COREL™

Align

Smart
Pronunciation: 'smart
Function: adjective
1: mentally alert, wise, knowledgeable,
clever, capable... smart investment...
... of intelligence...cting
...good judgment or some...ough <a smart
person> 3a: mentally keen, quick to perceive
or understand; 3b: quick-witted, sharp, on the
ball 4: knowledge of how to do something
smoothly and efficiently 5: stylish,
fashionable, snappy, in the mode <she is a
...t dresser>

Intersect

Corel**DRAW**®
Graphics Suite 12

CorelDRAW® Graphics Suite 12 User Guide

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Book contents

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Section I: Welcome to CorelDRAW Graphics Suite 12

Section II: CorelDRAW

Section V: Glossary

CorelDRAW®
Graphics Suite 12

Welcome

CorelDRAW® Graphics Suite 12 delivers powerful software for graphic design, page layout, photo editing, and vector animation.

In this section, you'll learn about

- CorelDRAW Graphics Suite 12 applications
- what's new in CorelDRAW Graphics Suite 12
- what's new in Corel PHOTO-PAINT
- installing and uninstalling applications
- changing the language of the user interface and Help
- registering Corel products
- updating Corel products
- Corel® Support Services
- documentation conventions
- getting Help
- using CorelTUTOR™
- customer feedback
- other resources
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CorelDRAW Graphics Suite 12 applications

This section describes the major applications included in CorelDRAW Graphics Suite 12.

CorelDRAW

CorelDRAW is an intuitive graphics design application that gives designers a more enjoyable work experience. CorelDRAW is built and designed to meet the demands of today's working designer to create ads or collateral for print or for the Web.

Corel PHOTO-PAINT

Corel PHOTO-PAINT® is a complete image-editing application that lets you retouch and enhance photos. Whether you're correcting red-eye or exposure problems, cutting out image areas, or creating and publishing images for the Web, Corel PHOTO-PAINT gives you powerful tools that are fast and easy to use.

Corel R.A.V.E.

Corel R.A.V.E.™ makes it easy to create a wide range of animated graphics — from animated logos and navigation controls to interactive animated graphics for the Web. The Corel R.A.V.E. application combines the familiar graphics capabilities and user interface of CorelDRAW with a powerful yet easy-to-use set of animation features.

What's new in CorelDRAW Graphics Suite 12

The following section outlines what's new in CorelDRAW Graphics Suite 12.

What's new in CorelDRAW and Corel R.A.V.E.

CorelDRAW and Corel R.A.V.E. include new features and enhancements that will make your work easier.

Feature	Description
Enhanced support for SVG files	Allows you to choose a variety of new options when exporting a drawing to the SVG file format. You can also embed information in an SVG file or store information in externally linked files.
Export for Office (CorelDRAW only)	Lets you optimize drawings for export to Microsoft® Office or WordPerfect® Office
Unicode	Allows users to exchange files effortlessly, regardless of the language or operating system in which the file was created, ensuring that text displays correctly
Text encoding	Allows users to correct the display of text created in a language that differs from that of their operating system

Feature	Description
Dynamic guides	Helps you precisely position, align, and draw objects relative to other objects using snap points in objects
Smart drawing tool	Lets you draw freehand strokes that are recognized and converted to basic shapes using the **Smart drawing** tool
Enhanced snapping	Allows you to snap an object to a number of snap points in a target object
Enhanced text alignment	Allows you to align text objects to other objects using the first text baseline, last text baseline, or the bounding box
Enhanced **Eyedropper** and **Paintbucket** tools	Allows you to copy color, object properties, effects, and transformations from one object to another
Virtual segment delete tool	Lets you delete portions of objects, called virtual line segments, that are between intersections
Improved file format compatibility	Gives you improved compatibility with many industry-standard file formats, such as Hewlett-Packard® Plotter (PLT), AutoCAD® Drawing Interchange Format (DXF), AutoCAD Drawing Database (DWG), Computer Graphics Metafile (CGM), Microsoft® Word Document (DOC), and many more
Improved symbols	The **Symbol manager** docker allows you to identify, create, and edit symbols easily. You can easily import and export symbols using Corel Symbol Libraries (CSL).
Enhanced sprites (Corel R.A.V.E. only)	The **Symbol manager** docker allows you to identify, create, and edit sprites easily.

What's new in Corel PHOTO-PAINT

Corel PHOTO-PAINT includes new features and enhancements that will make your work easier.

Feature	Description
Export for Office	Lets you optimize drawings for export to Microsoft Office or WordPerfect Office
Multiple language support	Allows users to exchange files effortlessly, regardless of the language or operating system in which the file was created, ensuring that text displays correctly
Touch-up brush tool	Lets you remove imperfections, such as tears, scratch marks, and wrinkles, from an image by blending its textures and colors
Export menu command	Provides you with another method for exporting images to a variety of file formats

Installing and uninstalling applications

The application's Installer makes it easy to install Corel applications and components. It lets you

* install any Corel applications included in your software package
* add components to a currently installed application
* refresh files and configurations of currently installed applications

To install an application

1   Close all applications.

2   Insert Disc 1 in the CD drive.

    If the installation wizard does not start automatically, click **Start** on the Windows taskbar, and click **Run**. Type **D:\Setup**, where **D** is the letter that corresponds to the CD drive.

3   Follow the instructions in the installation wizard and enable one of the following options:
    * **Typical** — to install the default applications and components

- **Compact** — to install the minimum components for the application to operate
- **Custom** — to choose applications and writing tool components

4 Follow the instructions for installing and registering the application.

To uninstall applications

1 On the Windows taskbar, click **Start ▶ Control Panel**.

   If your operating system is Windows 2000 or earlier, click **Start ▶ Settings ▶ Control Panel**.

2 Double-click **Add/Remove** programs.

3 Choose a Corel application from the list, click **Change/Remove**, and enable the **Remove all** option in the dialog box.

   If you want to remove all files, including user files, click **Change**, and enable the **Remove user files** checkbox.

   If your operating system is Windows 2000 or earlier, click the **Remove** button.

4 Follow the InstallShield® wizard instructions.

   You can choose whether the uninstalling process will remove user files such as preference, presets, user-created fills, customized files, and so on.

Changing the language of the user interface and Help

If you chose to install an application in more than one language, you can change the language of the user interface and Help at any time.

To change the language of the user interface and Help

1 Click **Tools ▶ Options**.

2 In the list of categories, click **Global**.

3 Choose a language from the **Select the language for the user interface** list box.

   If you want to change the language of the user interface and Help as you start the application, enable the **Ask me the next time the software starts** check box.

4 Restart the application.

Registering Corel products

Registering Corel products is important. Registration provides you with timely access to the latest product updates, valuable information about product releases, and access to free downloads, articles, tips and tricks, and special offers.

You can register when you install the application or at a later date.

You can register using the following methods:

- **online** — You can launch online registration if you are connected to the Internet when you install the Corel graphics application. If no Internet connection is detected, a list of options displays in a dialog box.
- **FTP** — You can complete the registration form, and it will be sent automatically when an Internet connection is detected.
- **by phone** — You can call the Corel Customer Service Center nearest you.

For more information about registering a Corel product, visit www.corel.com/support/register.

Updating Corel products

Corel® Update is an automatic feature that notifies you of updates to Corel products, downloads the updates, and installs them. Corel Update operates via the Web, so it requires an Internet connection.

You can set how often Corel Update checks for updates through the **Start** menu. It's recommended that you set Corel Update to check for updates every 30 days or on starting the application. If you prefer, you can disable Corel Update altogether by choosing to never check for updates.

Corel Support Services

Corel Support Services can provide you with prompt and accurate information about product features, specifications, pricing, availability, services, and technical support. For the most current information on support services available for your Corel product, please visit www.corel.com/support.

Documentation conventions

The following table describes important conventions used in the user guide and Help.

Convention	Description	Examples
Menu ▶ Menu command	Click the menu item followed by the menu command.	Click **File ▶ Open**.
list box	A list of options that drops down when a user clicks the down arrow button.	Choose a value from the **Force field** list box on the property bar.
docker	A window containing available commands and settings relevant to a specific tool or task.	Double-click the name of the group in the **Timeline** docker.
Enter	**Enter** key	Type a value in the Eraser thickness box on the property bar, and press **Enter**.
	A note contains information that is important to the preceding steps. It can describe conditions under which the procedure can be performed.	You can't copy or clone a compound blend. If you click the **Equal margins** button, you must specify values in the **Top/left margin** boxes.
	A tip contains suggestions for performing the preceding steps. It can present alternatives to the steps, and other benefits and uses of the procedure. You can also create a hyperlink using the Internet toolbar.	Trimming an object can reduce the drawing file size.

Getting help

You can get help from the accompanying user guide or directly from the user interface. You can find topics from the Help by using the table of contents and search tool. You can also print a Help topic and display Help topics relevant to the task you are performing.

Help is available through the following tools:

- **User guide** — provides commonly used procedures and information. Chapters ending with From here tables contain keywords that direct you to additional topics in the Help.
- **Help** — lets you access Help directly from the user interface and find topics using the contents topic, index, and word/phrase search tool
- **ToolTips** — let you access tips for using the application's icons and buttons. To view a ToolTip, position the cursor over an icon, button, or other application control.

To use Help

1 Click **Help** ▶ **Help topics**.
2 Click one of the following tabs:
   - **Contents** — lets you browse through topics in the Help
   - **Index** — lets you use the index to find a topic
   - **Search** — lets you search the full text of the Help for a particular word. For example, if you are looking for information about RGB color mode, you can type "RGB" to display a list of relevant topics.

You can also

View Help for a dialog box	Click the **Help** button.
Print a specific Help topic	Open a Help topic, click the frame you want to print, and click **Print**.

You can also launch Help by pressing **F1**.

Using CorelTUTOR

CorelTUTOR provides a series of project-based tutorials that introduce you to basic and advanced features of the applications of CorelDRAW Graphics Suite 12.

To access CorelTUTOR

- Click **Help** ▶ **CorelTUTOR**.

VBA Programming Guide

The new VBA Programming Guide for CorelDRAW Graphics Suite 12 will help you automate tasks and create custom solutions using Microsoft® Visual Basic® for Applications (VBA) in CorelDRAW and Corel PHOTO-PAINT. If you installed CorelDRAW or Corel PHOTO-PAINT using the Typical install, or a Custom install that included VBA, then the guide is accessible from a link in the VBA Help for CorelDRAW or the VBA Help for Corel PHOTO-PAINT.

Customer feedback

If you have any comments or suggestions about the user guides, Help, and tutorials, you can send them by email to drawdoc@corel.com. You can check the product Web site for the latest news, tips and tricks, and product upgrade information. Go to www.corel.com and follow the links to the product site.

Other resources

Corel has training partnerships with other firms and provides professional services for its software products. The Corel Designer Web site contains a wealth of graphics resources.

Training

Corel Training Events

- Maximize your skills and attend a Corel® Training Camp — special intensive Training Events held throughout North America on various Corel products. All Training Camps are delivered by a Corel Training Specialist, with hands-on

instruction, exercises and practical real-world projects. To look at the training schedule or to register for a course, please visit www.corel.com/trainingschedule.

Corel Customized Training

- Once you have Corel applications running on your computers, our team of expert Corel Training Specialists can help you make the most of them with customized training, tailored to the specific needs of your work environment. We will help you develop a custom curriculum which is practical and relevant to the needs of your organization. For more information about Corel Customized Training, please visit www.corel.com/customizedtraining.

Corel Training Partners (CTP)

- A Corel® Training Partner is an independent, officially accredited local organization that provides training on Corel products and is located worldwide for your convenience.

Corel Corporate Services

Corel is committed to getting you up and running quickly with time and money-saving workflow solutions. To simplify the process of deploying Corel applications across your organization, our Corporate Services department offers a comprehensive range of cost-effective services to meet your technology needs. This group brings together highly skilled experts from across the company who are dedicated to providing top-notch solutions. Our knowledgeable team is ready to offer assistance through all stages of your project, from application development and support to software systems integration and training.

For more information on Corel Corporate Services, please contact proservices@corel.com.

World Wide Web resources

The following sites include product information, articles, tips, and additional tutorials, as well as graphics resources such as photos, clipart, and font subscriptions:

- www.corel.com

About Corel Corporation

Founded in 1985, Corel Corporation (www.corel.com) is a leading technology company specializing in content creation tools, business process management and XML-enabled enterprise solutions. The company's goal is to give consumers and enterprise customers

the ability to create, exchange and instantly interact with visual content that is always relevant, accurate and available. Corel Corporation has its headquarters in Ottawa, Canada.

CorelDRAW®12

Workspace tour

Becoming familiar with the terminology and workspace of CorelDRAW will help you easily follow this user guide's concepts and procedures.

In this section, you'll learn about

- CorelDRAW terminology and concepts
- CorelDRAW application window
- CorelDRAW workspace tools

CorelDRAW terminology and concepts

Before you get started with CorelDRAW, you should be familiar with the following terms.

Term	Description
object	An element in a drawing such as an image, shape, line, text, curve, symbol, or layer.
drawing	The work you create in CorelDRAW: for example, custom artwork, logos, posters, and newsletters
vector graphic	An image generated from mathematical descriptions that determine the position, length, and direction in which lines are drawn.
bitmap	An image composed of grids of pixels or dots
docker	A window containing available commands and settings relevant to a specific tool or task
flyout	A button that opens a group of related tools or menu items

Term	Description
artistic text	A type of text to which you can apply special effects, such as shadows
paragraph text	A type of text to which you can apply formatting options, and which can be edited in large blocks

CorelDRAW application window

When you launch CorelDRAW, the application window opens containing a drawing window. The rectangle in the center of the drawing window is the drawing page where you create your drawing. Although more than one drawing window can be opened, you can apply commands to the active drawing window only.

