

Gamma: Red = Green = Blue = 2.2

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**{button ,AL(`OVR Color Manager Help;OVR Color Manager';,0,"Defaultoverview",)} Related Topics**

# Creating scanner profiles



## Creating scanner profiles

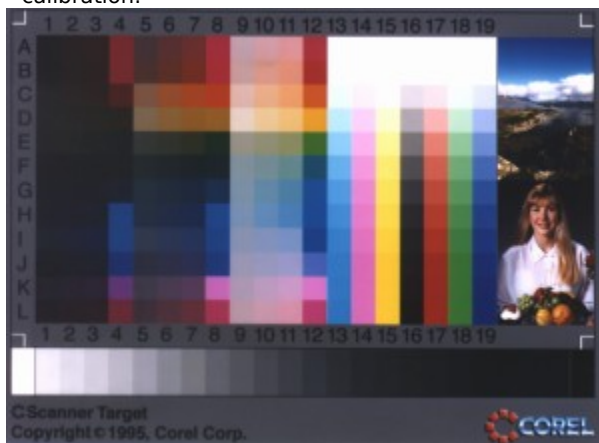
A scanner profile allows Corel Color Manager to measure the variance between the scanner's output and a known reference point, and to make the output conform to that point of reference. This ensures that the scanner's output is accurate and consistent.

In most cases, Corel has already profiled your scanner, so simply [choose a scanner](#) by manufacturer and model from the list boxes provided. If your scanner is not on the list, or if you are an experienced user and want more control over the calibration process, choose either the [Generate Or Redo A Profile](#) or [Get Profile From Disk](#) option.

If you choose to calibrate your own scanner, you need both of the following items before you start:

### Scanner targets

IT8 scanner targets are images carefully manufactured to display a wide range of precise colors and tones. Corel has provided the following target with your software package which includes a color chart for basic scanner calibration.



### Reference files

A reference file is a mathematical representation of a target which Corel Color Manager compares to your scanner's version of the target. Corel provides a reference file with your software package for basic calibration which matches the target shown above. After you either scan the target or indicate where the previously scanned target is found, the reference file is automatically loaded when you indicate that you are using the target shipped by Corel.

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**{button ,AL(`OVR Color Manager Help;OVR Color Manager;'0,"Defaultoverview",)} [Related Topics](#)**



## Choosing a scanner

For most users, all that's needed to get Corel Color Manager working with your scanning device is to select your scanner from the list box.

### To select a scanner from the list box

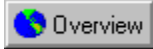
1. Enable the check box to the right of the Scanner list box.
2. Choose your scanner from the Scanner list box.
3. Verify that the option selected in step 2 indicates the correct manufacturer, model, and scanning software.

### Notes

- We recommend that you use Corel TWAIN scanning software when there is an option to do so.
- If you are using a grayscale scanner, you will not need to set a profile. Simply disable the Scanner check box.

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**{button ,AL(` PRC Creating scanner profiles;',0,"Defaultoverview",)} Related Topics**



## Generating or editing a scanner profile

Once you've chosen this option from the Scanner list box in the initial Corel Color Manager dialog box, you begin the process of custom scanner calibration.

### To begin the custom scanner calibration process

- Type the manufacturer and model of your scanner in the boxes provided.

#### **Note**

- Corel provides a photograph with your software which you can use as a target image when calibrating your scanner. The Corel target is only for basic calibration. While using it provides satisfactory results for most users, more advanced and professional users should consider using a third-party IT8 target—good ones are available from Kodak and AFGA among others. Be sure that you obtain both a target and a reference file; some targets may be sold without a corresponding file.

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**`{button ,AL(` PRC Creating scanner profiles;',0,"Defaultoverview",)}` [Related Topics](#)**



## Aligning scanner targets

Before Corel Color Manager can calculate your scanner's characteristics from the scanner target, it has to be able to compare the scanner target with the matching reference file. Aligning your target using fiduciary marks tells Corel Color Manager where to find the color information on the page.

### To align your scanner target

1. Ensure that the [Zoom tool](#) is enabled.
2. Click the [fiduciary mark](#) in the upper left corner of the target file. This enlarges the area, making it easier to see the fiduciary mark. The cursor becomes a semi crosshair.
3. Position the semi crosshair over the fiduciary mark and click.
4. Repeat steps 2 and 3 for the top right and bottom right corners. It is not necessary to select the lower left corner as Corel Color Manager only needs three points to read the target.
5. Click the Calculate button.



### Note

- If you scanned the target improperly, you can use the left and right Rotate tools to re-orient the target in 90 degrees clockwise or counterclockwise.

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**{button ,AL(` PRC Creating scanner profiles;',0,"Defaultoverview",)} [Related Topics](#)**



## Getting a scanner profile from disk

- If your scanner is not present on Corel Color Manager's list, but you do have a profile on disk from the scanner manufacturer, type the name of the directory where it can be found in the box provided or click the Browse button to find it.

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**{button ,AL(`PRC Creating scanner profiles;',0,"Defaultoverview",)} Related Topics**

# Creating monitor profiles



## Monitor profiles

A monitor profile allows Corel Color Manager to measure the variance between the monitor's output and a known reference point and to make the output conform to that point of reference. This ensures that the monitor's output is accurate and consistent.

In most cases, Corel has already profiled your monitor, so simply [choose a monitor](#) by manufacturer and model from the list box provided. If your device is not on the list, or if you are an experienced user and want more control over the calibration process choose either the [Generate Or Edit A Profile](#) or [Get Profile From Disk](#) option.

As a monitor ages, RGB output signals can begin to deviate from the manufacturer's specifications, so you may want to create a custom profile for an older device. You may also want to compensate for the following:

- changes in ambient lighting conditions throughout the day or evening
- different temperature for the ambient lighting under which printed proofs are viewed



### Tip

Before creating a profile:

- the monitor should be on for at least an hour before you begin. This warms up the electron guns in your monitor to a stable temperature, since color output varies depending on how warm the guns are.
- if the monitor has manual adjustment controls, ensure that they have been set to the manufacturer's recommended settings. Then, adjust the monitor's brightness to match the lighting in the room (ambient lighting). Remember that the brighter the ambient lighting, the smaller the range of colors the monitor can produce (gamut).

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**{button ,AL(`OVR Color Manager Help;OVR Color Manager;',0,"Defaultoverview",)} [Related Topics](#)**



## Choosing a monitor

The quickest way to set a profile for your monitor is to choose a monitor from the list of profiles provided by Corel. This option is recommended for most users since generating or editing profiles can be quite involved.

### To choose your monitor

1. Enable the check box to the right of the Monitor list box.
2. Choose a monitor from the Monitor list box.
3. Verify that the option selected in step 2 indicates the correct manufacturer and model.
4. After you have set all your profiles click the Finish button.

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**{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)} Related Topics**





## Generating or editing a monitor profile

Once you've chosen this option from the Scanner list box in the initial Corel Color Manager dialog box, you begin the process of custom monitor calibration.

### To generate or edit a profile

- After selecting the Generate Or Edit A Profile option in the list box, type the manufacturer and model of your monitor.



### Note

- To avoid making irreversible changes, we recommend that you do not edit the prepackaged monitor profile. If your device is listed but you wish to create a new profile for it, alter the name slightly when you enter the manufacturer and model (e.g. type "Viewbox 5000 #2" rather than "Viewbox 5000").

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`{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)}` [Related Topics](#)



## Defining monitor characteristics

Choose whether you want to calibrate your monitor according to the default settings of another device or begin from scratch. Starting from scratch is useful if your monitor is not included in the list of profiles but is similar to another monitor model. It is also useful if you are creating a second profile for a device but would like to begin editing with the default settings for your device.

### To define monitor characteristics without copying settings

1. Disable the Copy Another Monitor's Characteristics check box.
2. Click the Next button.

### To copy another monitor's characteristics

1. Enable the Copy Another Monitor's Characteristics check box.
2. Choose your monitor's manufacturer from the Monitor manufacturer list box.
3. Choose your monitor's model from the Monitor model list box.

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**{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)} [Related Topics](#)**

## J

### Adjusting your monitor (monitor calibration dialog box)

Adjusting your monitor allows you to ensure that your monitor's color output is consistent with a fixed point of reference — the two photos included in your software package.



Before you begin, click the [zoom tool](#). These photos — a landscape and a portrait — were chosen because of their subtle grades of color. Note the flesh tones as well as the colors of the fruit, foliage, and sky. You will be setting your monitor to reproduce colors in the printed photograph as closely as possible.

In order to do this, ensure that the monitor's [chromaticity](#), [white point](#), and [gamma](#) are set correctly.

During monitor calibration, you can review the effects of your selections by clicking the Preview button; you can also return all values to the defaults by clicking the Reset button.

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**{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)} [Related Topics](#)**



## Adjusting Chromaticity

Chromaticity is a quality of color corresponding to the monitor's color gamut (the number of saturated colors that the monitor is capable of reproducing). Since chromaticity values are relatively stable and do not vary greatly between monitors, they usually do not need to be adjusted.

### To change chromaticity settings:

1. Enable the Monitor Chromaticity button.
2. Choose the channel (red, green, or blue) you wish to adjust in the Chromaticity section of the dialog box.
3. Do one of the following:
  - drag the marker across the visual selector (the colored box).
  - type numeric values in the x and y boxes associated with the chosen color channel. Contact your monitor manufacturer for the best values for your monitor.
  - choose from the list of prepackaged settings in the Phosphors list box.

---

**{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)} Related Topics**

## J

### Adjusting White Point

White point is the measure of the light produced by the monitor when all electron guns are set to full intensity. White point allows you to define the quality of "pure" white for your monitor. This is expressed as a temperature in degrees Kelvin (K) corresponding to the reflective qualities of different illuminants (light sources). "Cold" light tends toward the violet range of the light spectrum. It reflects from white with a blueish hue, while "warm" light reflects more red.

#### To change white point settings

1. Enable the Monitor White Point button.
2. Adjust white point values by doing one of the following:
  - move the slider
  - type numeric values
  - choose an illuminant you wish to simulate from the list of prepackaged settings.

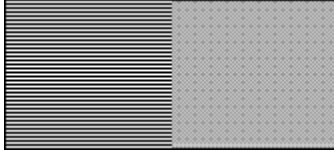
---

`{button ,AL(' PRC Creating monitor profiles;',0,"Defaultoverview",)}` [Related Topics](#)

## J

### Adjusting Gamma

Gamma controls the monitor's brightness. Adjust gamma values using the Gamma box as a reference:



The square on the left represents the natural gamma of your monitor, while the square on the right reflects the current gamma settings. Gamma is set correctly when these two squares match each other in brightness. While you are setting these values, it will help to move back from the monitor (approximately four feet) until the horizontal lines in the left side of the gamma box seem to converge into a solid color, or blur your eyes to achieve the same effect.

#### To adjust the gamma settings for your monitor:

1. Click one of the Channel buttons in the Gamma Section to adjust the gamma for red (R), green(G), blue(B), or all three (RGB). The Gamma box changes to reflect the color selected.
2. Type numerical values in the box until the two grays or colors match.

#### Tip

- Although Gamma can be adjusted individually for each color channel, most users will achieve satisfactory results by enabling the Identical RGB value radio button and adjusting all three channels together.

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**{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)} Related Topics**



## Calibrating your monitor with a color measurement device

The most accurate way of defining exact colors for your monitor is to use Corel Color Manager in tandem with a specialized color measurement device.

### To calibrate your monitor with a Colortron II measurement device

1. Enable the Calibrate With Device check box.
2. Choose the serial port that the Colortron II™ is plugged into from the list box beside the Calibrate button.
3. Click Calibrate.
4. Follow the instructions in the windows that follow.

### To calculate white point temperature with a color measurement device

1. Click the Monitor White Point button
2. Open CorelDRAW and ensure that color correction is disabled while you are doing your measurements. To do so, click View, Color Correction, None.
3. Do one of the following:
  - using your color measurement device, measure a patch of "pure" white from the Corel DRAW screen (check that the RGB values are all set to 0) and type the value in the White Point Temperature box
  - if your device only registers x and y values, measure a patch of "pure" white from one of your Corel applications, choose Custom from the Illuminants list box under the temperature slider, and type the chromaticity x and y coordinates for "pure" white in the White Point dialog box that opens.

### To calculate RGB chromaticity values with a color measurement device

1. Click the Monitor Chromaticity button.
2. Click the Red button.
3. Open CorelDRAW and ensure that color correction is disabled while you are doing your measurements. To do so click View, Color Correction, None.
4. Using your color measurement device, measure a patch of "pure" red from the CorelDRAW screen (check that the RGB values are 255, 0, 0) and type the x and y coordinates in the boxes.
5. Repeat steps 2 to 4 for Green and Blue.



#### Note

- The two chromaticity values added together ( $x + y$ ) must not total greater than one (i.e.  $.3457 + .3587 = .7044$ ).

---

{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)} [Related Topics](#)



## Getting a monitor profile from disk

This option in the Monitors list box should be used only if your monitor is not present on Corel Color Manager's list box but you do have a profile on disk from the monitor manufacturer.

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`{button ,AL(` PRC Creating monitor profiles;',0,"Defaultoverview",)}` [Related Topics](#)



# Creating color printer profiles



## Color printer profiles

A color printer profile allows Corel Color Manager to ensure that output from your color output device accurately reflects the image on your monitor and is consistent with scanner input.

Corel Color Manager allows you to select two printer profiles: one for composite output, and one for color separations:

- Output from a [composite printer](#) looks like the image on your monitor. It contains a combination of all the [color channels](#) in your image.

Composite printers process images using either [RGB](#) or [CMYK](#) color models.

- Output from a [separations printer](#) is broken down into component colors. Separations printers process images using the [CMYK](#) color model.

In most cases, Corel has provided you with a profile for your composite and/or separations printer, so for each category, simply [choose a printer](#) by manufacturer and model from the list boxes provided. If your printer is not on the list, or if you are an experienced user and want more control over the calibration process, choose either the [Generate Or Tune A Profile](#) or [Get A Printer Profile from disk](#) option.



### Tip

- If you are using one device to perform both functions, select your device from the Separations list box and select None in the Composite printers list box.
- Corel Color Manager uses the separations printer to manage CMYK images in your applications. CMYK is a device-dependent color space, so any conversions to or from CMYK are based on the devices you choose.



### Note

- If your printer has a built-in color management circuit, you must disable it before using the Corel Color Manager. These printers expect to receive color information as RGB data, which the built-in color management circuit converts to CMY or CMYK (depending on the color model used to map to the printer's color space). Color management sends CMYK data to the printer for calibration. To disable the printer's built-in color management, refer to the printer's documentation or contact the manufacturer.

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{button ,AL(`OVR Color Manager Help;OVR Color Manager;',0,"Defaultoverview",)} [Related Topics](#)



## Choosing a printer

The quickest way to set a profile for either your composite or your separations printer is to choose a printer from a list of profiles provided by Corel. This option is recommended for most users since the process of generating or tuning profiles can be quite involved.

The same procedure allows you to set composite and separations devices.

### To choose your printer

1. Choose a printer from either the Composite or Separations list box.
2. Ensure that the manufacturer and model match your printer exactly.
3. Ensure that the check box to the right of the printer box is enabled.
4. After you have set profiles for all your devices, click the Finish button.

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**{button ,AL(` PRC Creating color printer profiles;' ,0,"Defaultoverview",)} Related Topics**



## Generating or tuning a printer profile

Once you've chosen this option from the Scanner list box in the initial Corel Color Manager dialog box, you begin the process of custom printer calibration. Corel Color Manager allows you to create a new printer profile or revise an existing profile.

Before you begin, please note that color printers are difficult devices to calibrate accurately. Accurate printer calibration requires the use of precise instruments which are too expensive for most users. Using the scanner method is an inexpensive alternative, but be aware that it is limited by the capabilities of your scanner.

To avoid making irreversible changes, we recommend that you do not directly alter the printer profiles provided by Corel. If your device is listed but you wish to create a new profile for it, alter the name slightly when you type the manufacturer and model.

### To generate or tune a profile

1. Choose the Generate Or Tune A Profile option in the list box.  
A new dialog box opens.
2. Type the manufacturer and model of your printer in the appropriate boxes and click the Next button.
3. Ensure that your printer's color correction has been disabled in your Print Setup dialog boxes as it can interfere with Corel Color Manager's calibration.
4. Click the Next button.



### Note

- 4 inks are automatically selected for separation printers.

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{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",)} [Related Topics](#)



## Defining printer characteristics

Decide whether you'd like to select a general category for your printer (Laser, Thermal Wax Transfer, etc.), or base your new profile on a specific printer model.

### To define printer characteristics as a general category

1. Click the Please Specify Your Printer's Type button.
2. Select a printer type from the list box to the right of the button.
3. Click the Next button.

### To define printer characteristics based on the printer's model

1. Click the Use An Existing Printer As A Base Profile button.
2. Select the manufacturer and model from the appropriate boxes.
3. Click Next.

---

**{button ,AL(` PRC Creating color printer profiles;' ,0,"Defaultoverview",,)} Related Topics**

J

## Choosing a calibration method

There are two methods for printer calibration:

- The Scanner method is the simplest method which involves printing the target file provided by Corel, which looks like this.



Once printed, you scan it using a scanner and Corel Color Manager creates a measurements file for your printer. Ensure that your scanner has been calibrated before you choose this option.

- The File method is more accurate, but is time-consuming and requires special equipment. You print a numbered target sheet, measure each color swatch using a spectrophotometer, and type the results into a measurements file. If you are calibrating a CMYK printer, you can adjust the TAC and K-curve once the measurements file is complete (either through the scanner or manually).

### To choose a calibration method

1. Click either the File Method or Scanner Method button.
2. Click Next.

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{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",,)} [Related Topics](#)



## **Naming the measurement file for scanner-based printer calibration**

- Type a filename in the box.