The CorelDRAW application window appears below. A description of its parts follows.

Part	Description
Menu bar	The area containing pull-down menu options
Property bar	A detachable bar with commands that relate to the active tool or object. For example, when the text tool is active, the text property bar displays commands that create and edit text.
Toolbar	A detachable bar that contains shortcuts to menu and other commands
Title bar	The area displaying the title of the currently open drawing
Rulers	Horizontal and vertical borders that are used to determine the size and position of objects in a drawing
Toolbox	A floating bar with tools for creating, filling, and modifying objects in the drawing
Drawing window	The area outside the drawing page bordered by the scroll bars and application controls
Drawing page	The rectangular area inside the drawing window. It is the printable area of your work area.
Color palette	A dockable bar that contains color swatches
Docker	A window containing available commands and settings relevant to a specific tool or task
Status bar	An area at the bottom of the application window that contains information about object properties such as type, size, color, fill, and resolution. The status bar also shows the current mouse position.
Document navigator	The area at the bottom left of the application window that contains controls for moving between pages and adding pages

Part	Description
Navigator	A button at the bottom-right corner that opens a smaller display to help you move around a drawing

To toggle between displaying and hiding the status bar, click **Window ▶ Toolbars ▶ Status bar**.

CorelDRAW workspace tools

Application commands are accessible through the menu bar, toolbars, toolbox, property bar, and dockers. The property bar and dockers provide access to commands that relate to the active tool or current task. The property bar, dockers, toolbars, and toolbox can be opened, closed, and moved around your screen at any time.

You can customize many of these workspace tools to suit your needs. For more information, see "Customizing your application" in the Help.

Standard toolbar

The standard toolbar, which displays by default, contains buttons that are shortcuts to many of the menu commands.

For information about customizing the position, contents, and appearance of toolbars, see "Customizing toolbars" in the Help.

Click this button	To
	Start a new drawing
	Open a drawing
	Save a drawing
	Print a drawing

Click this button	To
✂	Cut selected objects to the Clipboard
📋	Copy selected objects to the Clipboard
📋	Paste the Clipboard contents into a drawing
↶	Undo an action
↷	Restore an action that was undone
📲	Import a drawing
📤	Export a drawing
100% ▾	Set a zoom level
⚗ ▾	Start Corel applications
⚝	Launch to Corel Graphics Community Web site

More about toolbars

In addition to the standard toolbar, CorelDRAW has toolbars for specific kinds of tasks. For example, the **Text** toolbar contains commands relevant to using the **Text** tool. If you use a toolbar frequently, you can display it in the workspace at all times.

The following table describes toolbars other than the standard toolbar.

Toolbar	Description
Text	Contains commands for formatting and aligning text

Toolbar	Description
Zoom	Contains commands for zooming in and out of a drawing page by specifying percentage of original view, clicking the **Zoom** tool, and selecting a page view
Internet	Contains commands for Web-related tools for creating rollovers and publishing to the Internet
Print merge	Contains commands for print merge items that combine text with a drawing such as creating and loading data files, creating data fields for variable text, and inserting print merge fields
Transform	Contains commands for skewing, rotating, and mirroring objects
Visual Basic for Applications	Contains commands for editing, testing, and running VBA commands

Exploring the toolbox

Flyouts open to display a set of related CorelDRAW tools. A small arrow in the bottom, right corner of a toolbox button indicates a flyout: for example, the **Shape edit** flyout. Clicking a flyout arrow opens a set of related tools. Clicking and dragging the grab handles at the end of the flyout sets the flyout in its expanded form.

The following table provides descriptions of the flyouts and tools in the CorelDRAW toolbox.

Flyouts

Flyout	Description
Shape edit	Lets you access the **Shape, Knife, Eraser, Smudge brush, Roughen brush, Free transform,** and **Virtual segment delete** tools
Zoom	Lets you access the **Zoom** and **Hand** tools

Flyout	Description
Curve	Lets you access the **Freehand, Bézier, Artistic media, Polyline, Pen, 3 point curve, Dimension**, and **Interactive connector** tools
Rectangle	Lets you access the **Rectangle** and **3 point rectangle** tools
Ellipse	Lets you access the **Ellipse** and **3 point ellipse** tools
Object	Lets you access the **Graph paper, Polygon**, and **Spiral** tools
Perfect Shapes™	Lets you access the **Basic shapes, Arrow shapes, Flowchart shapes, Star shapes**, and **Callout shapes** tools
Interactive tools	Lets you access the **Interactive blend, Interactive contour, Interactive distortion, Interactive envelope, Interactive extrude, Interactive drop shadow**, and **Interactive transparency** tools
Eyedropper	Lets you access the **Eyedropper** and **Paintbucket** tools
Outline	Lets you access the **Color** docker, **Outline pen** and the **Outline color** dialog boxes, and a selection of outlines of various widths
Fill	Lets you access the **Color** docker, **Fill** color, **Fountain fill, Pattern fill, Texture fill**, and **PostScript® fill** dialog boxes
Interactive fill	Lets you access **Interactive fill** and **Interactive mesh fill** tools

Tools

Tool	Description
	The **Pick** tool lets you select and size, skew, and rotate objects.
	The **Shape** tool lets you edit the shape of objects.
	The **Knife** tool lets you cut through objects.
	The **Eraser** tool lets you remove areas of your drawing.
	The **Smudge brush** tool lets you distort a vector object by dragging along its outline.
	The **Roughen brush** tool lets you distort the outline of a vector object by dragging along the outline.
	The **Free transform** tool lets you transform an object by using the **Free rotation, Angle rotation, Scale**, and **Skew** tools.
	The **Virtual segment delete** tool lets you delete portions of objects that are between intersections.
	The **Zoom** tool lets you change the magnification level in the drawing window.
	The **Hand** tool lets you control which part of the drawing is visible in the drawing window.
	The **Pen** tool lets you draw curves one segment at a time.
	The **Polyline** tool lets you draw lines and curves in preview mode.
	The **Freehand** tool lets you draw single line segments and curves.

Tool	Description
	The **Bézier** tool lets you draw curves one segment at a time.
	The **3 point curve** tool lets you draw a curve by defining the start, end, and center points.
	The **Artistic media** tool provides access to the **Brush, Sprayer, Calligraphic**, and **Pressure** tools.
	The **Dimension** tool lets you draw vertical, horizontal, slanted, or angular dimension lines.
	The **Interactive connector** tool lets you join two objects with a line.
	The **Smart drawing tool** converts the freehand strokes that you draw to basic shapes and smoothed curves.
	The **Rectangle** tool lets you draw rectangles and squares.
	The **3 point rectangle** tool lets you draw a rectangle by dragging to create the rectangle baseline and clicking to define its height.
	The **Ellipse** tool lets you draw ellipses and circles.
	The **3 point ellipse** tool lets you draw an ellipse by dragging to create the center line of the ellipse and clicking to define its height.
	The **Polygon** tool lets you draw symmetrical polygons and stars.
	The **Spiral** tool lets you draw symmetrical and logarithmic spirals.

Tool	Description
⊞	The **Graph paper** tool lets you draw a grid of lines similar to that on graph paper.
🖻	The **Basic shapes** tool lets you choose from a full set of shapes, including hexagram, a smiley face, and a right-angle triangle.
⇄	The **Arrow shapes** tool lets you draw arrows of various shape, direction, and number of heads.
8ₚ	The **Flowchart shapes** tool lets you draw flowchart symbols.
☆	The **Star shapes** tool lets you draw ribbon objects and explosion shapes.
▯	The **Callout shapes** tool lets you draw callouts and labels.
🄰	The **Text** tool lets you type words directly on the screen as artistic or paragraph text.
▱	The **Interactive blend** tool lets you blend two objects.
⬚	The **Interactive contour** tool lets you apply a contour to an object.
▨	The **Interactive distortion** tool lets you apply a Push or Pull distortion, a Zipper distortion, or a Twister distortion to an object.
▩	The **Interactive envelope** tool lets you distort an object by dragging the nodes of the envelope.
◰	The **Interactive extrude** tool lets you apply the illusion of depth to objects.
◪	The **Interactive drop shadow** tool lets you apply a drop shadow to an object.

Tool	Description
	The **Interactive transparency** tool lets you apply transparencies to objects.
	The **Eyedropper** tool lets you select object properties, such as fill, line thickness, size, and effects, from an object on the drawing window.
	The **Paintbucket** tool lets you apply object properties, such as fill, line thickness, size and effects, to an object on the drawing window after selecting these properties using the **Eyedropper** tool.
	The **Interactive fill** tool lets you apply various fills.
	The **Interactive mesh** tool lets you apply a mesh grid to an object.
	The **Fill** tool lets you set the fill properties.

Property bar

The property bar displays the most commonly used functions that are relevant to the active tool or to the task you're performing. Although it looks like a toolbar, the property bar content changes depending on the tool or task.

For example, when you click the **Text** tool in the Toolbox, the property bar displays only text-related commands. In the example below, the property bar displays text, formatting, alignment, and editing tools.

You can customize the contents and position of the property bar to suit your needs. For more information, see "Customizing the property bar" in the Help.

Dockers

Dockers display the same type of controls as a dialog box, such as command buttons, options, and list boxes. Unlike most dialog boxes, you can keep dockers open while working on a document, so you can readily access the commands to experiment with different effects.

An example is the Object properties docker. When this docker is open, you can click an object in the drawing window and view formatting, dimensions, and other properties of the object.
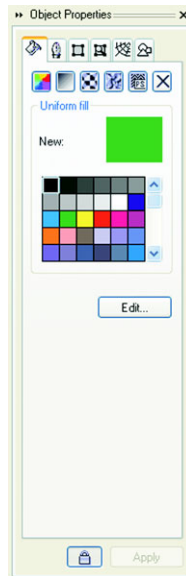
Dockers can be either docked or floating. Docking a docker attaches it to the edge of the application window. Undocking a docker detaches it from other parts of the workspace, so it can be easily moved around. You can also collapse dockers to save screen space.

Status bar

The status bar displays information about selected objects (such as color, fill type, and outline, cursor position, and relevant commands).

See "Customizing the status bar" in the Help for information about customizing the contents and appearance of the status bar.

Getting started in CorelDRAW

Drawings are the work that you create and edit in CorelDRAW.

In this section, you'll learn about
- starting and opening drawings
- finding and inserting drawing content
- exploring the basic features of CorelDRAW
- working with templates
- undoing, redoing, and repeating actions
- accessing drawing information
- zooming and panning
- previewing a drawing
- backing up and recovering files
- saving drawings
- closing drawings and quitting CorelDRAW

Starting and opening drawings

CorelDRAW lets you start a new drawing from a blank page, from a template, or from an existing drawing.

A blank page gives you the freedom to specify every aspect of a drawing.

A template provides you with a starting point and leaves the amount of customization up to you. The templates included with CorelDRAW are available under the following categories:
- Full page
- Label
- Envelope
- Side-fold
- Web

For more information about creating and using templates, see "Working with templates" on page 33.

Basing a new drawing on an existing drawing lets you reuse objects and page settings. CorelDRAW lets you open existing drawings saved to a variety of file formats. For information about the file formats you can open in CorelDRAW, see "File formats" in the Help.

If the drawing you are opening is from an earlier version of CorelDRAW and contains text in a language different from the language of your operating system, you can choose code page settings to ensure that text is converted into Unicode characters properly. Code page settings help you correctly display text outside the drawing window, such as keywords, file names, and text entries in the **Object manager** and **Object data manager** dockers. To correctly display text in the drawing window, you need to use encoding settings. For more information, see "Encoding text" on page 214.

To start CorelDRAW

• Click **Start ▸ All programs ▸ CorelDRAW Graphics Suite 12 ▸ CorelDRAW 12.**

To start a drawing

To	Do the following
Start a drawing from a blank page	Click **File ▸ New.**
Start a drawing from a template	Click **File ▸ New from template,** click the tab that corresponds to the template category you want, and choose a template.

When you start a drawing from a blank page, the drawing is based on the default CorelDRAW template (**CorelDRAW.cdt**).

You can specify a layout style (template) by clicking **Layout ▸ Page setup,** clicking **Layout** in the list of categories, and choosing a layout style from the **Layout** list box.

To open a drawing

1 Click **File ▶ Open**.

2 Locate the folder where the drawing is stored.

3 Click a filename.

   If the drawing is from an earlier version of CorelDRAW and contains text in a
   language different from the language of your operating system, choose the
   corresponding option from the **Code page** list box to ensure text is converted into
   Unicode characters properly.

4 Click **Open**.

You can also open a drawing by clicking the **Open** button 📝 on the toolbar.

If you want to view a thumbnail of the drawing, click the **Preview** check box.

Finding and inserting drawing content

You can use clipart, photo images, and sounds stored on the Corel content CDs or that
are available online. The digital content manual contains pictures of the graphics
available on the CD and their folder locations.

You can also access online images directly from Corel on the Web through the
Scrapbook™ docker.

To browse for clipart, photos, and sound files

1 Click **Window ▶ Dockers ▶ Scrapbook**.

2 Insert a Corel content CD into the CD drive.

3 Double-click an icon in the CD list and navigate to a folder.

You can also

Browse for files on your computer or network	Double-click the **Desktop** icon, and navigate to a folder.
Browse for images online	Click the **Content on the Web** button.

To browse for images online, you must be connected to the Internet.

To change your browsing view in the **Scrapbook** docker, click the flyout arrow, click **View**, and choose a view type.