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`{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",)}` [Related Topics](#)



## Aligning a printer measurement target on your scanner

Before Corel Color Manager can calculate your printer's characteristics by measuring output from your calibrated scanner, it has to be able to compare the values of individual swatches of color from the printer with the reference file for the target. Aligning your target using fiduciary marks tells Corel Color Manager where to find the color information on the page.

### To align your target

1. Use the left and right Rotate tools to re-orient the target in increments of 90 degrees.
2. Click the [Zoom Tool](#).
3. Click the [fiduciary mark](#) in the upper left corner of the target file. This enlarges the area, making it easier to see the fiduciary mark. The cursor becomes a semi crosshair.
3. Position the semi crosshair over the fiduciary mark and click.
4. Repeat steps 2 and 3 for the top right and bottom right corners. It is not necessary to select the lower left corner as Corel Color Manager only needs three points to read the target.

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{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",)} [Related Topics](#)





## Printing test pattern files

The test pattern will print a page of colored squares called patches. These patches are evenly distributed across the visible spectrum, showing a range of possible colors. You select the number of patches to be printed, which can be any number between 40 and 200. The larger the number of patches, the wider the range of samples you give Corel Color Manager to calculate your printer's color characteristics. The default number has been set to 200 for maximum accuracy, but 60 or more samples will provide adequate results.

When you select Yes, a graphic file (in the .TIF format) is created in your Color directory and printed.

### To print test pattern files

1. Click the Yes Print The Test Pattern File.



2. Type the number of patches to print in the box provided.
3. Click the Next button.
4. A print setup dialog pops up. Select the printer you wish to calibrate from the list box and click OK.



### Note

- If you have not done so already, ensure that any printer-level color management or color correction is disabled before you print the test pattern file. Click Properties in the Print Setup dialog box to search for and disable these printer options.

### To skip this step

- Click the No, Do Not Print The Test Pattern File button.

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{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",,)} [Related Topics](#)



## Using a measurement file to calibrate your printer

You can perform the measurements required to calibrate your printer and save them to a file or load an existing measurement file. If this is your first time using Corel Color Manager for this printer, choose Measure And Save To File.

### To load a measurement file from disk

1. Click the Load From File button.
2. Do one of the following:
  - type the name of the measurement file
  - click the Browse button to find a Measurement file on your disk. Measurement files use .RMF extensions for RGB printers and .CMF extensions for CMYK printers.

### To begin the measurement process

1. Click the Measure And Save To File button.
2. Identify your color measurement device in the Device list box, as well as the serial port it is connected to. Corel Color Manager supports the following devices:
  - The Gretag SPM series: No device calibration is required for these instruments.
  - The X-Rite 900 series.
  - The X-Rite Color Digital Swatchbook.
  - The Colortron II.
3. Click the Calibration button and follow the instructions in the dialog box that appears.
4. Click the Next button.

### Note

- If you have not done so already, ensure that any printer-level color management or color correction is disabled before you print the test pattern file. Click Properties in the Print Setup dialog box to search for and disable these printer options.

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**{button ,AL(` PRC Creating color printer profiles;' ,0,"Defaultoverview",,)} [Related Topics](#)**



## Measuring printer colors

When you first open the Printer Color Measurement dialog box, you'll see a version of your printer measurement file with a flashing square around the patch in the upper left corner. This square is the active patch marker and it indicates the patch to be measured. As you enter new measurements with your measurement device, the active patch marker automatically moves from left to right, allowing you to move your device from one patch to the next without using your keyboard or mouse. You can, however, click any of the patches to select and enter a measurement for it.

After measuring a patch, the solid square of color on your screen divides into two halves:



The color at the upper left corner of the patch represents the "pure" color as it appears in the reference file; the color in the lower right represents the color as read by your calibration device from the printer's output. While measuring, keep an eye on both sides of the patch to ensure that you are always measuring the correct patch. Under the graphic representation of the measurement file is a box where the L\*a\*b\* values are entered for each color. This shows you the exact data that are being entered into the measurement file you are creating, saved with an .RMF extension for RGB printer profiles and .CMF for CMYK printers. Each line in the file begins with the index number for the patch along with one value for each L\* (lightness), a\* (red-green chromaticity range), and b\* (blue-yellow chromaticity range) up to 7 decimal places per value..

### To build a new printer output measurement file

1. Place the active swatch marker (the flashing square) on the upper left patch by clicking the patch.
2. Measure the patch with your measurement device.  
The active swatch marker automatically moves to the next patch to the right.
3. Measure the next patch and repeat until all patches have been measured.
4. Click Save.

### **J** Note

The measurement file is an ASCII text file structured like this. The material above the line is the header for the file. The material below the line is repeated for as many patches as are being measured.

Number of swatches	Version number		
index number	L* (0-100)	a* (0-60)	b* (0-60)

**{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",)} Related Topics**



## Using test pattern files

When you calibrate the printer using a colorimeter, you need to print a test pattern. The test pattern contains numbered color swatches which you will measure using a CIE XYZ colorimeter. You then record the measured values in an ASCII file.

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**{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",)} Related Topics**



## Getting a printer profile from disk

- If your printer is not listed in Corel Color Manager's list but you do have a profile on disk (either from the manufacturer or one you've created), type the filename in the Copy Manufacturer's File From box or click the Browse button to find it. The file type for printer profiles is .ICM files.

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**{button ,AL(` PRC Creating color printer profiles;',0,"Defaultoverview",)} Related Topics**

## J

### Adjusting printer TAC and K-curve

Total area coverage (TAC) and the K-curve can be used to control both the amount of ink placed on the paper and the quality of the colors produced. While the essentials of the printer profile are derived using the measurement and reference files, TAC and K-curve are used to fine-tune the printer output to produce a desired result.

When setting the TAC percentage and the K-curve, testing and experience are the best guides. Print a sample that you can evaluate against a reference point (a photograph, original drawing, or target sheet), and adjust the values as needed. You may have to do this several times, or only once, depending on your level of experience.

#### Setting TAC percentage

TAC defines the amount of ink placed on the paper. If you have full saturation of cyan, magenta, yellow, and black, you end up with 400% coverage (100% of each ink). In most cases, this level of coverage is impossible to apply with satisfactory results. Most printers support a maximum coverage of 300%, with an optimal TAC setting from 260% to 280%. The maximum TAC depends on the speed of the printer and the technology on which the printer is based. Refer to your printer's technical documentation for the best setting, or contact the printer manufacturer.

TAC is primarily used for calibrating four-ink printers. TAC can be adjusted for three-ink printers, but is generally not required since the theoretical maximum of ink on paper is 300%. However, you may want to lower the TAC setting and test the results.

TAC percentage can be set to between 200% and 400%. Higher TAC percentages result in steeper curves on the CMYK Plates graph.

#### Setting the K-curve

The K-curve represents the amount of gray component replacement (GCR) used at print time, and is used for four-ink printers only. A steeper curve means increased GCR in the shadows. The changes generally have these effects:

- A shallow K-curve results in black produced using more C, M, and Y inks; the black has a warm and glossy character.
- A deep K-curve results in a darker, truer black (less warmth and gloss).

GCR is a variation on undercolor removal. In any color, whenever there is a value for cyan, magenta, and yellow, there is a gray component that can be replaced with black. This approach to printing has four advantages:

- The amount of ink placed on the paper is reduced.
- Grays are produced more consistently (since grays are now made up primarily of black ink).
- Variations in color are reduced (if ink coverage varies, colors become lighter or darker instead of changing hue).
- Printing costs are reduced.

The only disadvantage of this approach to printing is that darker colors have reduced color density, and it is more difficult to adjust inks for color balance.

#### To choose the K-curve

- Choose a preset K-curve from the Black colorant list box

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**{button ,AL(` PRC Creating color printer profiles;' ,0,"Defaultoverview",,)} [Related Topics](#)**

## **Zoom tool**




Found on the Toolbox and Zoom toolbar. The Zoom tool magnifies areas of your picture. Click to zoom in to the next preset level, right-click to zoom out to the next preset level, or click and drag around the area you wish to zoom in on.

### **The Fiduciary Marker**

 Use this marker, which appears on your scanner/printer target, to align your target.



### **The Visual Selector Box**

 Drag the markers this box to adjust monitor chromaticity.

Click to display the next dialog box.

Click to return to the previous dialog box.

Click to return all values and settings to their default values.

Select the name of the manufacturer of the device you are calibrating from the list, or type a new name if you want to generate a customized device profile that will not overwrite the existing profile.

Select the model name for the device you are calibrating from the list, or type it.

Select the manufacturer of the device whose characteristics you want to use to create a profile for your device. It is recommended that you select a manufacturer and model that closely resembles the device you are calibrating. You can also do this to create a second profile for a device using the original profile's characteristics as the starting point for the second profile.

Select the model of the device whose characteristics you want to use to create a profile for your device. It is recommended that you select a manufacturer and model that closely resembles the device you are calibrating. You can also do this to create a second profile for a device using the original profile's characteristics as the starting point for the second profile.



This box appears in several Corel Color Manager dialog boxes and is used for two reasons:

- in Corel Color Manager's introductory screen, it is used to display a description or copyright information for the profile or option selected in the list box above that is currently active, i.e., the list box you last clicked.
- in other dialog boxes it is used to type comments or a description of the device or profile you are editing

Type the drive letter and the complete path for the location of the device profile you want to use to calibrate your device.

Type the name of the file you want to load whether it be the third-party's scan reference file to be used by to compare the scan target when calibrating a scanner or a saved color measurement file to use to calibrate a printer.

When you are calibrating a printer using the scanner method, use this box to type the name to assign to the measurement file generated by the scanned target image you are using as a reference for the calibration process.

Click to calibrate your monitor using the Colortron II(TM) third-party color measurement device with Corel Color Manager.

Click to browse through all drives and folders you have access to find the file you want to load.

This control appears in several Corel Color Manager dialog boxes and is used for the following purposes:

- when you are calibrating a scanner, to confirm that you are using the scan target shipped with your Corel software.
- when you are calibrating a printer, to confirm that you want to print the test pattern which is a series a colored patched covering a spectrum of colors. In this situation, you can specify how many patches you want to print.

This control appears in several Corel Color Manager dialog boxes and is used for the following purposes:

- when you are calibrating a scanner, to indicate that you are using an IT8 scanner target you obtained from a third-party vendor.
- when you are calibrating a printer, to indicate that you do not want to print the test pattern patches

For Corel Color Manager to be able to compare the scanner target with the matching reference file, the scan target must be right side up. If the scan target was not properly placed on the scanner bed, click this button to rotate the scan target 90 degrees in a clockwise direction.



For Corel Color Manager to be able to compare the scanner target with the matching reference file, the scan target must be right side up. If the scan target was not properly placed on the scanner bed, click this button to rotate the scan target 90 degrees in a counter-clockwise direction.

The Zoom tool appears in several dialog boxes:

- when you are calibrating a scanner, use this tool to magnify the top and bottom-right corners of the scanned target so that you may accurately align the fiduciary marks
- when you are calibrating your monitor, click this tool to magnify the preview of the reference photos and verify the result of adjustments you have made.

Enable to apply the default tonal characteristics when generating the scanner profile. To use the default characteristics in combination with the Darken Shadows option listed below, enable the Use Preset Tonal Settings and choose Normal in the list; the Darken Shadow check box will be available to you.

- Default characteristics will be appropriate in most cases.

Enable to choose a Preset Tonal Setting from the list box. Normal provides the same attributes as the Default button above but allows you to use the Darken Shadows button.

Enable to make shadows in the scanned target image darker and to use this adjustment when generating the scanner profile. This can only be used when you are using a Preset Tonal Setting.

Choose a Preset Tonal Setting from the list box. These preset affect the tonal characteristics that will be included in the scanner profile when you click the OK button.

Click the Color Picker to choose a Gamut alarm color to be used on screen in your Corel applications to show the colors in an image or document that cannot be reproduced by the current printer. Those colors fall outside the current printer's range of possible colors also called the printer's gamut. The default Gamut alarm is neon green. To activate the Gamut alarm in other Corel applications, you must click the View menu, choose Color Correction, enable Accurate. Repeat the process but this time enable Gamut Alarm in the Color Correction flyout menu.

Lists all preset scanner profiles, and options for creating a profile from scratch, editing an existing profile, and installing a third-party profile from disk. You must enable the check box to the right of this list to choose an option from the list.

You can right-click this box to see various commands to quickly edit the selected profile, remove it from the list, copy it to give it to another use, see its properties, or return to the generic profile.

**Note**

- The Install Profiles options listed in this box is used only to install Corel-supplied scanner profiles. This option can only access the drive from which you installed Corel Color Manager. Printer profiles have a .ICM file extension.



Lists all preset monitor profiles, and options for creating a profile from scratch, editing an existing profile, and installing a third-party profile from disk. You must enable the check box to the right of this list to choose an option from the list.

You can right-click this box to see various commands to quickly edit the selected profile, remove it from the list, copy it to give it to another use, see its properties, or return to the generic profile.

**Note**

- The Install Profiles options listed in this box is used only to install Corel-supplied monitor profiles. This option can only access the drive from which you installed Corel Color Manager. Printer profiles have a .ICM file extension.

Lists all preset composite printer profiles, and options for creating a profile from scratch, editing an existing profile, and installing a third-party profile from disk. You must enable the check box to the right of this list to choose an option from the list.

You can right-click this box to see various commands to quickly tune the selected printer profile, edit the GCR (Gray Component Replacement), remove the profile from the list, copy it to give it to another use, see its properties, or return to the generic profile.

**Note**

- The Install Profiles options listed in this box is used only to install Corel-supplied composite printer profiles (3-ink or 4-ink printers). This option can only access the drive from which you installed Corel Color Manager. You can use CTRL and SHIFT in the install dialog box to install several profiles in a single operation.

Lists all preset separations printer profiles, and options for creating a profile from scratch, editing an existing profile, and installing a third-party profile from disk. You must enable the check box to the right of this list to choose an option from the list.

You can right-click this box to see various commands to quickly tune the selected printer profile, edit the GCR (Gray Component Replacement), remove the profile from the list, copy it to give it to another use, see its properties, or return to the generic profile.

**Note**

- The Install Profiles options listed in this box is used only to install Corel-supplied separations printer profiles (4-ink printers). This option can only access the drive from which you installed Corel Color Manager. Printer profiles have a .ICM file extension.

Click to make Corel Color Manager scan your system and assign a profile to each one of your devices such as scanners, monitors, and printers. This is an alternative to choosing from the lists of preset profiles displayed above, or creating your own profiles from scratch.

Enable to choose an existing scanner profile, create one, edit an existing one, or install a third-party profile from disk. If you are using a grayscale scanner, you do not need to generate a profile for it. Disable this check box and calibrate your other devices.

Enable to choose an existing monitor profile, create one, edit an existing one, or install a third-party profile from disk.

Enable to choose an existing composite printer profile, create one, edit an existing one, or install a third-party profile from disk. A composite printer's output looks like the image on your monitor. It contains a combination of all the color channels in your image. This is different from a separations printer which breaks down its output per color component using the CMYK model.

Enable to choose an existing separations printer profile, create one, edit an existing one, or install a third-party profile from disk. A separations printer's output breaks down your image into color components corresponding to the CMYK color model; it produces separations. This is different from a composite printer which prints your image the way it looks on your monitor with all color channels combined.



Enable when the scan target has already been scanned; you will then retrieve the file created from the scanned target.

Enable to scan a printed target.

Identify the type of material on which the third-party's scan target is printed. Reflective material reflects light whereas Transmissive does not. A photographic scan target you scanned on a flatbed scanner is reflective. A slide or negative is transmissive.

Click to display the original scanned target in the Uncalibrated and Calibrated preview areas after viewing a different image.

Click to apply the currently selected tonal characteristics preset. To change the preset selected, click the Close button to return to the previous screen and choose a new one from the list box.

Click to apply the default tonal characteristics to the calibrated image.

Click this button to see the effect of the selections you make on the reference photos. This allows you to evaluate whether or not the selections make the device produce colors that match the colors in the corresponding photos you received in your software package, called the scanner target.

Visual selector which displays all possible chromaticity values for each color channel. Drag the marker inside the visual selector to set the chromaticity values for the selected color channel.



Choose an illuminant you want to simulate. The white point value is updated according to the choice you make. Click the preview button to see the result in the reference image.

Type the temperature of pure white measured by the third-party measurement device in this box. To calculate your monitor's White Point temperature using this type of device, you must launch another Corel application, disable color correction by clicking View, Color Correction, None, and use the device to measure a patch of pure white in the application — an object or section of an image that is white and for which all RGB values are set to 0.

If your measurement device reads x and y values instead of a temperature, choose Custom in the list box on the left and type those values in the dialog box that opens.

Enable the button to adjust the gamma value for the red channel. Type the desired gamma value for this channel in the corresponding box. Gamma values range from 0.5 to 3.0 and can be set in increments of 0.01.

Enable the button to adjust the gamma value for the green channel. Type the desired gamma value for this channel in the corresponding box. Gamma values range from 0.5 to 3.0 and can be set in increments of 0.01.

Enable the button to adjust the gamma value for the blue channel. Type the desired gamma value for this channel in the corresponding box. Gamma values range from 0.5 to 3.0 and can be set in increments of 0.01.

Enable to make the gamma values the same for all color channels. When enabled, the gamma preview area changes to grayscale.

The Gamma reference used to see the result of changing the gamma settings. Gamma refers to the brightness of your monitor.

The square on the left represents the natural gamma of your monitor, while the square on the right reflects the current gamma settings. Gamma is set correctly when these two squares match each other in brightness. While you are setting these values, it will help to move back from the monitor (approximately four feet) until the horizontal lines in the left side of the gamma box seem to converge into a solid color, or blur your eyes to achieve the same effect.