To search for clipart, photos, and sound files

1 Click **Window ▶ Dockers ▶ Scrapbook ▶ Search**.

2 Insert a Corel contents CD into the CD drive.

3 Type a keyword in the **Search for text** box.

To insert a graphic or sound file

- Drag the graphic or sound file from the Scrapbook docker to the drawing window.

Exploring the basic features of CorelDRAW

CorelDRAW has a virtually unlimited number of tools and capabilities to help you create drawings. The following table provides you with the basic features of CorelDRAW so that you can get started.

For information about	See
Drawing lines	"Working with lines, outlines, and brush strokes" on page 45
Drawing shapes	"Drawing shapes" on page 63
Creating and manipulating objects	"Working with objects" on page 75
Adding color to objects	"Filling objects" on page 141
Adding text to a drawing	"Adding and selecting text" on page 211
Creating drawings for use on the World Wide Web	"Publishing to the Web" on page 263
Printing drawings	"Printing" on page 271

Working with templates

A template is a set of styles and page layout settings that govern the layout and appearance of a drawing. You can use the default template (**CorelDRAW.cdt**) or choose one from a wide variety of preset templates available in the application. For information on starting a drawing from a template, see "Starting and opening drawings" on page 29. If none of the preset templates meets your requirements, you can create a template based on styles you create or styles taken from other templates. For example, if you regularly put together a newsletter, you can save the newsletter's page layout settings and styles to a template.

When you create a new drawing using a template, CorelDRAW formats the page using the template's page layout settings and loads the template's styles in the new file.

You can edit a template by making changes to the styles, page layout settings, or objects. For example, if you like a template but want to make it more versatile, you can add styles that you've created or that you've taken from another template. For information about setting page layout options, see "Specifying the page layout" on page 193. After you have started a drawing with a template, you can load a different template. When you load a template, you can choose to load just the styles or to load styles, page layout settings, and objects.

Use a template for drawing designs that you want to reuse.

To create a template

1   Click **File ▶ Save as**.

2   Type a name in the **File name** list box.

3   Choose **CDT - CorelDRAW template** from the **Save as type** list box.

4   Locate the folder where you want to save the template.

5   Click **Save**.

To edit a template

1   Click **File ▶ Open**.

2   Choose **CDT - CorelDRAW template** from the **Files of type** list box.

3   Locate the folder where the template is stored.

4   Double-click a template filename.

5   In the **Open** dialog box, enable the **Open for editing** check box.

To preview the contents of a template, enable the **Preview** check box.

To create a new file based on a saved template

1   Click **File ▶ Open**.

2   Choose **CDT - CorelDRAW template** from the **Files of type** list box.

3   Locate the folder where the template is stored.

4   Double-click a template filename.

5   Enable the **New from template** check box in the **Open** dialog box.

   If, in addition to loading the template's styles, you also want to load page settings and objects, enable the **With contents** check box.

To load styles from another template

1   Click **Tools ▶ Graphic and text styles**.

2   In the **Graphic and text styles** docker, click the flyout button ⬝, and click **Template ▶ Load**.

3   Locate the folder where the template is stored.

4   Click a template whose styles you want to load.

5   Click **Open**.

When you use the **Load** command, only the styles are loaded. CorelDRAW does not use the template's page layout settings and does not add objects saved with the template to the page. The attributes of existing objects are maintained.

Undoing, redoing, and repeating actions

You can undo the actions you perform in a drawing, starting with the most recent action. If you don't like the result of undoing an action, you can redo it. Reverting to the last saved version of a drawing also lets you remove one or more actions. Certain actions applied to objects, such as stretching, filling, moving and rotating, can be repeated to create a stronger visual effect.

Customizing the undo settings lets you increase or decrease the number of actions that you can undo or redo.

To undo, redo, and repeat actions

To	Do the following
Undo an action	Click **Edit ▶ Undo**.
Redo an action	Click **Edit ▶ Redo**.
Undo or redo a series of actions	Click **Tools ▶ Undo Docker**. Choose the action that precedes all the actions you want to undo, or choose the last action you want to redo.
Revert to the last saved version of a drawing	Click **File ▶ Revert**.
Repeat an action	Click **Edit ▶ Repeat**.

When you undo a series of actions, all actions listed below the action you choose are undone.

When you redo a series of actions, the action you choose and all actions listed between it and the last undone action are redone.

You can repeat an action on another object or group of objects by selecting the object or objects and clicking **Edit ▶ Repeat**.

You can also undo or redo actions by clicking the **Undo** button ✍ or **Redo** button ✍ on the **Standard** toolbar.

Accessing drawing information

As you work, you can access drawing information such as the number of pages, fonts, text statistics, color models used, and the types of objects the drawing contains. You can also save and print this information.

To access drawing information

1   Click **File ▶ Document info**.

2   Enable the check box beside each type of information you want to display.

You can also

Save drawing information	Click **Save as,** specify a folder and filename, and click **Save**.
Print drawing information	Click **Print**.

Zooming and panning

You can change the view of a drawing by zooming in to get a closer look or by zooming out to see more of the drawing. You can experiment with a variety of zoom options to determine the amount of detail you want. Another way in which you can view specific areas of a drawing is by panning. When you work at high magnification levels or with large drawings, you may not be able to see the whole drawing. Panning lets you view areas that aren't displayed by moving the page around in the drawing window.
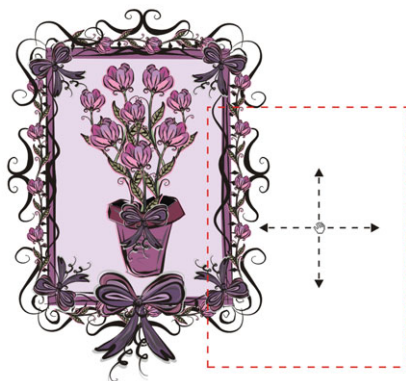
You can use the Hand tool to pan around a large image and view particular areas.

While you are panning, you can zoom in and out. While you are zooming, you can pan. This saves you from having to alternate between the two tools.

You can specify zooming and panning settings to zoom in quickly to detailed parts of a drawing and zoom out to the larger context.

To zoom

1   Open the **Zoom** flyout ⧉ 🔍 ✋ , and click the **Zoom** tool 🔍.

2   On the property bar, click one of the following buttons:
    • **Zoom in** 🔍
    • **Zoom out** 🔍
    • **Zoom to selected** 🔍
    • **Zoom to all objects** 🔍
    • **Zoom to page** 🗔
    • **Zoom to page width** 🗔
    • **Zoom to page height** 🗔

👆🏽 The **Zoom to selected** button is available only when you select one or more objects before you open the **Zoom** flyout.

💡 When you are not editing text, you can also access the **Zoom** tool by pressing the Z key.

You can also zoom in by double-clicking or dragging anywhere in the drawing window using the **Hand** tool ✋. To zoom out, right-click in the drawing window.

To pan in the drawing window

1 Open the **Zoom** flyout ‖ 🔍 ✋ ‖, and click the **Hand** tool ✋.

2 Drag in the drawing window until the area you want to view displays.

When you are not editing text, you can also access the **Hand** tool by pressing the **H** key.

If you want to pan in the drawing window while zoomed in on the drawing, click the **Navigator** button ▢ in the bottom-right corner of the drawing window or the **N** key. Drag the cross-haired pointer around in the Navigator pop-up window.

Previewing a drawing

You can preview a drawing to see how it will look when you print and export. When you preview a drawing, only the objects on the drawing page and in the immediate area of the drawing window are displayed, and you can see all layers that are set to print in the Object Manager. If you want to get a closer look at specific objects in a drawing, you can select and preview them, too. When you preview selected objects, the rest of the drawing is hidden.

Before you preview a drawing, you can specify the preview mode. The preview mode affects the speed at which your preview displays and the amount of detail that is displayed in the drawing window.

You can also display consecutive pages on the screen at the same time and create objects that span two pages.

To preview a drawing

• Click **View ▸ Full screen preview**.

Click anywhere on the screen, or press any key, to return to the application window.

You can press **Page up** and **Page down** to preview pages in a multiple-page drawing.

To preview selected objects

1   Select the objects.

2   Click **View ▶ Preview selected only**.

3   Click **View ▶ Full screen preview**.

Click anywhere on the screen, or press any key, to return to the application window.

If **Preview selected only** mode is enabled and no objects are selected, **Full screen preview** displays a blank screen.

You can disable **Preview selected only** mode after you return to the application window by clicking **View ▶ Preview selected only**.

To view facing pages

1   Click **Layout ▶ Page setup**.

2   In the **Document**, **Page** list of categories, click **Layout**.

3   Enable the **Facing pages** check box.

4   Choose one of the following settings from the **Start on** list box:
    • **Left side** — starts the document on a left-facing page
    • **Right side** — starts the document on a right-facing page

You will be unable to view facing pages if the document uses a Tent card or Top fold card layout style, or if it contains multiple page orientations. The Left side option is only available for the Full page and Book layout styles.

Backing up and recovering files

CorelDRAW can automatically save backup copies of drawings and prompt you to recover them when you restart the program in the event of a system error.

The auto backup feature saves drawings that you have open and modified. During any working session with CorelDRAW, you can set the time interval for automatically backing up files and specify where you want the files to be saved: by default in your temporary folder or to a specified folder.

You can recover backed-up files from the temporary or specified folder when you restart CorelDRAW. Backup files are stored in either the temporary or the user-specified folder. You can choose not to recover a file; however, that file is automatically erased when you shut down the program normally.

To specify auto backup settings

1 Click **Tools ▶ Options**.

2 In the **Workspace** list of categories, click **Save**.

3 Enable the **Auto-backup every** check box, and choose a value from the **Minutes** list box.

4 In the **Always back-up to** area, enable one of the following options:
   • **Temporary folder** — lets you save an auto backup file in the temporary folder
   • **Specific folder** — lets you specify the folder for an auto backup file

You can also

Create a backup file every time you save	Enable the **Make backup on save** check box.
Disable auto backup	Choose **Never** from the **Minutes** list box.

Auto backup files are named **auto_backup_of_filename** and can be saved in any folder you specify. Backup files created when you save a drawing are named **backup_of_filename** and are always stored in the same folder as the original drawing.

All open or modified files other than CorelDRAW file format (**.cdr**) will be backed up as **.cdr** files.

You can cancel the creation of an auto backup file by pressing **Esc** while saving is in progress.

To recover a backup file

1 Restart CorelDRAW.

2 Click **OK** in the **File recovery** dialog box.

3 Save and rename the file in the specified folder.

     Recovered files are named **GraphicsX.cdr**, where **X** is the numbered increment.

     If you click **Cancel**, CorelDRAW ignores the backup file and deletes it when you exit the program normally.

Saving drawings

CorelDRAW lets you save a drawing as you work. The application also offers advanced options that let you assign notes, keywords, and thumbnails to drawings so that you can find them more easily.

By default, drawings are saved to the CorelDRAW file format (**.cdr**); however, advanced save options let you choose other file formats as well. If you are saving a drawing to use in another application, you must save it to a file format that is supported by that application. You can also save a drawing to a previous version of CorelDRAW. For information about file formats supported by CorelDRAW, see "File formats" in the Help. For information about saving files to other formats, see "Exporting files" on page 302.

A drawing can also be saved as a template, allowing you to create other drawings with the same properties. You can also save selected objects in a drawing. If you are working on a large drawing, saving only the selected objects reduces the file size, which can decrease the time it takes to load the drawing. For information about saving a drawing as a template, see "Working with templates" on page 33.

To save a drawing

1 Click **File ▶ Save as**.

2 Locate the folder where you want to save the file.
  • If you want to save notes or keywords with the file, type them in the corresponding box.
  • If you want to specify advanced settings, click **Advanced**, and specify the settings you want in the **Options** dialog box.

3   Type a filename in the **File name** list box.

4   Click **Save**.

✍

 If you want to save changes made to a previously saved drawing, click **File ▶ Save**.

To save only selected objects

1   Select the objects.

2   Click **File ▶ Save as**.

3   Enable the **Selected only** check box.

4   Locate the folder where you want to save the file.

5   Type a filename in the **File name** list box.

6   Click **Save**.

Closing drawings and quitting CorelDRAW

You can close one or all open drawings at any time before quitting CorelDRAW.

To close drawings

To close	Do the following
One drawing	Click **File ▶ Close**.
All open drawings	Click **Window ▶ Close all**.

To quit CorelDRAW

• Click **File ▶ Exit**.

✎

 You can also quit CorelDRAW by pressing **Alt + F4**.

From here

For more information about	In the Help index, see
Customizing undo settings	undoing, customizing settings
Choosing default settings for zooming and panning	zooming, defaults
Working with views	views

Working with lines, outlines, and brush strokes

CorelDRAW lets you add lines and brush strokes using a variety of techniques and tools. After you draw lines or apply brush strokes to lines, you can format them. You can also format the outlines that surround objects.

CorelDRAW provides preset objects that you can spray along a line. You can also create flow and dimension lines in drawings.

You can draw lines using shape recognition. For more information, see "Drawing using shape recognition" on page 71.

In this section, you'll learn about
- drawing lines
- formatting lines and outlines
- closing multiple line segments
- applying brush strokes
- spraying objects along a line
- drawing flow and dimension lines

Drawing lines

CorelDRAW lets you draw all kinds of different lines, from curved or straight lines to calligraphic lines. You can create a line that is drawn as you drag the mouse. You can create segments that are straight and curved in the same line. You can draw straight or curved segments and then add one node at a time. You can also draw a curve by specifying width and height.
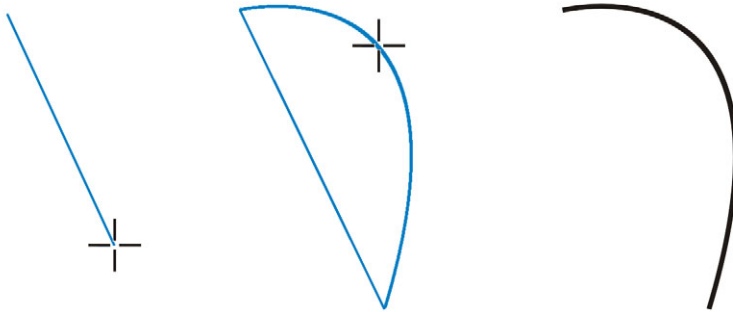
You can draw a curved line by specifying its width (left), specifying its height (center), and clicking the page (right).