Preview of the two photos included in your software package that are used as a reference when calibrating your monitor. The photos were selected because of the wide range of colors, highlights, and shadows they include. Click the Zoom tool below to magnify the preview.

In the monitor calibration process, you will be setting your monitor to reproduce the colors in the printed photograph as closely as possible.



Type the x chromaticity value for the red color channel. An alternative method for adjusting the chromaticity values is to drag the marker in the visual selector on the right. Contact your monitor manufacturer for the best values for your monitor.

Type the y chromaticity value for the red color channel. An alternative method for adjusting the chromaticity values is to drag the marker in the visual selector on the right. Contact your monitor manufacturer for the best values for your monitor.

Type the x chromaticity value for the green color channel. An alternative method for adjusting the chromaticity values is to drag the marker in the visual selector on the right. Contact your monitor manufacturer for the best values for your monitor.

Type the y chromaticity value for the green color channel. An alternative method for adjusting the chromaticity values is to drag the marker in the visual selector on the right. Contact your monitor manufacturer for the best values for your monitor.

Type the x chromaticity value for the blue color channel. An alternative method for adjusting the chromaticity values is to drag the marker in the visual selector on the right. Contact your monitor manufacturer for the best values for your monitor.

Type the y chromaticity value for the blue color channel. An alternative method for adjusting the chromaticity values is to drag the marker in the visual selector on the right. Contact your monitor manufacturer for the best values for your monitor.

Enable to adjust the chromaticity of the red color channel. You must select Custom in the Phosphors list box in order to adjust the chromaticity of the color channels.

Enable to adjust the chromaticity of the green color channel. You must select Custom in the Phosphors list box in order to adjust the chromaticity of the color channels.



Enable to adjust the chromaticity of the blue color channel. You must select Custom in the Phosphors list box in order to adjust the chromaticity of the color channels.

Enable to see the controls for adjusting the chromaticity of your monitor until the reference photos displayed in the Preview area match those you received in your software package. Chromaticity defines hue and saturation, or chroma levels of the colors produced by your monitor. In most cases, chromaticity values do not need to be modified; they do not vary very much from one monitor to the other. If you choose to edit the chromaticity values, you can set them for each color channel. i.e., Red, Green, and Blue.

Enable to see the controls for adjusting your monitor's white point. The white point value is the measure of the light produced by the monitor when all electron guns are set to full intensity. White point allows you to define the quality of "pure" white for your monitor. This is expressed as a temperature in degrees Kelvin (K).

This section of the Monitor Calibration dialog box displays the controls used to adjust the chromaticity or the white point for your monitor. The controls displayed here depend on which one of the two buttons at the top of the dialog box is enabled.

If you are using a third-party measurement device to assess the temperature of pure white on your monitor, and the device registers x and y values instead of a temperature, type the x value registered by the device in this box.

To calculate your monitor's White Point temperature using this type of device, you must launch another Corel application, disable color correction by clicking View, Color Correction, None, and use the device to measure a patch of pure white in the application — an object or section of an image that is white and for which all RGB values are set to 0.

If you are using a third-party measurement device to assess the temperature of pure white on your monitor, and the device registers x and y values instead of a temperature, type the y value registered by the device in this box.

To calculate your monitor's White Point temperature using this type of device, you must launch another Corel application, disable color correction by clicking View, Color Correction, None, and use the device to measure a patch of pure white in the application — an object or section of an image that is white and for which all RGB values are set to 0.

Choose preset chromaticity settings from the list, or choose Custom to adjust the chromaticity per color channel yourself.

Enable this button to make the preview of the reference photos update automatically after every adjustment you make in this dialog box.



Enable if you want to use the Colortron II(TM) specialized color measurement device to define exact colors for your monitor. This device is a third-party device and is not provided by Corel Corporation.

Enable if the printer you are calibrating is a 3-ink printer or if you cannot determine the printer type.

Enable if the printer you are calibrating is a CMYK printer that supports 4 inks.

Enable to calibrate your printer using a colorimeter or spectrophotometer to measure colors and save those measurement to a file.

Enable to use a scanner as the tool to calibrate your printer. The scanner you are using should already be calibrated.

If your printer includes built-in calibration, you must disable it before proceeding with the calibration process. Click this button to access the printer setup dialog box. From there you can change the current printer's properties which included whether or not it includes its own calibration functionality.

Graphic representing the amount of each CMYK ink used by the printer to produce highlights, midtones, and shadows. The graphic includes one curve for each ink and a K - curve that represents the amount of Gray Component Replacement. You can edit the K -curve to customize the GCR. The K - curve is shown in black and includes nodes that can be dragged. When you rest the mouse over one of the nodes, it becomes a crosshair.

Type the desired Total Area Coverage (TAC) percentage. TAC defines the amount of ink placed on the paper. Most printers support a maximum coverage of 300%, with an optimal TAC setting from 260% to 280%. The maximum TAC depends on the speed of the printer and the technology on which the printer is based. Refer to your printer's technical documentation for the best setting, or contact the printer manufacturer.



Click to make Corel Color Manager adjust the amount of cyan, yellow, magenta, and black inks the printer will use to produce consistent colors according to the amount of Gray Component Replacement you have chosen, as illustrated by the K - curve.

Choose a preset K - curve from this list box. The K - curve affects the amount of Gray Component Replacement that the printer will produce. The K -curve in the graphic on the left updates automatically. To adjust the K - curve yourself, choose Custom from the list.

Displays the uncalibrated scanned target, i.e., displays the image exactly as it was scanned.

Displays the scanned target calibrated using the tonal characteristics you have selected. If you are not pleased with the results, you can change the tonal characteristics from default to the current preset or from the current preset to default by clicking the appropriate buttons at the bottom of this dialog box. Click the Close button to return to the previous dialog box to specify the Preset Tonal Setting to use.

Displays the number of the patch that is currently highlighted in the dialog box; if that patch has already been measured, the measurements for it are selected in the table below the patches. You can type the number of the next patch you want to measure or correct to make that patch active immediately.

Click to make the patch whose number appears in the box below active.

Click to save the measurements you have made in this dialog box in a measurement file. Measurement files have the .RMF extension for RGB printer profiles and the .CMF extension for CMYK printers.

Click to load an existing or different color measurement file to use to calibrate your printer.



Click to delete the measurement for the color patch presently highlighted in the dialog box. You can then take the measurement again should a mistake have occurred during the first attempt.

Table displaying the results of the measurement of the patches. Each line in the file begins with the index number for the patch along with one value for each  $L^*$  (lightness),  $a^*$  (red-green chromaticity range), and  $b^*$  (blue-yellow chromaticity range) up to 7 decimal places per value. You can use the scroll bars to move up and down the list.

Choose the serial port that the color measurement device you are using is plugged into.

Click to perform the measurements required to calibrate your printer and save them to a file.

When calibrating a monitor, choose Colortron II(TM) in the box to use that device with Corel Color Manager.

When calibrating a printer, choose the device you will be using to perform the color measurements from the four devices listed

Click this button to calibrate the measurement device you are using. Follow the instructions provided by the device manufacturer.

Enable this button to base your new printer profile on a specific printer model.

Enable this button to use your printer's type as the starting point for its profile. When enabled, choose the category that best describes your printer in the list box on the right.



The test pattern prints, or displays on screen, a page of colored squares called patches. These patches are evenly distributed across the visible spectrum, showing a range of possible colors. Type the number of patches to be printed, which can be any number between 40 and 200. The larger the number of patches, the wider the range of samples you give Corel Color Manager to calculate your printer's color characteristics.

Select the printer type you want to use to simulate color on your monitor when you choose the Simulate Printer color correction method in any Corel application.

Enable this check box to print the test pattern as separations. The test pattern will be printed on four plates corresponding to the CMYK color components. To measure from a test pattern printed as separations, you must get a composite done on a printing press from the separations. Measure the colors from the composite printout.

New Ids added:

Click to generate the device profile using your selections and finish the calibration process.

Click to remove the device profile for the model of device you select in the list boxes above. Keep in mind that the device profile will be permanently removed by this operation.

Click to return all values and settings to their default values.

[Click to return to the previous dialog box.](#)



Click to display the next dialog box.



## Color Selection dialog box


The Color Selection dialog box is accessible from many Corel applications and is used to select and edit the color of several attributes. The name of the dialog box changes according to the type of color you are changing, and the location from which you accessed the dialog box. In CorelDRAW for example, this dialog box is called the Uniform Fill, the Fountain Fill, or the Outline Color dialog box, depending on the attribute you decided to edit. In Corel PHOTO-PAINT, it is called the Paint Color, the Paper Color, or the Uniform Fill dialog box.

Color swatches are displayed in the top left-hand corner of the dialog box. The top swatch shows the current color of the attribute you are changing — object's fill or outline, paint, paper, or uniform fill color. This is called the Reference color. The bottom swatch displays the color you select in the dialog box. This is called the New color. When you are pleased with the new color, you click the [Update Reference Color](#) button located beside the swatches to make the color the Reference color.