Some lines have nodes and control points that you can manipulate to shape lines as you draw. For information about node types, see "Working with curve objects" on page 101.
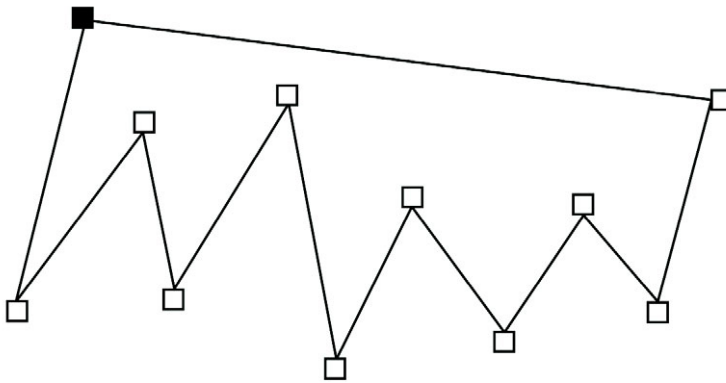
You can draw multi-segment lines using the Bézier tool, by clicking each time you want the line to change direction.
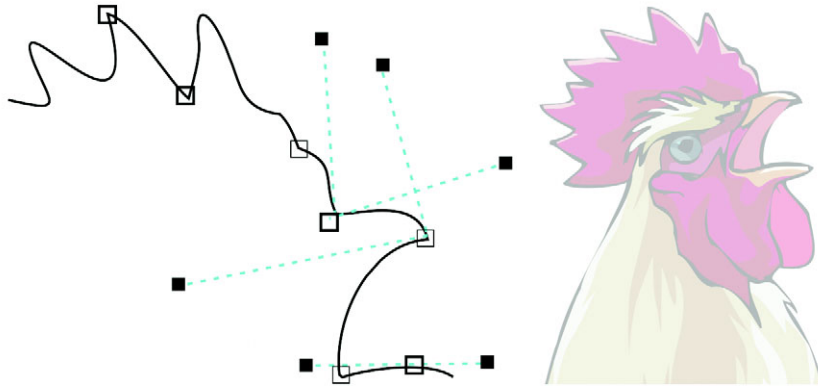
You can draw curves using the Bézier tool, by dragging the control points at the ends of the Bézier curve.

CorelDRAW also lets you simulate the effect of a calligraphic pen when you draw lines. Calligraphic lines vary in thickness according to the direction of the line and the angle of the pen nib. By default, calligraphic lines display as closed shapes drawn with a pencil. You can control the thickness of a calligraphic line by changing the angle of the line you draw in relation to the calligraphic angle you choose. For example, when the line you draw is perpendicular to the calligraphic angle, the line is at the maximum thickness specified by the pen width. Lines drawn at the calligraphic angle, however, have little or no thickness.

A calligraphic pen allows you to draw lines of various thicknesses.

CorelDRAW lets you create pressure-sensitive lines which vary in thickness. You can create this effect using the mouse or a pressure-sensitive pen and graphics tablet. Both methods result in lines with curved edges and varying widths along a path. For information about using a pressure-sensitive pen on a graphics tablet, see the manufacturer's instructions.

A flower drawn by using three different artistic media lines: calligraphic lines (left), pressure-sensitive lines (center), and the lineflat preset line (right).

CorelDRAW provides preset lines that let you create thick strokes in a variety of shapes. After you draw a calligraphic or preset line, you can apply a fill to it as you would to any other object. For information about applying fills, see "Filling objects" on page 141.

To draw a straight line

1   Open the **Curve** flyout ⟨⟨icon toolbar⟩⟩, and click the **Freehand** tool ⟨icon⟩.

2   Click where you want to start the line, and click where you want to end it.

You can also

Draw a straight line using the **Polyline** tool	Open the **Curve** flyout, and click the **Polyline** tool ⟨icon⟩. Click where you want to start the line segment, and click where you want to end the line segment. Double-click to end the line.

You can also

Draw a straight line using the **Bézier** tool	Open the **Curve** flyout, and click the **Bézier** tool. Double-click where you want to start the line. Click where you want to end the line. If you want to create a multi-segment line, double-click where you want the new line segment to end. Continue this process until the line has as many segments as you want. Double-click to finish the line.
Draw a straight line using the **Pen** tool	Open the **Curve** flyout, and click the **Pen** tool. Double-click where you want to start the line. Click where you want to end the line. If you want to create a jagged line, double-click where you want the new line segment to end. Continue this process until the line has as many segments as you want. Double-click to finish the line.
Preview a line using the **Pen** tool	Click the **Preview mode** button in the property bar. Click on the drawing page, and release the mouse button. Move the mouse, and click to finish the line.
Add line segments to an existing line	Using the **Freehand** tool, click the end node of a selected line, and click where you want the new segment to end.
Create a closed shape from two or more connected lines	Using the **Freehand** tool, click the end node of a line with two segments. Click the first node.

You can constrain a line created with the **Freehand** tool to a straight vertical or horizontal line by holding down **Ctrl** while you drag. You can change the angle of this line by clicking **Tools ▶ Options**, clicking **Edit** in the **Workspace** list of categories and changing the value in the **Constrain Angle** box.

To draw a curved line

1   Open the **Curve** flyout, and click the **Freehand** tool.

2   Click where you want to start the curve, and drag to draw the line.

You can also

Draw a curved line using the **Polyline** tool	Open the **Curve** flyout, and click the **Polyline** tool . Click where you want to start the curve, and drag across the drawing page. Double-click to finish the curve.
Draw a curved line using the **Bézier** tool	Open the **Curve** flyout and click the **Bézier** tool . Click where you want to place the first node, and drag the control point in the direction you want the curve to bend. Release the mouse button. Position the cursor where you want to place the next node, and drag the control point to create the curve you want. Double-click to finish the curve.
Draw a curved line using the **Pen** tool	Open the **Curve** flyout and click the **Pen** tool . Click where you want to place the first node, and drag the control point in the direction you want the curve to bend. Release the mouse button. Position the cursor where you want to place the next node, and drag the control point to create the curve you want. Double-click to finish the curve.
Preview a line using the **Pen** tool	Click the **Preview mode** button in the property bar. Click on the drawing page, and release the mouse button. Move the mouse and click to finish the curve.
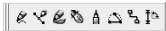
You can erase a portion of a curved freehand line by holding down **Shift** and dragging backward over the line before releasing the mouse button.

You can close an object with the **Shape** tool by opening the **Shape** flyout , and selecting a shape. Click on the **Auto-close curve** button .

To draw a curve by specifying width and height

1 Open the **Curve** flyout ⎸🖊🖋🖌🖉🖊🖌🖋⎸, and click the **3 point curve** tool 🖉.

2 Click where you want to start the curve, and drag to where you want the curve to end.

3 Release the mouse button, and click where you want the center of the curve to be.

To draw a calligraphic line

1 Open the **Curve** flyout ⎸🖊🖋🖌🖉🖊🖌🖋⎸, and click the **Artistic media** tool 🖌.

2 Click the **Calligraphic** button 🖋 on the property bar.

3 Type a value in the **Calligraphic angle** box on the property bar.

   If you want to smooth the edges of the line, type a value in the **Freehand smoothing** box on the property bar.

4 Drag until the line is the shape you want.

   If you want to set the width of the line, type a value in the **Artistic media tool width** box on the property bar.

The width you set is the maximum line width. The angle of the line you draw in relation to the calligraphic angle determines the line's actual width.

You can also access calligraphic lines by clicking **Effects ▶ Artistic media**, and specifying the settings you want in the **Artistic media** docker.

To draw a pressure-sensitive line

1 Open the **Curve** flyout ⎸🖊🖋🖌🖉🖊🖌🖋⎸, and click the **Artistic media** tool 🖌.

2 Click the **Pressure** button 🖉 on the property bar.

   If you want to smooth the edges of the line, type a value in the **Freehand smoothing** box on the property bar.

3 Drag until the line is the shape you want.

   If you want to change the width of the line, type a value in the **Artistic media tool width** box on the property bar.
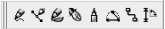
The width you set represents the line's maximum width. The amount of pressure you apply determines the line's actual width.

If you are using the mouse, press the **Up arrow** or **Down arrow** to simulate the pen pressure, and, therefore, the width of the line.

You can also access pressure-sensitive lines by clicking **Effects ▸ Artistic media**.

To draw a preset line

1 Open the **Curve** flyout ⌜⌐⌐⌐⌐⌐⌐⌐⌐⌐⌐⌐⌝, and click the **Artistic media** tool ⌐.

2 Click the **Preset** button ⊶ on the property bar.

3 Choose a preset line shape from the **Preset stroke list** list box.

   If you want to smooth the edges of the line, type a value in the **Freehand smoothing** box on the property bar.

4 Drag until the line is the shape you want.

   If you want to set the width of the line, type a value in the **Artistic media tool width** box on the property bar.

Formatting lines and outlines

You can change the appearance of both lines and outlines. For example, you can specify their color, width, style, corner shape, and cap style. You can also remove a line or outline, and you can create your own line or outline style by adjusting the distance between segments in the line.

CorelDRAW also lets you copy the color of an outline to other objects, convert outlines to objects so that you can apply a fill to them, and create calligraphic outlines. For more information about filling objects, see "Filling objects" on page 141.

You can also add arrowheads to lines and curves. In addition, you can create new arrowheads and edit current or new ones.

Setting the miter limit for outlines lets you specify at what angle a sharp corner is either mitered (pointed) or beveled (squared-off).

To specify line and outline settings

1 Select an object.

2 Open the **Outline tool** flyout ⎹ ◦ ⊕ ☒ ☂ – – – ■ ■ ☲ ⎸, and click the **Outline pen dialog** button ☂.

3 Specify the settings you want.

You can also

Create a line style	Click **Edit style**, and move the slider in the **Edit line style** dialog box. By clicking the boxes to the left of the slider, you can specify the placement and frequency of the dots in the new line style you create.
Edit a line style	Choose a line style from the **Style** list box, and click **Edit style**. Create a line style in the **Edit line style** dialog box, and click **Replace**.

You can change the outline color of a selected object by choosing a color from the color picker in the **Outline pen** dialog box.

To copy outline color to another object

1 Open the **Eyedropper** flyout ⎹ ⚲ ⚗ ⎸, and click the **Eyedropper** tool ⚲.

2 Choose **Object attributes** from the list box on the property bar.

3 Click the **Properties** flyout on the property bar, and enable the **Outline** check box.

4 Click the edge of the object whose outline you want to copy.

5 Open the **Eyedropper** flyout ⎹ ⚲ ⚗ ⎸, and click the **Paintbucket** tool ⚗.

6 Click the edge of the object to which you want to copy the outline.

To convert an outline to an object

1 Select an object.

2 Click **Arrange** ▶ **Convert outline to object**.

To create a calligraphic outline

1 Select an object.

2 Open the **Outline tool** flyout ⫿▯⬢⬜⬍————■■⬚⫿, and click the **Outline pen dialog** button ▯.

3 In the **Corners** area, enable a corner style option.

4 Type a value in the **Stretch** box.

5 Type a value in the **Angle** box.

To remove an object's outline

1 Select an object.

2 Open the **Outline tool** flyout ⫿▯⬢⬜⬍————■■⬚⫿, and click the **No outline button** ⬜.

⚡ You can also remove an object's outline by selecting the object and right-clicking **No Color** on the color palette.

To add an arrowhead

1 Select a line or curve.

2 Open the **Outline tool** flyout ⫿▯⬢⬜⬍————■■⬚⫿, and click the **Outline pen dialog** button ▯.

3 In the **Arrows** area, open the **Start arrowhead** picker, and click a line-ending shape.

4 Open the **End arrowhead** picker, and click a line-ending shape.

Closing multiple line segments

You can quickly create a closed object from line segments by selecting which lines you want to connect and the shape of the connecting line.

You can connect lines using the closest nodes between lines. The connecting line can be either straight or curved. You can also connect lines using the start to end nodes of the lines. The end node of the first selected line connects directly with the starting node of the closest selected line. The connected lines will take on the properties of the first line selected.
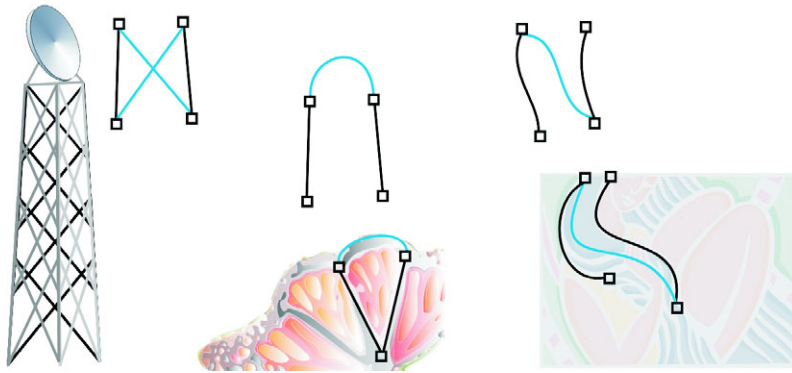
Closing multiple line segments can be the starting point for more complex drawings.

To close multiple line segments

1 Hold down **Shift**, and select each object using the **Pick** tool .

2 Click **Arrange ▶ Close path**, and click one of the following:
   - **Closest nodes with straight lines**
   - **Closest nodes with curvy lines**
   - **Start to end with straight lines**
   - **Start to end with curvy lines**

Text and blends fitted to a path will be detached from their paths when the paths are closed.

You can also connect the subpaths in a group of objects.

You can also select lines by marquee selecting. If the lines are marquee selected, the properties from the top object on a layer are used. To see which object is the top one, open the **Object manager** docker by clicking **Window ▶ Dockers ▶ Object manager**.

Applying brush strokes

CorelDRAW lets you apply a variety of preset brush strokes, ranging from strokes with arrowheads to ones that are filled with rainbow patterns. When you draw a preset brush

stroke, you can specify some of its attributes. For example, you can change the width of a brush stroke and specify its smoothness.

You can also create custom brush strokes using an object or a group of vector objects. When you create a custom brush stroke, you can save it as a preset.

The above image was created using different kinds of brush strokes and widths.

To apply a preset brush stroke

1   Open the **Curve** flyout ⟦𝒦⟧, and click the **Artistic media** tool 🖌.

2   Click the **Brush** button 🖊 on the property bar.

3   Choose a brush stroke from the **Brush stroke** list box.

   If you want to smooth the edges of the brush stroke, type a value in the **Freehand smoothing** box on the property bar.

4   Drag until the stroke is the shape you want.

   If you want to set the width of the stroke, type a value in the **Artistic media tool width** box on the property bar.

   If you have access to a brush stroke that isn't listed in the **Brush stroke** list box, you can apply it by clicking the **Browse** button on the property bar, and locating the brush stroke file.

To create a custom brush stroke

1   Select an object or a set of grouped objects.

2   Open the **Curve** flyout ⟦𝒦⟧, and click the **Artistic media** tool 🖌.

3   Click the **Brush** button on the property bar.

4   Click the object or grouped objects.

5   Click the **Save artistic media stroke** button ▧ on the property bar.

6   Type a filename for the brush stroke.

7   Click **Save**.

You can create custom brush strokes by clicking **Effects ▶ Artistic media**, and specifying the settings you want in the **Artistic media** docker.

Spraying objects along a line

CorelDRAW lets you spray a series of objects in a line. Besides graphic and text objects, you can import bitmaps and symbols to spray along a line.

You can control how a sprayed line appears by adjusting the spacing between objects, so they are closer or farther apart from each other. You can also vary the order of objects in the line. For example, if you are spraying a series of objects that includes a star, a triangle, and a square, you can change the spray order so that the square appears first, followed by the triangle and then the star. CorelDRAW also lets you shift the position of objects in a sprayed line by rotating them along the path or offsetting them in one of four different directions: alternating, left, random, or right. For example, you can choose a left offset direction to align the objects you spray to the left of the path.

You can also create a new spraylist with objects of your own.
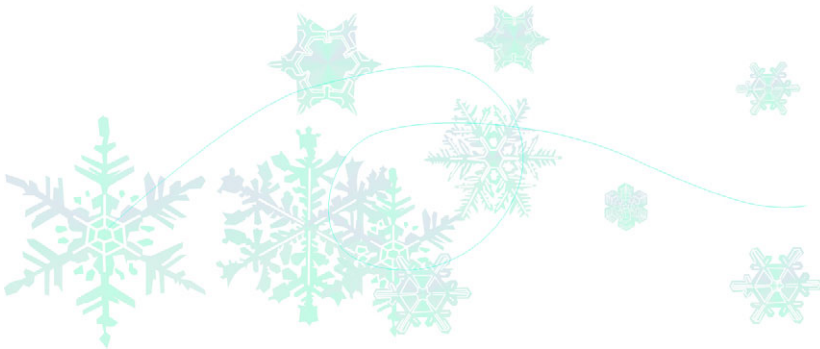
Objects sprayed along a curved line. The objects and line can be edited after the objects have been sprayed.

To spray a line

1 Open the **Curve** flyout ![Curve flyout icons], and click the **Artistic media** tool ![Artistic media icon].

2 Click the **Sprayer** button ![Sprayer icon] on the property bar.

3 Choose a spraylist from the **Spraylist file** list box on the property bar.

If the spraylist you want is not listed, click the **Browse** button on the property bar to select the folder in which the file is located.

4 Drag to draw the line.

You can also

Adjust the number of objects sprayed at each spacing point	Type a number in the top box of the **Dabs/ spacing of objects to be sprayed** ![#* box: 1] box on the property bar.
Adjust the spacing between dabs	Type a number in the bottom box of the **Dabs/spacing of objects to be sprayed** ![box: 1.0 "] box on the property bar.
Set the spray order	Choose a spray order from the **Choice of spray order** list box on the property bar.
Adjust the size of spray objects	Type a number in the top box of the **Size of objects to be sprayed** box on the property bar.
Increase or decrease the size of the spray objects as they progress along the line	Type a number in the bottom box of the **Size of objects to be sprayed** box on the property bar.
Reset a spraylist to its saved settings	Click the **Reset values** button ![Reset values icon] on the property bar.

![Note icon]

Increasing the value for the size of spray objects along the line causes objects to become larger as they are distributed along the path.

Spraylists that have more complex objects use more system resources. CorelDRAW takes longer to produce lines using complex objects, and these objects will increase the file size. Using symbols for each group in the list can help reduce file size and demands on your system. For more information about creating symbols, see "Working with symbols" on page 133.

To rotate the lines that you spray

1 Select the spraylist that you want to adjust.

2 Click the **Rotation** button ⚙ on the property bar.

3 Type a value between zero and 360 in the **Angle** box on the property bar.

   If you want each object in the spray to rotate incrementally, enable the **Use Increment** check box and type a value in the **Increment** box.

4 Enable one of the following options:
   • **Path based** — rotates objects in relation to the line
   • **Page based** — rotates objects in relation to the page

5 Press **Enter**.

To offset the lines that you spray

1 Select a spraylist.

2 Click the **Offset** button 🖫 on the property bar.

3 Enable the **Use offset** check box to offset objects from the path of the line sprayed.

   If you want to adjust the offset distance, type a new value in the **Offset** box.

4 Choose an offset direction from the **Offset direction** list box.

   If you want to alternate between the left and right of the line, choose **Alternating**.

To create a new spray list

1 Click **Effects ▶ Artistic media**.

2 Select an object, a set of grouped objects, or a symbol.

3 Click the **Save** button on the **Artistic media** docker.

4 Enable **Object sprayer**.

5 Click **OK**.

6 Type a filename in the **Filename** box.

7 Click **Save**.

Drawing flow and dimension lines

You can draw flow lines in flowcharts and organizational charts to connect chart shapes. Objects stay connected by these lines even when you move one or both objects. For

information about drawing flowchart shapes, see "Drawing predefined shapes" on page 70.

You can draw callout lines that label and draw attention to objects.

You can also draw dimension lines to indicate the distance between two points in a drawing or the size of objects. Dimension lines and the measurements shown on the lines change with an object. You can also set how dimension lines are displayed.
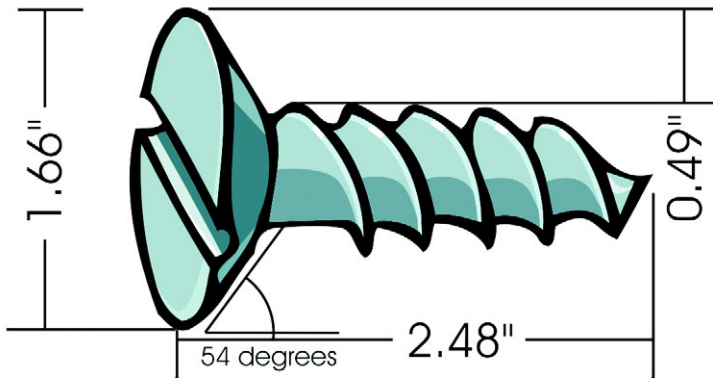
Dimension lines can show the sizes of parts of an object.
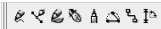
To draw a flow line between two or more objects

To	Do the following
Draw a flow line	Open the **Curve** flyout ![flyout icons], and click the **Interactive connector** tool ![icon]. Drag from a node on one object to a node on another object.
Move a flow line	Select a flow line using the **Shape** tool ![icon], and drag the node you want to move.

![hand icon] You can draw a flow line horizontally or vertically, but not both. All angles in a flow line, therefore, are right angles.

To draw a callout

1   Open the **Curve** flyout ⟦ ⟧, and click the **Dimension** tool ⟨⟩.

2   Click the **Callout** tool ⟨⟩ on the property bar.

3   Click where you want the first callout segment to start.

4   Click where you want the second segment to start.

5   Type the callout text.

✎

When you draw a callout line, a text cursor displays at the end of line, showing where to type a label for the object.
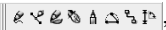
To draw a dimension line

1   Open the **Curve** flyout ⟦ ⟧, and click the **Dimension** tool ⟨⟩.

2   On the property bar, click one of the following buttons:
    - **Vertical dimension** tool
    - **Horizontal dimension** tool
    - **Slanted dimension** tool

3   Click the start and end points of the dimension line.

4   Click where you want to place the dimension text.

You can also

Draw an angular dimension line	Open the **Curve** flyout ⟦ ⟧, and click the **Dimension** tool. Click the **Angular dimension** tool button on the property bar. Click where you want the two lines that measure the angle to intersect. Click where you want the first line to end, and click where you want the second line to end. Click where you want the angle's label to appear.

To set how the dimension units are displayed

1   Select a dimension line.

2   Click the **Show units for dimension** button ⟨⟩ on the property bar.

3   On the property bar, choose options from the following list boxes:

- Dimension style
- Dimension precision
- Dimension units

You can also

Specify the position of the dimension units	Click the **Text position drop down** button ⊞ on the property bar, and click a text position.
Change the point size and font of the dimension units	Select a dimension line. Click **Text ▶ Format text**. Choose a font style from the **Font** list box, and type a value in the **Size** box.

From here

For more information about	In the Help index, see
drawing using shape recognition	drawing, using shape recognition
Setting the miter limit	miter limit

Drawing shapes

CorelDRAW lets you draw basic shapes, which you can modify using special effects and reshaping tools.

In this section, you'll learn about

- drawing rectangles and squares
- drawing ellipses, circles, arcs, and wedges
- drawing polygons and stars
- drawing spirals
- drawing grids
- drawing predefined shapes
- drawing using shape recognition

Drawing rectangles and squares

CorelDRAW lets you draw rectangles and squares. You can draw a rectangle or square by dragging diagonally or draw a rectangle by specifying the width and height. After you draw a rectangle or square, you can reshape it by rounding one or more of its corners.
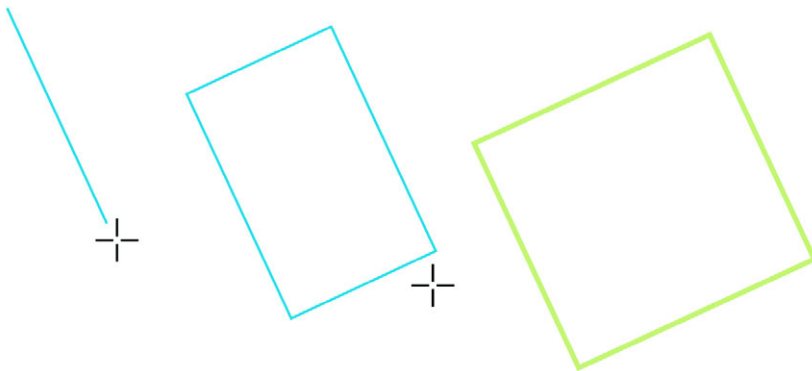
You can create a rectangle by drawing its baseline first and then its height.

To draw a rectangle or a square by dragging diagonally

To draw	Do the following
A rectangle	Open the **Rectangle** flyout ▯ ▢ ▱ , and click the **Rectangle** tool ▢. Drag in the drawing window until the rectangle is the size you want.
A square	Open the **Rectangle** flyout ▯ ▢ ▱ , and click the **Rectangle** tool ▢. Hold down **Ctrl**, and drag in the drawing window until the square is the size you want.

You can draw a rectangle from its center outward by holding down **Shift** as you drag. You can also draw a square from its center outward by holding down **Shift + Ctrl** as you drag.

You can draw a rectangle that covers the drawing page by double-clicking the **Rectangle** tool.

To round the corners of a rectangle or a square

1 Click a rectangle or a square.

2 Type values in the **Corner roundness** areas on the property bar.

To apply the same roundness to all corners click the **Round corners together** button on the property bar.

To set default corner roundness click **Tools ▶ Options**, double-click **Toolbox** in the list of categories, click **Rectangle** tool, and move the slider or enter a number.

Drawing ellipses, circles, arcs, and wedges

You can draw an ellipse or circle by dragging diagonally or you can draw an ellipse by specifying its width and height. You can draw an ellipse or circle and change the shape into an arc or wedge.
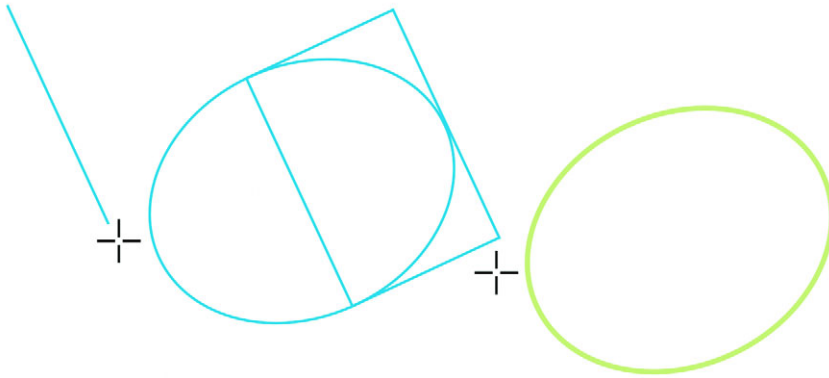
You can draw an ellipse by drawing first its centerline and then its height.