The four buttons found in a vertical row on the right side of the Color Selection dialog box are used to choose a visual color selection method. You can choose colors from many color models such as RGB and CMYK, from color palettes, the Color Blender, or the Mixing Area.

When you choose colors from a color model, a graphical representation of the selected model appears in the dialog box. To select a color, you can drag the markers inside this representation of the color model, or type values in the color model's component boxes which appear to the left of the graphical representation.

Color palettes are either color matching systems such as PANTONE and TRUMATCH, or custom palettes. You can create and edit custom palettes as you please. When using a color matching system, you choose the color from the selected system's palette. Custom palettes are displayed along the bottom section of the dialog box.

Flyout menus appear when you click  in the dialog box. They list commands that allow you to manage the colors in custom palettes, display color names in palettes, use a different visual representation for the selected color model, select color from a printed document using third-party measurement devices, and more.

### For more information

- For information about a specific control in this dialog box, right-click the control and choose What's This?.
- If you are currently working in CorelDRAW see [Filling and outlining objects](#).
- If you are currently working in Corel PHOTO-PAINT, see [Introduction to color in Corel PHOTO-PAINT](#).

The content of this list box changes depending on the color selection button you have enabled on the right side of the dialog box. When using the color model, Color Blender, or the Mixing area, the box lists the color models you can use to select colors. When you enable the Palettes button, the box lists the various palettes and color matching palettes that you can display in the dialog box. The label of this box changes to "Type" when you have enabled the Palettes button. For the remaining three buttons, the label is "Model".

Displays the value of the color model's first component for the color shown in the New color swatch located in the top left of the dialog box. The letter above the box identifies the component name, i.e., C for cyan when using the CMYK model, R for red when using the RGB model, and so on. For colors in the custom palette, the components correspond to the color model or color matching palette through which the color was edited.

Type or use the scroll arrows to change the value of the component. To see the range of possible values for a specific color model, right-click one of the component boxes and choose Settings. The boxes are inaccessible (grayed out) if the color is selected from a color matching palette.

Displays the value of the color model's second component for the color shown in the New color swatch located in the top left of the dialog box. The letter above the box identifies the component name, i.e., M for magenta when using the CMYK model, G for green when using the RGB model, etc. For colors in the custom palette, the components correspond to the color model or color matching palette through which the color was edited.

Type or use the scroll arrows to change the value of the component. To see the range of possible values for a specific color model, right-click one of the component boxes and choose Settings. The boxes are inaccessible (grayed out) if the color is selected from a color matching palette.

Displays the value of the color model's third component for the color shown in the New color swatch located in the top left of the dialog box. The letter above the box identifies the component name, i.e., Y for yellow when using the CMYK model, B for blue when using the RGB model, etc. For colors in the custom palette, the components correspond to the color model or color matching palette through which the color was edited.

Type or use the scroll arrows to change the value of the component. To see the range of possible values for a specific color model, right-click one of the component boxes and choose Settings. The boxes are inaccessible (grayed out) if the color is selected from a color matching palette.

When working in the CMYK color mode, this box displays the value of that model's black component for the color shown in the New color swatch located in the top left of the dialog box. When working in Grayscale, it shows the grayscale value of the shade displayed in that swatch.

Type or use the scroll arrows to change the value of the black component or the grayscale value.




Move the slider or type a percentage value in the box to increase or decrease the amount of color blending when you apply color to the Mixing Area. A large value increases the blending effect (the color is more transparent); a low value decreases the blending effect (the color is more opaque).

Move the slider or type a percentage value in the box to increase or decrease the amount of color blending when you apply color to the Mixing Area. A large value increases the blending effect (the color is more transparent); a low value decreases the blending effect (the color is more opaque).

The Reference Color swatch.

In CorelDRAW, it shows the color of the object that is selected when you open the dialog box, or the last color placed in the reference area from the color models, color matching palettes, mixers, or the custom palette.

In Corel PHOTO-PAINT, this swatch displays the current Paint, Paper, or Uniform Fill color according to the color you decided to edit.

The contents of this swatch remains unchanged, even if you select a different color in the dialog box, until you update it by clicking the Update Reference Color Button .

### The New Color swatch

In CorelDRAW, it shows the color of the object that is selected when you open the dialog box, or the last color selected from the color models, color matching palettes, mixers, or the custom palette.

In Corel PHOTO-PAINT, it shows the current Paint, Paper, or Uniform fill color according to the color you decided to edit.

If the color is not available in the color gamut of the delivery system (which is usually your printer), the Printable Color swatch appears on the right of this swatch and shows the color that will print in place of the New Color.

This box shows the name of the selected color, if a name is available. Color names are shown only for the color matching palettes, the custom palette, and the four color buttons for the Color Blender (which correspond to swatches in the custom palette). Use this field to name a new color or to rename the selected color in the custom palette. Colors in the color matching palettes cannot be renamed.


This color swatch appears to indicate that the color displayed in the New Color swatch cannot be reproduced by the current printer. The closest match possible for that printer is displayed in this new swatch. Click the swatch if you want to use the printable color as the new color.


Click this button to display the Options flyout menu. The commands listed in this menu vary according to the color selection method you have selected. The following is a description of the commands found in this menu:


- **Add Color To Palette:** adds the color displayed in the New color swatch to the custom palette.
- **Swap Color:** switches the colors in the New and Reference color swatches.
- **Gamut Alarm:** uses the gamut alarm color to represent colors in the color model, Color Blender or palette that cannot be reproduced by the current printer.
- **Measure From:** opens a flyout menu used to identify the color measurement device you will be using to measure colors on a printed document; this allows you to select colors directly from that printed document. The supported devices are; Gretag SPM55, Xrite 918, Xrite DTP22, and Colortron II.
- **Color Model:** opens a flyout in which you select how the current color model, selected in the Models list box found in the dialog box, will be represented in the Color Model area. This means that you can, for example, select colors using RGB values while viewing a wheel-based or any other selector listed in the flyout.
- **Show Color Names:** when using a color palette for the color selection, this command shows the color name superimposed on the color swatches in the palette. This is not valid for the custom palette, only Color Matching palettes.
- **Add All Grid Colors To Palette:** displayed when the Color Blender is visible, this command adds all colors displayed in the Color Blender's grid to the custom palette.
- **Grid Size:** displayed when the Color Blender is visible, this command displays a flyout in which you choose the grid size for the Color Blender.
- **Brush Size:** displayed when the Mixing Area is visible, it offers three sizes for the Brush tool you use to mix colors.
- **Load Bitmap:** displayed when the Mixing Area is visible, this command allows you to load any .BMP image you want to use to mix colors in the Mixing Area.
- **Save Bitmap:** displayed when the Mixing Area is visible, this command allows you to save the bitmap shown in the Mixing Area to disk.
- **Clear Bitmap:** empties the Mixing Area.
- **PostScript Options:** only available when you are using the palette of PANTONE Spot Colors, this command opens a dialog box in which you choose the options for printing the colors on a PostScript printer. The options are: Halftone dot shape, frequency, and angle.
- **Make UserInks Colors:** only available when you are using the USERINKS color palette, this command opens a dialog box in which you define and name the colors you want to add to the USERINK palette.

Click this button to open a menu that allows you to rename or delete a color selected in the custom palette, open and save the custom palette, and to start a new custom palette.




Enable this tool to mix color in the Mixing Area. You can choose brush attributes such as size and edge type using the Brush Size and Brush Type commands found in the flyout menu .

Click this tool to select a color from the Mixing Area and apply that color to the color swatch selected at the top of the Color Roll-Up. You can choose brush attributes such as size and edge type using the Brush Size and Brush Type commands found in the flyout menu .

The Mixing Area. Use the Brush tool below to mix the colors in this area. You can click  to choose a brush size and edge type. To select a color from the Mixing Area, use the Eyedropper tool below.

Shows the colors in the current custom palette. Use the scroll bar on the right to display the colors of the palette that are not visible. You can create new custom palettes and save them to create a library of palettes.

The Update Reference Color button. Click this button to use the New Color as the Reference Color. This is useful when you are matching colors and wish to update your reference point. To swap the Reference and New Colors, use the Color Options , and choose Swap Color.

Click to choose a color to use in the Color Blender. The color you choose here will blend with the three other colors chosen in the blend if you click the Auto-Blend button.

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Click to choose a color to use in the Color Blender. The color you choose here will blend with the three other colors chosen in the blend if you click the Auto-Blend button.



Click to choose a color to use in the Color Blender. The color you choose here will blend with the three other colors chosen in the blend if you click the Auto-Blend button.

Enable to have the grid of blended colors update continuously as you change any of the four colors used in the blend.

Use the Search field to find a color in the palette using the color name. You can search on a full or partial name. Color names consist of two parts: the first is the palette name, and the second is the color name or code. A search can be done using only the color name or code.

The Color Model button. Click this button to use a model to select or edit colors. Color models are listed in the Model list box. Your choice of model is based on whether you are working with a drawing or an image. If you're working with an image, your choice is further limited by the image mode. When you choose a model, number boxes for the model's color components are displayed on the left side of the dialog box.