To draw an ellipse or a circle by dragging diagonally

To draw	Do the following
An ellipse	Open the **Ellipse** flyout ⏸ ◯ 🖱, and click the **Ellipse** tool ◯. Drag in the drawing window until the ellipse is the shape you want.
A circle	Open the **Ellipse** flyout ⏸ ◯ 🖱, and click the **Ellipse** tool ◯. Hold down **Ctrl**, and drag in the drawing window until the circle is the size you want.

You can draw an ellipse or a circle from its center outward by holding down **Shift** as you drag.

To draw an ellipse by specifying width and height

1 Open the **Ellipse** flyout ⏸ ◯ 🖱, and click the **3 point ellipse** tool 🖱.

2 In the drawing window, drag to draw the centerline of the ellipse, and release the mouse button.

The centerline runs through the center of the ellipse and determines its width.

3 Move the pointer to define the height of the ellipse, and click.

To draw an arc or a wedge

To draw	Do the following
An arc	Open the **Ellipse** flyout ⊟ ◎ ♨ , and click the **Ellipse** tool. Click the **Arc** button on the property bar. Drag in the drawing window until the arc is the shape you want.
A wedge	Open the **Ellipse** flyout ⊟ ◎ ♨ , and click the **Ellipse** tool. Click the **Wedge** button on the property bar. Drag in the drawing window until the wedge is the shape you want.

To draw an arc, the ellipse or circle must have an outline.

You can change the direction of a selected arc or a wedge by clicking the **Clockwise/counterclockwise arcs or pies** button ⟳ on the property bar.

You can constrain the movement of the node to 15-degree increments by holding down **Ctrl** as you drag.
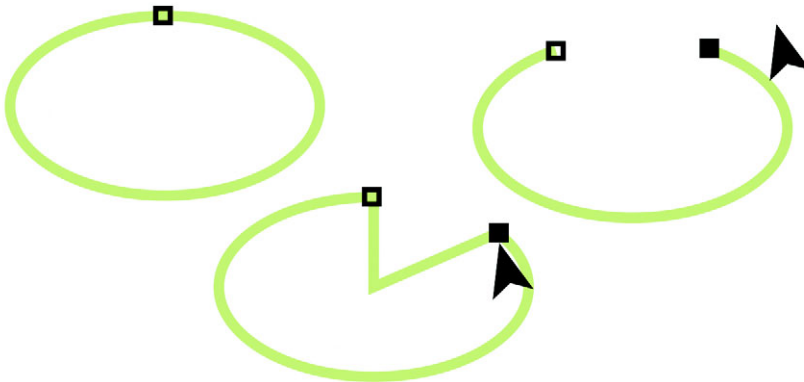
To create a wedge, drag the node of the ellipse (left) to the inside of the ellipse (center). To create an arc, drag the node to the outside of the ellipse (right).

Drawing polygons and stars

CorelDRAW lets you draw polygons and stars and then reshape them. For example, you can convert polygons to stars and stars to polygons, change the number of sides on a polygon or the number of points on a star, and sharpen the points of a star.

You can also draw a predefined star shape. For more information, see "To draw a predefined shape" on page 70.

To draw a polygon or a star

To draw	Do the following
A polygon	Open the **Object** flyout ⊞ ◇ ◎, click the **Polygon** tool ◇, and drag in the drawing window until the polygon is the size you want.
A star	Open the **Object** flyout ⊞ ◇ ◎, click the **Polygon** tool, drag in the drawing window until the polygon is the size you want, and click the **Star** button ☆ on the property bar.

You can draw a polygon or a star from its center by holding down **Shift** as you drag.

You can draw a symmetrical polygon or a star by holding down **Ctrl** as you drag.

To reshape a polygon or a star

To	Do the following
Change a polygon to a star or a star to a polygon	Select a polygon or a star, and click the **Polygon** button ◇ or the **Star** button ☆ on the property bar.
Reshape a polygon or a star	Click the **Shape** tool ⟨, and click a node on the object. Drag the node to change the object's shape.

To	Do the following
Change the number of sides of a polygon or number of points on a star	Select a polygon or star, type a value in the **Number of points on polygon** box on the property bar, and press **Enter**.
Sharpen a star's points	Select a star, and move the **Sharpness of polygon** slider on the property bar.

The **Sharpness of polygon** slider displays only if the star you select has at least seven points. The sensitivity of the slider increases with the number of points.

You can change a polygon to a star by selecting the polygon, clicking a node on one of the sides, and dragging toward the center of the polygon.

Drawing spirals

You can draw two types of spirals: symmetrical and logarithmic. Symmetrical spirals expand evenly so that the distance between each revolution is equal. Logarithmic spirals expand with increasingly larger distances between revolutions. You can set the rate by which a logarithmic spiral expands outward.
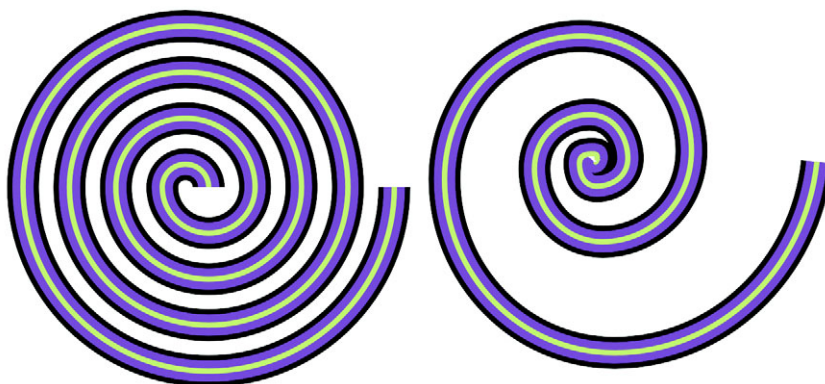
A symmetrical spiral (left) and a logarithmic spiral (right)

To draw a spiral

1   Open the **Object** flyout ⊩ ▦ ◇ ◉ , and click the **Spiral** tool ◉ .

2   Type a value in the **Spiral revolutions** box on the property bar.

3   On the property bar, click one of the following buttons:
    • **Symmetrical spiral** ◉
    • **Logarithmic spiral** ◉

    If you want to change the amount by which the spiral expands as it moves outward, move the **Spiral expansion** slider.

4   Drag diagonally in the drawing window until the spiral is the required size.

You can draw a spiral from its center outward by holding down **Shift** as you drag.

You can also draw a spiral with even horizontal and vertical dimensions by holding down **Ctrl** as you drag.

Drawing grids

You can draw a grid and set the number of rows and columns. A grid is a grouped set of rectangles, which you can break apart.

To draw a grid

1   Open the **Object** flyout, and click the **Graph paper** tool ▦ .

2   Type values in the top and bottom portions of the **Graph paper columns and rows** box ▦ on the property bar.

    The value you type in the top portion specifies the number of columns; the value in the bottom portion specifies the number of rows.

3   Point to where you want the grid to display.

4   Drag diagonally to draw the grid.

If you want to draw the grid from its center point outward, hold down **Shift** as you drag; if you want to draw a grid with square cells, hold down **Ctrl** as you drag.

To ungroup a grid

1 Select a grid using the **Pick** tool ⏳.

2 Click **Arrange ▶ Ungroup**.

You can also break apart a grid by clicking the **Ungroup** button on the property bar.

Drawing predefined shapes

Using the Perfect Shapes collection, you can draw predefined shapes, such as basic shapes, arrows, stars, and callouts. Basic shapes, arrows shapes, star shapes, and callout shapes have glyphs which let you modify their appearance.
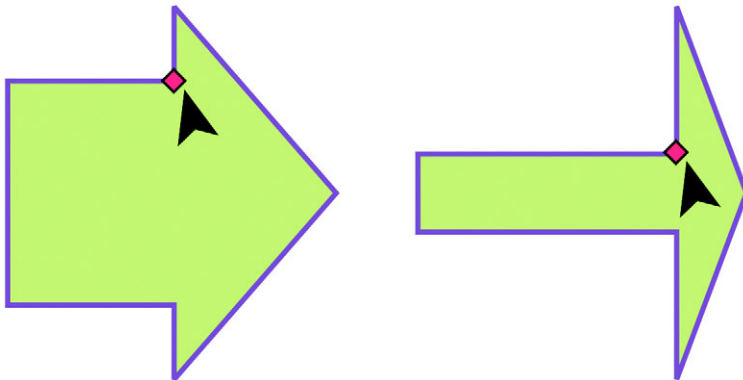
You can drag a glyph to alter a shape.

You can add text to the inside or outside of the shape. For example, you might want to put a label inside a flowchart symbol or a callout.

To draw a predefined shape

1 Open the **Perfect Shapes** flyout ⏷, and click one of the following tools:
   • **Basic shapes** ⏷
   • **Arrows shapes** ⏷
   • **Flowchart shapes** ⏷
   • **Star shapes** ⏷

- **Callout shapes** 🗨

2 Open **Perfect Shapes** picker on the property bar, and click a shape.

3 Drag in the drawing window until the shape is the size you want.

> Perfect Shapes can be modified like any other shapes.

To modify a predefined shape

1 Select a shape with a glyph.

2 Drag a glyph until the shape is the form you want.

> The right-angle, heart, lightning bolt, explosion, and flowchart shapes do not have glyphs.

To add text to a predefined shape

1 Click the **Text** tool 🅰.

2 Position the cursor inside the shape's outline until it changes to a text cursor I₋.

3 Type and format the font inside the shape.

Drawing using shape recognition

You can use the **Smart drawing** tool to draw freehand strokes that can be recognized and converted to basic shapes. Rectangles and ellipses are translated to native CorelDRAW objects; trapezoids and parallelograms are translated to Perfect Shapes objects; lines, triangles, squares, diamonds, circles, and arrows are translated to curve objects. If an object is not converted to a shape, it can be beautified. Objects and curves drawn with shape recognition are editable. You can set the level at which CorelDRAW recognizes shapes, converts them to objects, and the amount of smoothing applied to curves.

You can set the amount of time to elapse between making a pen stroke and the implementation of shape recognition. For example, if the timer is set to one second and you draw a circle, shape recognition takes effect one second after you draw the circle.

You can make corrections as you draw. You can also change the thickness and line style of a shape drawn using shape recognition.
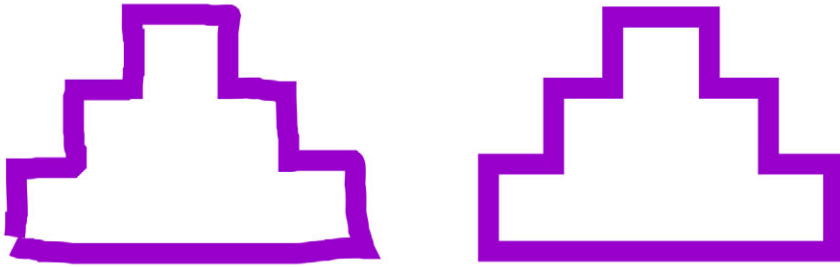
Shapes created with the Smart drawing tool are recognized and smoothed.

To draw a shape using shape recognition

1   Click the **Smart drawing** tool 📝.

2   Choose a recognition level from the **Recognition level** list box on the property bar.

3   Choose a smoothing level from the **Smoothing level** list box on the property bar.

4   Draw a shape in the drawing window.

✍️
> The **Smart drawing tool** property bar is only displayed when the **Smart drawing** tool is selected.

To set shape recognition delay

1   Click **Tools ▶ Customization**.

2   In the **Toolbox** list of categories, click **Smart drawing tool**.

3   Move the **Drawing assistance delay** slider.

✍️
> The minimum delay is ten milliseconds; the maximum is two seconds.

To make a correction while using shape recognition

•   Before the delay recognition period has elapsed, hold down **Shift**, and drag over the area you want to correct.

    You must start erasing the shape from the last point drawn.

If you are drawing a freehand shape consisting of several curves, pressing **Esc** deletes the last curve drawn.

To change the outline thickness of a shape drawn with shape recognition

1   Click the **Smart drawing** tool ![icon].

2   Click the shape.

3   Choose an outline thickness from the **Outline width** list box on the property bar.

The **Smart drawing tool** property bar is displayed only when the **Smart drawing** tool is selected.

When you overlap lines drawn with the **Smart drawing** tool, the outline thickness is determined by the average.

You can change the line style of a shape drawn with shape recognition. For more information, see "To specify line and outline settings" on page 53.

From here

For more information about	In the Help index, see
Specifying the height and width of rectangles	three-point tools, rectangle

Working with objects

Working with objects is an essential part of creating drawings.

In this section, you'll learn about
- selecting objects
- copying, duplicating, and deleting objects
- copying object properties, transformations, and effects
- positioning objects
- aligning and distributing objects
- snapping objects
- using dynamic guides
- changing the order of objects
- sizing and scaling objects
- rotating and mirroring objects
- grouping objects
- combining objects

Selecting objects

Before you can change an object, you must select it. You can select visible objects, hidden objects, and a single object in a group or a nested group. You can select objects in the order in which they were created. You can also select all objects at once and deselect objects.
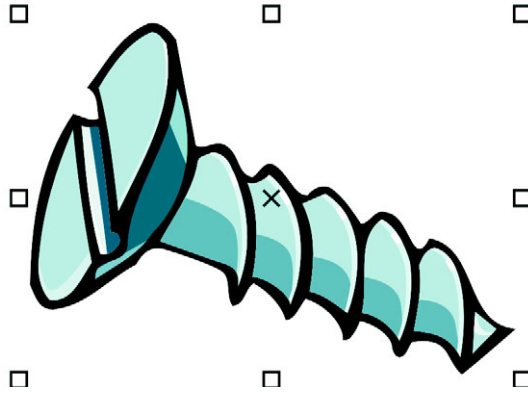
A bounding box displays around a selected object, and an "X" appears at its center.
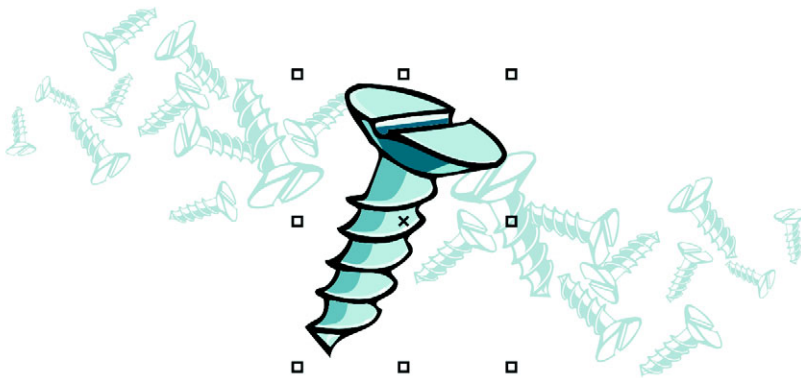
You can select a single object from a group.

To select objects

To select	Do the following
An object	Click an object using the **Pick** tool ⬚.
Multiple objects	Hold down **Shift**, and click each object you want to select.

To select	Do the following
An object, starting with the first object created and moving toward the last object created	Press **Shift + Tab** until a selection box displays around the object you want to select.
An object, starting with the last object created and moving toward the first object created	Press **Tab** until a selection box displays around the object you want to select.
All objects	Click **Edit ▶ Select all ▶ Objects**.
An object in a group	Hold down **Ctrl**, and click an object in a group using the **Pick** tool.
An object in a nested group	Hold down **Ctrl**, and using the **Pick** tool, click an object you want to select until a selection box displays around it.
A hidden object	Hold down **Alt**, and using the **Pick** tool, click the topmost object until a selection box displays around the hidden object you want to select.
Multiple hidden objects	Hold down **Shift + Alt** and using the **Pick** tool, click the topmost object until a selection box displays around the hidden objects you want to select.
A hidden object in a group	Hold down **Ctrl + Alt** and using the **Pick** tool, click the topmost object until a selection box displays around the hidden object you want to select.

The status bar displays a description of each hidden object as you select it.

You can also select one or more objects by dragging around the object or objects using the **Pick** tool.

To deselect objects

To deselect	Do the following
All objects	Click the **Pick** tool ⬚, and click a blank space in the drawing window.
A single object in multiple selected objects	Hold down **Shift**, and click the object using the **Pick** tool ⬚.

Copying, duplicating, and deleting objects

CorelDRAW gives you two ways to copy objects. You can cut or copy an object to place it on the Clipboard and paste it into a drawing, or you can duplicate an object. Cutting an object to the Clipboard removes it from the drawing; copying an object to the Clipboard leaves the original in the drawing; and duplicating an object places a copy directly in the drawing window, not the Clipboard. Duplicating is faster than copying and pasting.

When you no longer need an object, you can delete it.

To cut or copy an object

1   Select an object.
2   Click **Edit**, and click one of the following:
    • **Cut**
    • **Copy**

You can also cut or copy an object by right-clicking the object, and clicking **Cut** or **Copy**.

To paste an object into a drawing

•   Click **Edit** ▶ **Paste**.

To duplicate an object

1   Select an object.
2   Click **Edit** ▶ **Duplicate**.

To delete an object

1 Select an object.

2 Click **Edit ▶ Delete**.

You can also delete an object by clicking the object and pressing **Delete**.

Copying object properties, transformations, and effects

CorelDRAW lets you copy one object's attributes to another. You can copy object properties such as outline, fill, and text properties. You can copy object transformations such as sizing, rotating, and positioning. You can also copy effects applied to an object.

To copy an object's fill, outline, or text properties to another object

1 Click the **Eyedropper** flyout , and click the **Eyedropper** tool .

2 Choose **Object attributes** from the list box on the property bar.

3 Click the **Properties** flyout on the property bar, and enable any of the following check boxes:
   • **Outline**
   • **Fill**
   • **Text**

4 Click the edge of the object whose properties you want to copy.

5 Click the **Eyedropper** flyout , and click the **Paintbucket** tool .

6 Click the edge of the object to which you want to copy the properties.

You can copy fill or outline properties or both by right-clicking an object, dragging over another object, and choosing **Copy fill here**, **Copy outline here**, or **Copy all properties**.

To copy an object's size, position, or rotation to another object

1 Click the **Eyedropper** flyout , and click the **Eyedropper** tool .

2 Choose **Object attributes** from the list box on the property bar.

3 Click the **Transformations** flyout on the property bar.

4 Enable any of the following check boxes:

- **Size**
- **Rotation**
- **Position**

5 Click the edge of the object whose transformations you want to copy.

6 Click the **Eyedropper** flyout ‖ ⚲ ⚱ ‖, and click the **Paintbucket** tool ⚱.

7 Click the edge of the object to which you want to copy the transformations.

To copy effects from one object to another object

1 Click the **Eyedropper** flyout ‖ ⚲ ⚱ ‖, and click the **Eyedropper** tool ⚲.

2 Choose **Object attributes** from the list box on the property bar.

3 Click the **Effects** flyout on the property bar, and enable any of the following check boxes:
- **Perspective**
- **Envelope**
- **Blend**
- **Extrude**
- **Contour**
- **Lens**
- **PowerClip**™
- **Drop shadow**
- **Distortion**

4 Click the edge of the object whose effects you want to copy.

5 Click the **Eyedropper** flyout ‖ ⚲ ⚱ ‖, and click the **Paintbucket** tool ⚱.

6 Click the edge of the object to which you want to copy the effects.

Positioning objects

You can position objects by dragging them to a new location, by nudging, or by specifying their horizontal and vertical position.

The values you set in super nudging, and micro nudging allow you to move objects by increments. By default, you can nudge objects in 0.1-inch increments, but you can change the nudge values to suit your needs.

When you specify the position of an object, you can set horizontal and vertical coordinates that are relative to the object's center anchor point or to another anchor

point. You can also position objects by placing them at specific horizontal and vertical coordinates in the drawing window according to the object's anchor point.

To move an object

*   Drag an object to a new position in the drawing.

You can move an object to another page by dragging the object over a page number tab and then dragging over the page.

To move an object to another page

1   Drag the object over a page number tab of the page you want to move the object to.

2   Drag the object over the page.

To nudge an object

To	Do the following
Nudge a selected object by the nudge distance	Press an **Arrow** key.
Nudge a selected object by a fraction of the nudge distance	Hold down **Ctrl**, and press an **Arrow** key.
Nudge a selected object by a multiple of the nudge distance	Hold down **Shift**, and press an **Arrow** key.

To set nudge distances

1   Click **Tools ▶ Options**.

2   In the **Document** list of categories, click **Rulers**.

3   Type a value in the **Nudge** box.

4   Type a value in one of the following boxes:
     *   **Super nudge**
     *   **Micro nudge**

You can also set the nudge distance by deselecting all objects and typing a value in the **Nudge offset** box on the property bar.

To use the nudge distances you set in new drawings, click **Tools ▶ Save settings as default**.

To position an object by x and y coordinates

1   Select an object.

2   On the property bar, type values in the following boxes:
    • **x** — lets you position the object on the x axis
    • **y** — lets you position the object on the y axis

3   Press **Enter**.

Aligning and distributing objects

CorelDRAW lets you precisely align and distribute objects in a drawing. You can align objects to each other and to parts of the drawing page such as the center, edges, and grid. When you align objects to objects, you can line them up by their centers or by their edges.

CorelDRAW lets you align multiple objects to the center of the drawing page horizontally or vertically. Single or multiple objects can also be arranged along the edge of the page and to the nearest point on a grid.

You can distribute objects at equal intervals in a specified area.

The scattered objects (left) with vertical alignment applied to them (right).

To align an object to an object

1 Select the objects.

2 Click **Arrange ▸ Align and distribute ▸ Align and distribute**.

3 Click the **Align** tab.

4 Enable the check boxes that correspond to the horizontal and vertical alignment you want.

   If you want to align objects vertically, enable the **Left**, **Center**, or **Right** option.

   If you want to align objects horizontally, enable the **Top**, **Center**, or **Bottom** option.

5 From the **Align objects to** list box, choose **Active objects**.

   If you are aligning text objects, choose one of the following from the **For text source objects use** list box:
   • **First line baseline**
   • **Last line baseline**
   • **Bounding box**

> The object used to align the left, right, top, or bottom edge is determined by the order of creation or order of selection. If you marquee select the objects before you align them, the last object created will be used. If you select the objects one at a time the last object selected will be the reference point for aligning the others.

> You can also align objects by selecting them and clicking the **Align and distribute** button on the property bar.

To align an object to the page center

1 Select an object.

   If you want to align multiple objects, marquee select the objects.

2 Click **Arrange ▸ Align and distribute**, and click one of the following:
   • **Center to page** — aligns all objects to the page center
   • **Center to page vertically** — aligns objects to the page center along a vertical axis
   • **Center to page horizontally** — aligns objects to the page center along a horizontal axis

To align an object to the page edge

1   Select an object.

    If you want to align an object group, select the group.

2   Click **Arrange ▶ Align and distribute ▶ Align and distribute**.

3   Click the **Align** tab.

4   Enable the check boxes that correspond to the horizontal and vertical alignment
    you want.

    If you want to align objects vertically, enable the **Left**, **Center**, or **Right** option.

    If you want to align objects horizontally, enable the **Top**, **Center**, or **Bottom**
    option.

5   Choose **Edge of page** from the **Align to object** list box.

⤷
       You can also align objects by selecting them and clicking the **Align and**
       distribute button on the property bar.

       You can align an object to the grid by choosing **Grid** from the **Align objects**
       to list box.

To distribute objects

1   Select the objects.

2   Click **Arrange ▶ Align and distribute ▶ Align and distribute**.

3   Click the **Distribute** tab.

4   Enable the check boxes that correspond to the distribution you want.

5   In the **Distribute to** area, enable an option that corresponds to the distribution
    area.

Snapping objects

While you move or draw an object, you can snap it to another object in a drawing. You
can snap an object to a number of snap points in the target object. When the pointer is
close to a snap point, the snap point is highlighted, indicating it as the target that the
pointer will snap to.

To snap an object to another object with greater precision, you first snap the pointer to
a snap point in the object, and then snap the object to a snap point in the target object.

For example, you can snap the pointer to a rectangle's center, and then drag the rectangle by its center and snap it to the center of another rectangle.
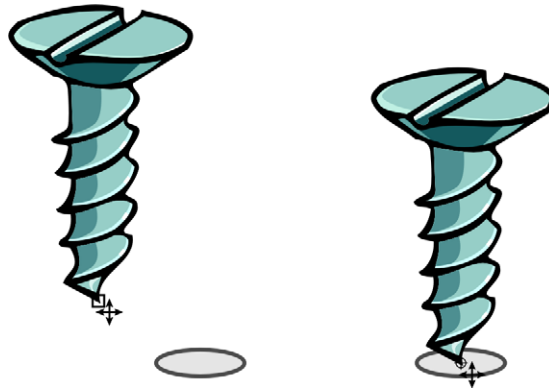
The pointer was snapped to an end node of the screw (left), and then the screw was dragged to snap to the center of an ellipse (right).

Snapping modes determine what snap points in an object you can use. The table below includes descriptions of all available snapping modes.

Snapping mode	Description	Snapping mode indicator
Node	Lets you snap to an object's node	□
Intersection	Lets you snap to a geometric intersection of objects	◇
Midpoint	Lets you snap to a line segment midpoint	△
Quadrant	Lets you snap to points that are at 0°, 90°, 130°, and 270° on a circle, ellipse, or arc	⬡
Tangent	Lets you snap to a point on the outside edge of an arc, circle, or ellipse where a line will touch but not intersect the object	◌

Snapping mode	Description	Snapping mode indicator
Perpendicular	Lets you snap to a point on the outside edge of a segment where a line will be perpendicular to the object	┗
Edge	Lets you snap to a point that touches the edge of an object	⊹
Center	Lets you snap to the center of the closest object (arc, regular polygon, or curve centroid)	⊕
Text baseline	Lets you snap to a point in the baseline of artistic or paragraph text	◆

You can choose a number of snapping options. For example, you can disable some or all snapping modes to make the application run faster. You can also choose the distance from the pointer at which a snap point will become active by setting the snapping threshold.

To turn snapping on or off

- Click **View** ▶ **Snap to objects**.

  A check mark beside the **Snap to objects** command indicates that snapping is turned on.

  You can also press **Alt** + **Z** to toggle snapping on and off.

To snap objects

1 Select the object you want to snap to the target object.

2 Move the pointer over the object until the snap point you want becomes highlighted.

3 Drag the object close to the target object, and when the snap point you want becomes highlighted, release the mouse button.

To snap an object as you draw it, drag in the drawing window and release the mouse button when the snap point in the target object becomes highlighted.

To set snapping options

1   Click **View ▶ Snap to objects setup**.

2   In the **Snapping modes** area, enable one or more of the mode check boxes.

    If you want to enable all snapping modes, click **Select all**.