The Palettes button. Click this button to use a color matching palette. Palettes are listed in the Type list box. You may want to use the palettes if you are working with spot or process color systems by DIC, DuPont, FOCOLTONE, PANTONE, TOYO, or TRUMATCH. By using these palettes along with a color reference book, you can be reasonably certain of how the colors will look when printed. The Uniform palette is also provided, with colors based on the RGB color model.

Click this button to display the Mixing Area which you can use to mix and select colors.

The Color Blender button. Click this button to select your colors using a grid showing the colors resulting from mixing four colors you select.

Displays the colors available for the CMYK color model — Cyan, Magenta, Yellow, and Black ("K" is used to indicate black). This model is based on the printer's primary colors. Modify the level of cyan, magenta, and yellow using the three-dimensional visual selector; the vertical slider defines the level of black.



Displays the colors available for the CMYK 255 color model — Cyan, Magenta, Yellow, and Black ("K" is used to indicate black). Modify the level of cyan, magenta, and yellow using the three-dimensional visual selector; the vertical visual selector defines the level of black. Cyan, Magenta, Yellow values range between 0 and 255.

Displays the colors available for the RGB color model — Red, Green, and Blue. This model is based on the light primary colors. Use this color model if the drawing will be produced on a radiant device, such as a computer monitor or a television screen, or on a transparent media such as slides. Modify the level of red, green, and blue by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current R, G, and B values geometrically. R, G, and B values range between 0 and 255.

Displays the colors available for the HSB color model — Hue, Saturation, and Brightness — which is an alternative to RGB. Hue determines color, saturation determines color depth, and brightness determines the percentage of white used to make the color lighter or darker. Modify the level of hue, saturation, and brightness by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current H, S, and B values geometrically. H, S, and B values range between 0 to 360 for hue, and 0 to 100 for saturation and brightness. The HSB color model is also known as HSV (hue, saturation, value). The HLS color model is a variant.

Displays the colors available for the HLS color model — Hue, Lightness, and Saturation — which is 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). H, L, and S values range between 0 to 360 for hue, and 0 to 100 for lightness and saturation. Modify the level of hue, lightness, and saturation by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current H, L, and S values geometrically.

Displays the colors available for the color model developed by Commission Internationale de l'Eclairage (CIE), based on three parameters: lightness ( $L^*$ ), green to red chromaticity ( $a^*$ ), and blue to yellow chromaticity ( $b^*$ ). Modify the levels by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current  $L^*a^*b^*$  values geometrically.  $L^*a^*b^*$  values range from -60 to 60 for the  $a^*$  and  $b^*$  coordinates, and 0 to 100 for the  $L^*$  value. This model is device-independent, and encompasses the color gamut of both the CMYK and the RGB color models.

Displays the colors available for the YIQ 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. Modify the levels by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current YIQ values geometrically. All values are scaled from 0 to 255.

Displays the colors available for the YIQ 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. Modify the levels by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current YIQ values geometrically. All values are scaled from 0 to 255.


Displays 256 shades of gray to choose from. Each color is defined as a single value between 0 and 255, where 0 is darkest (black) and 255 is lightest (white). Modify the level of grayscale using a single visual selector. 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.




Registration color is black created using the CMYK color model, for which C, M, Y, and K are at 100%. You can apply this color to object(s) that you want to appear on all color separation plates. It is ideal for crop marks, registrations marks, job numbers, or any other identifying marks, even a company logo, that you may need for the job. This color cannot be added to the custom palette.

Use the Color Blender to create a four-way blend of color and choose from the range of color variations. Grids are square, ranging in size from 3x3 to 25x25 (smaller grids produce more distinct colors while larger grids produce more subtle color variations). Colors are selected from the custom palette and can be mapped to the CMYK, RGB, and HSB color models.


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

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 using the Show Color Names command found in the flyout menu .


Displays the palette of 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 using the Show Color Names command found in the flyout menu .


Displays the palette of 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 using the Show Color Names command found in the flyout menu .

Displays the color palette which originates from the FOLCOLTONE color matching 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.


Displays the PANTONE® Spot Colors palette. 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 Corel PHOTO-PAINT, you can use spot colors only in CMYK images to affect duotones. Colors can be displayed by name or swatch using the Show Color Names command found in the flyout menu .





Displays the 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-color 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 using the Show Color Names command found in the flyout menu .

Displays the palette that uses the TRUMATCH® color matching system which 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 using the Show Color Names command found in the flyout menu .

Displays a custom color palette in which you can add or delete colors. You can assign a personalized name to the colors you add to the palette. This can be helpful when you deal with the same service bureau regularly and want them to use the same colors they always use to produce your materials; you can simply refer to the customized color name instead of specifying color values.

Displays the colors available for the CMY color model  Cyan, Magenta, and Yellow. This model is used if the drawing will be produced on a CMY device, such as a 3-ink printer. Modify the level of cyan, magenta, and yellow using the three-dimensional visual selector; the vertical visual selector scales all current C, M, and Y values geometrically. Cyan, Magenta, Yellow values range between 0 and 255.

Displays the colors available for the CMY color model  Cyan, Magenta, and Yellow. This model is used if the drawing will be produced on a CMY device, such as a 3-ink printer. Modify the level of cyan, magenta, and yellow using the three-dimensional visual selector; the vertical visual selector scales all current C, M, and Y values geometrically. Cyan, Magenta, Yellow values range between 0 and 255.

Click the color model list box to choose from color models and other color selection methods such as Palette and Color Blender. In CorelDRAW, you can choose the Mixing Area in this list. In Corel PHOTO-PAINT, display the Mixing Area by clicking  and choosing Show Mixing Area from the flyout. Only models and palettes that are appropriate for the drawing or image are available.

Displays the value of the color model's first component for the color shown in the selected color swatch. The letter above the box identifies the component name, i.e., C for cyan when using the CMYK model, R for red when using the RGB model, and so on. For colors in the custom palette, the components correspond to the color model or color matching palette through which the color was edited.

Type or use the scroll arrows to change the value of the component. To see the range of possible values for a specific color model, right-click one of the component boxes and choose Settings.

Displays the value of the color model's second component for the color shown in the selected color swatch. The letter above the box identifies the component name, i.e., M for magenta when using the CMYK model, G for green when using the RGB model, and so on. For colors in the custom palette, the components correspond to the color model or color matching palette through which the color was edited.

Type or use the scroll arrows to change the value of the component. To see the range of possible values for a specific color model, right-click one of the component boxes and choose Settings.




Displays the value of the color model's third component for the color shown in the selected color swatch. The letter above the box identifies the component name, i.e., Y for yellow when using the CMYK model, B for blue when using the RGB model, and so on. For colors in the custom palette, the components correspond to the color model or color matching palette through which the color was edited.

Type or use the scroll arrows to change the value of the component. To see the range of possible values for a specific color model, right-click one of the component boxes and choose Settings.

When working in the CMYK color mode, this box displays the value of the that model's black component for the color shown in the New color swatch at the top left of the dialog box. When working in Grayscale, it shows the grayscale value of the shade displayed in the New color swatch.


Type or use the scroll arrows to change the value of the black component or the grayscale value.

The color name field shows the name of the selected color, if a name is available. Color names are shown only for the color matching palettes, the custom palette, and the color buttons for the Color Blender (which correspond to swatches in the custom palette). Use this field to name a new color or to rename the selected color in the custom palette. Colors in the color matching palettes cannot be renamed.

Reference Color swatch which shows the color of the selected object when you open the Roll-Up, or the last color updated in the Reference Color swatch from the color models, color matching palettes, mixers, or the custom palette. The contents of this swatch remains unchanged, even if you select a color using other controls, until you update it using the Update Reference Color Button .

New Color swatch which shows the color you have selected using the controls of the Roll-Up.

This color swatch appears to indicate that the color displayed in the New Color swatch cannot be reproduced by the current printer. The closest match possible for that printer is displayed in this swatch. Click the swatch if you want to use the printable color as the new color instead of the current new color which is outside the printer's gamut.

Update Reference Color button. Click this button to use the New Color as the Reference Color. This is useful when you are matching colors and wish to update your reference point. To swap the Reference and New Colors, choose Swap Colors from the Roll-Up's flyout menu .

Click to choose a color to use in the Color Blender. The color you choose here will blend with the three other colors chosen in the blend if you click the Auto-Blend button.





Click to choose a color to use in the Color Blender. The color you choose here will blend with the three other colors chosen in the blend if you click the Auto-Blend button.


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Click to choose a color to use in the Color Blender. The color you choose here will blend with the three other colors chosen in the blend if you click the Auto-Blend button.


Enable to have the grid of blended colors update continuously as you change any of the four colors used in the blend.

Displays the colors available for the CMYK color model  Cyan, Magenta, Yellow, and Black ("K" is used to indicate black). This model is based on the printer's primary colors. Modify the level of cyan, magenta, and yellow using the three-dimensional visual selector; the vertical slider defines the level of black.

Displays the colors available for the CMYK 255 color model  Cyan, Magenta, Yellow, and Black ("K" is used to indicate black). Modify the level of cyan, magenta, and yellow using the three-dimensional visual selector; the vertical visual selector defines the level of black. Cyan, Magenta, Yellow values range between 0 and 255.


Displays the colors available for the RGB color model  Red, Green, and Blue. This model is based on the light primary colors. Use this color model if the drawing will be produced on a radiant device, such as a computer monitor or a television screen, or on a transparent media such as slides. Modify the level of red, green, and blue by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current R, G, and B values geometrically. R, G, and B values range between 0 and 255.

Displays the colors available for the HSB color model  Hue, Saturation, and Brightness

 which is an alternative to RGB. Hue determines color, saturation determines color depth, and brightness determines the percentage of white used to make the color lighter or darker. Modify the level of hue, saturation, and brightness by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current H, S, and B values geometrically. H, S, and B values range between 0 to 360 for hue, and 0 to 100 for saturation and brightness. The HSB color model is also known as HSV (hue, saturation, value). The HLS color model is a variant.



Displays the colors available for the HLS color model  Hue, Lightness, and Saturation

 which is 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). H, L, and S values range between 0 to 360 for hue, and 0 to 100 for lightness and saturation. Modify the level of hue, lightness, and saturation by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current H, L, and S values geometrically.


Displays the colors available for the color model developed by Commission Internationale de l'Eclairage (CIE), based on three parameters: lightness ( $L^*$ ), green to red chromaticity ( $a^*$ ), and blue to yellow chromaticity ( $b^*$ ). Modify the levels by clicking and dragging the small square that appears; the vertical slider adjusts color brightness by scaling all current  $L^*a^*b^*$  values geometrically.  $L^*a^*b^*$  values range from -60 to 60 for the  $a^*$  and  $b^*$  coordinates, and 0 to 100 for the  $L^*$  value. This model is device-independent, and encompasses the color gamut of both the CMYK and the RGB color models.


Displays 256 shades of gray to choose from. Each color is defined as a single value between 0 and 255, where 0 is darkest (black) and 255 is lightest (white). Modify the level of grayscale using a single visual selector. 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.

Registration color is black created using the CMYK color model, for which C, M, Y, and K are at 100%. You can apply this color to object(s) that you want to appear on all color separation plates. It is ideal for crop marks, registrations marks, job numbers, or any other identifying marks, even a company logo, that you may need for the job. This color cannot be added to the custom palette.


Displays the colors produced when the four selected colors are blended together.


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

Displays the color included in the custom palette you are using. To use a different custom color palette, click  and choose Open Palette. Custom palettes have the .CPL extension.


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 using the Show Color Names command in the flyout menu .





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 using the Show Color Names command in the flyout menu .

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 using the Show Color Names command in the flyout menu .

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.

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 document 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 using the Show Color Names command in the flyout menu .

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-color 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 using the Show Color Names command in the flyout menu .

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 using the Show Color Names command in the flyout menu .

Click this button to display the Options flyout menu. The commands listed in this menu vary according to the color selection method you have selected. The top section of the flyout offers options to make various areas of the Roll-Up visible and are called Show Color Components, Show Color Model, Show Color Name, Show Mixing Area (in Corel PHOTO-PAINT only) The following is a description of the remaining commands found in this menu:


- **Add Color To Palette/ Add color:** adds the color displayed in the New color swatch in CorelDRAW, and the selected swatch in Corel PHOTO-PAINT to the on-screen palette.
- **Swap Color:** switches the colors in the New and Reference color swatches in CorelDRAW, and between the Paint and Paper color swatches in Corel PHOTO-PAINT.
- **Gamut Alarm:** uses the gamut alarm color to represent colors in the color model, Blender or palette that cannot be reproduced by the current printer.
- **Measure From:** opens a flyout menu used to identify the color measurement device you will be using to measure colors on a printed document; this allows you to select colors directly from that printed document. The supported devices are; Gretag SPM55, Xrite 918, Xrite DTP22, and Colortron II.
- **Color Model:** opens a flyout in which you select how the current color model, selected in the Models list box found in the dialog box, will be represented in the Color Model area. This means that you can, for example, select colors using the RGB values while viewing a wheel-based or any other selector listed in the flyout.
- **Add All Grid Colors To Palette:** displayed when the Color Blender is visible, this command adds all colors displayed in the Color Blender's grid to the custom palette.
- **Grid Size:** displayed when the Color Blender is visible, this command displays a flyout in which you choose the grid size for the Blender.
- **Brush Size:** displayed when the Mixing Area is visible, it offers three sizes for the Brush tool you can use in the Mixing Area to mix colors.
- **Load Bitmap:** displayed when the Mixing Area is visible, this command allows you to load any .BMP image you want to use to mix colors in the Mixing Area.
- **Save Bitmap:** displayed when the Mixing Area is visible, this command allows you to save the bitmap shown in the Mixing Area to disk.
- **Clear Bitmap:** empties the Mixing Area.

When you have selected Palette in the list box in the top section of the Color Roll-Up, use this list box to choose a custom palette, or a palette based on established color matching systems.



This box shows the name of the selected color, if a name is available. Color names are shown only for the color matching palettes, the custom palette, and the color buttons for the Color Blender (which correspond to swatches in the custom palette). Use this field to name a new color or to rename the selected color in the custom palette. Colors in the color matching palettes cannot be renamed.


Use the Tint field to control the saturation of the selected PANTONE Spot Color. This color parameter is available only for the PANTONE Spot Color palette.

Click this Eyedropper tool to select a color from the Mixing Area and make it the New color that will be displayed in the New Color Swatch. You can choose brush attributes such as size and edge type using the Brush Size and Brush Type commands found in the flyout menu .

The Eyedropper tool displayed at the bottom of the Color Roll-Up in CorelDRAW, outside the Mixing Area is used to select a color from your document and make that color the New color.

Click to apply the color displayed in the New Color swatch of the Color Roll-Up's to the selected object's fill.

Click to apply the color displayed in the New Color swatch of the Color Roll-Up's color swatch to the selected object's outline.

Click to use the brush tool in the Mixing Area to mix color together. You can choose brush attributes such as size and soft edge types by clicking .

Displays a custom color palette that is based on the colors found in the Paletted image currently displayed in the Image Window. A maximum of 256 colors are included in the palette.



Click to reset the Paint and Paper colors to their default values, i.e., black for the Paint color, white for the Paper color.

Click to swap the colors found in the Paint and Paper color swatches.

When you first open the Color Roll-Up, this swatch displays the current paint color also displayed in the first color swatch in Corel PHOTO-PAINT's Status Bar. To change the paint color, click this swatch in the Roll-Up; it is now enclosed by a selection frame. Use any of the Color Roll-Up's color selection method or model to choose a new paint color.

When you first open the Color Roll-Up, this swatch displays the current paper color also displayed in the second color swatch in Corel PHOTO-PAINT's Status Bar. To change the paint color, click this swatch in the Roll-Up; it is now enclosed by a selection frame. Use any of the Color Roll-Up's color selection method or model to choose a new paint color.

Displays the PANTONE® Hexachrome colors which are based on the CMYK color model but adds two additional inks for a total of six inks and a broader range of colors.

Displays the PANTONE® Hexachrome colors which are based on the CMYK color model but adds two additional inks for a total of six inks and a broader range of colors.

Displays a color palette that is based on the Lab color model. Colors defined using this model have three components: lightness ( $L^*$ ), green to red chromaticity ( $a^*$ ), and blue to yellow chromaticity ( $b^*$ ).

Displays a color palette that is based on the Lab color model. Colors defined using this model have three components: lightness ( $L^*$ ), green to red chromaticity ( $a^*$ ), and blue to yellow chromaticity ( $b^*$ ).



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

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

Displays the 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.

Displays the 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.

 Click to make the color shown in the New Color swatch become the Reference Color.

## **Postscript Options dialog box**

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This dialog box is available only when you are using PANTONE Spot Colors. It is used to control the halftone screen used to print your documents. The options presented in this dialog box allow you to select the shape of the dots to use in the halftone screen, the frequency, and the angle of the screen.

Choose a halftone screen type for PANTONE Spot Colors. The types are named after the dot shape they produce. The Default halftone screen type uses the printer's default screen parameters unless they are overridden in the Print dialog box.

The halftone screen's effect on your document won't appear on screen. To see it, you must print your drawing on a PostScript printer.



Controls the halftone screen's resolution. Screen frequency affects images such as photographs and tints of color. The lower the frequency, the more apparent the screen will appear when printed. A frequency of 80 to 100 lines per inch (LPI) is suitable for work that will be printed on newsprint. Magazines typically use a 150 LPI frequency while high-quality photography books use a frequency as high as 300 LPI.

Consult your service bureau or commercial printer as to the frequency and angle you should be using to avoid moiré patterns.

Type the angle you want to apply to the halftone screen.

Consult your service bureau or commercial printer as to the frequency and angle you should be using to avoid moiré patterns.