    If you want to disable all snapping modes, but without turning off snapping, click **Deselect all**.

3   Choose one of the following snapping options from the **Snapping threshold** list box:
    • **Low** — activates a snap point when it is four screen pixels away from the pointer
    • **Medium** — activates a snap point when it is eight screen pixels away from the pointer
    • **High** — activates a snap point when it is sixteen screen pixels away from the pointer

You can also

Display or hide snapping mode indicators	Enable or disable the **Show snap location marks** check box.
Display or hide screen tips	Enable or disable the **Screen tip** check box.

Using dynamic guides

You can display dynamic guides to help you precisely move, align, and draw objects relative to other objects. Dynamic guides are temporary guidelines that you can pull from the following snap points in objects — center, node, quadrant, and text baseline. For more information about snap points and snapping modes, see "Snapping objects" on page 84.

As you drag an object along a dynamic guide, you can view the object's distance from the snap point used to create the dynamic guide, and place the object precisely. You can use dynamic guides to place objects in relation to other objects as you draw them. You can also display intersecting dynamic guides and then place an object at the intersection point.
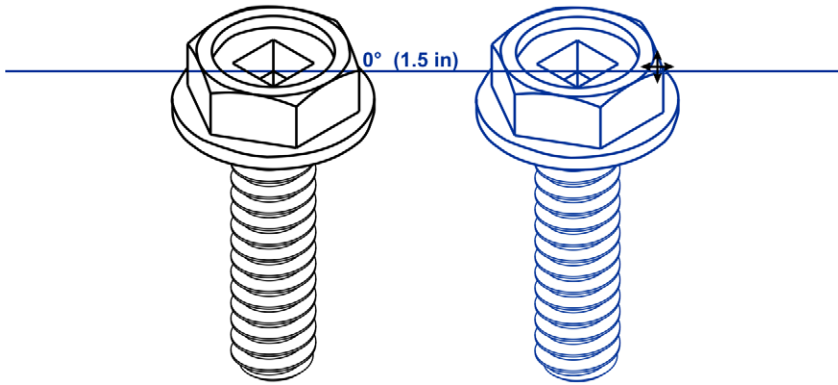
A dynamic guide was pulled from a node in the bolt on the left. The screen tip beside the node displays the angle of the dynamic guide(0º)and the distance between the node and the pointer (1.5"). The bolt on the right was dragged along the dynamic guide and positioned precisely 1.5 inches away from the node used to generate the dynamic guide.

Dynamic guides contain invisible divisions called ticks to which your pointer gravitates. Ticks let you move objects with precision along a dynamic guide. You can adjust tick spacing to suit your needs, and you can disable snapping to ticks. You can set other options for dynamic guides. For example, you can choose to display dynamic guides at one or more preset angles, or at custom angles you specify. A preview of the angle settings you choose is available. When you no longer need a dynamic guideline at a certain angle, you can delete the angle settings. You can also display dynamic guides that are extensions of line segments.
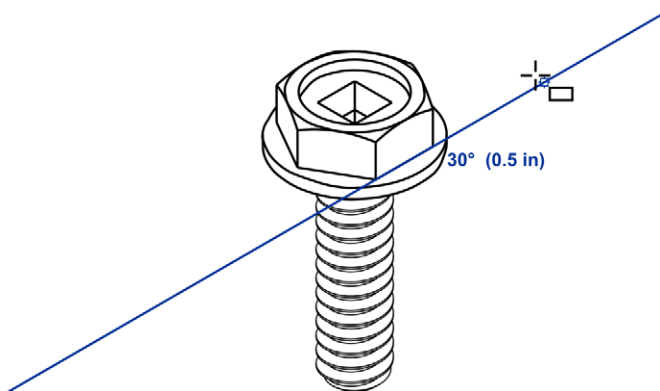
An example of a dynamic guide that is an extension of a line segment

You can turn off dynamic guides at any time.

To enable or disable dynamic guides

- Click **View** ▸ **Dynamic guides**.

A check mark beside the **Dynamic guides** command indicates that dynamic guides are enabled.

You can toggle dynamic guides on and off by clicking the **Dynamic guides** button on the property bar or by pressing **Shift+Alt+D**.

To display dynamic guides

1 With dynamic guides enabled, click a drawing tool.

2 Move the pointer over and then off an eligible snap point of an object.

3 Repeat step 2 with other objects to display other dynamic guides.

The snap points you point to are registered in a queue and are used to create dynamic guides.

The eligible snap points — node, center, quadrant, and text baseline snap points — display only when the corresponding snapping modes are activated. For more information about snap points and snapping modes, see "Snapping objects" on page 84.

To avoid displaying too many dynamic guides, you can clear the queue of points at any time by clicking in the drawing window or pressing **Esc**.

You can use the snap points you registered to display intersecting dynamic guides. To do this, you first display a dynamic guide and then move the pointer along the dynamic guide to where an intersecting dynamic guide would display from a registered snap point.

To place an object in relation to another object

1 With dynamic guides enabled, select an object.

If you want to move the object by a specific snap point, move the pointer over the snap point until the snap point becomes highlighted.

2 Drag the object to an eligible snap point of the target object.

3 When the snap point of the target object becomes highlighted, drag the object along the dynamic guide to position it.

To draw an object in relation to another object

1 With dynamic guides enabled, click a drawing tool.

2 Move the pointer over an eligible snap point of an object.

3 When the snap point becomes highlighted, move the pointer to display a dynamic guide.

4 Move the pointer along the dynamic guide to where you want, and drag to draw an object.

To place an object at the intersection of dynamic guides

1 With dynamic guides enabled, select an object.

If you want to move the object by a specific snap point, move the pointer over the snap point until the snap point becomes highlighted.

2 Drag the object to an eligible snap point of another object, and drag to display a dynamic guide. Don't release the mouse button.

3 Drag the object to another eligible snap point, and when the snap point becomes highlighted, drag to display another dynamic guide to where the two dynamic guides would intersect.

4 When the intersection point displays, release the mouse button.

Below is an example of using intersecting dynamic guidelines to position a washer in relation to two other objects — another washer and a bolt.
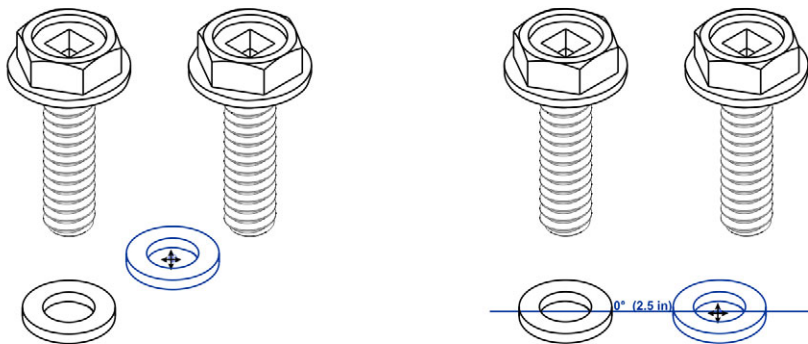
First, the washer was dragged by its center snap point (top left) to the other washer's edge, and then to the right to display a dynamic guide (top right).
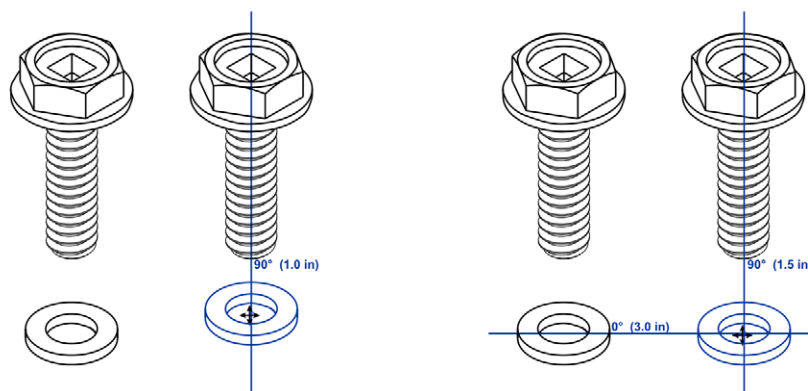
Next, the washer was dragged to the edge of the bolt, and then down to display another dynamic guide (top left). Last, the washer was positioned at the intersection point of the dynamic guides (top right).

To set dynamic guide options

1   Click **View ▶ Dynamic guides setup**.

2   Enable any of the following check boxes:
    • **Angle screen tip** — lets you display or hide the angle of dynamic guides
    • **Distance** — lets you display or hide the distance from the snap point, used to create the dynamic guide

3   Type a value in the **Tick spacing** box to change the distance between the invisible divisions on the dynamic guides.

4   In the **Guides** area, enable or disable the angle check boxes to choose the angles at which to create the dynamic guides.

When you enable an angle check box, a preview of the dynamic guide displays in the **Guides** preview window.

5   Enable the **Extend along segment** check box to create dynamic guides that are extension of line segments.

You can also	Do the following
Disable snapping to ticks	Disable the **Snap to ticks** check box.
Display a custom dynamic guide by specifying its angle	In the **Guides** area, type a value in the **Degrees** box, and click **Add**.
Delete angle settings	Click an angle check box in the list box, and click **Delete**.
Display dynamic guides at all available angles	Click **Select all**.

Changing the order of objects

You can change the stacking order of objects on a layer by sending objects to the front or back, or behind or in front of other objects. You can also position objects precisely in the stacking order, as well as reverse the stacking order of multiple objects.

To change the order of an object

1   Select an object.

2   Click **Arrange ▶ Order**, and click one of the following:
   • **To front** — moves the selected object to the front of all other objects
   • **To back** — moves the selected object behind all other objects
   • **Forward one** — moves the selected object forward one position
   • **Back one** — moves the selected object behind one position
   • **In front of** — moves the selected object in front of a specific object
   • **Behind** — moves the selected object behind a specific object

To reverse the order of multiple objects

1 Select the objects.

2 Click **Arrange ▸ Order ▸ Reverse order**.

Sizing and scaling objects

CorelDRAW lets you size and scale objects. In both cases, you change the dimensions of an object proportionally by preserving its aspect ratio. You can size an object's dimensions by specifying values or changing the object directly. Scaling changes an object's dimensions by a specified percentage.

You can change an object's anchor point from its center to any of its eight selection handles.

To size an object

To	Do the following
Size a selected object	Drag any of the corner selection handles.
Size a selected object from its center	Hold down **Shift**, and drag one of the selection handles.
Size a selected object to a multiple of its original size	Hold down **Ctrl**, and drag one of the selection handles.
Stretch a selected object as you size it	Hold down **Alt**, and drag one of the selection handles.

You can also set a precise size for the object by typing values in the **Object size** boxes on the property bar.

To scale an object

1 Select an object.

2 Click **Window ▸ Dockers ▸ Transformations ▸ Scale**.

3 In the **Transformations** docker, type values in the following boxes:
   • **H** — lets you specify a percentage by which you want to scale the object horizontally

- **V** — lets you specify a percentage by which you want to scale the object vertically

If you want to change the object's anchor point, enable the check box that corresponds to the anchor point you want to set.

If you want to maintain the aspect ratio, disable the **Non-proportional** check box.

You can also scale an object by dragging a selection handle.

Rotating and mirroring objects

CorelDRAW lets you rotate and create mirror images of objects. You can rotate an object by specifying horizontal and vertical coordinates. You can move the center of rotation to a specific ruler coordinate or to a point that is relative to the current position of the object.
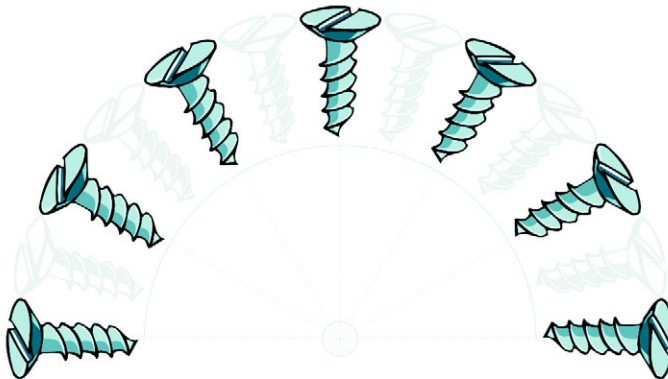
Rotating objects around a single point

Mirroring an object flips it from left to right or top to bottom. By default, the mirror anchor point is in the center of the object.
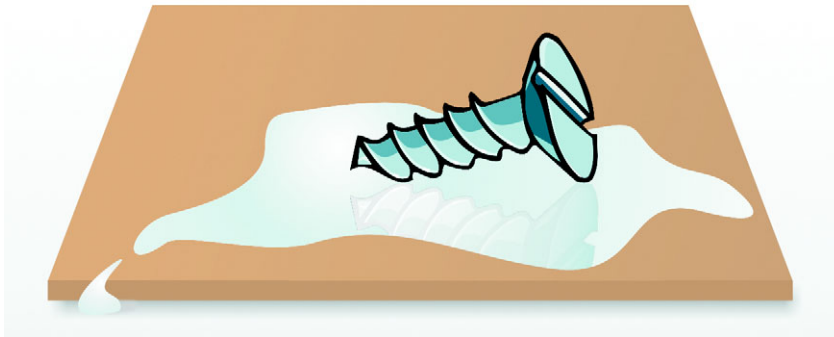
Mirroring an object from top to bottom

To rotate an object

1   Select an object.

2   Click **Window ▶ Dockers ▶ Transformations ▶ Rotate**.

3   Disable the **Relative center** check box in the **Transformations** docker.

   To rotate an object around a point relative to its current position, enable the **Relative center** check box.

4   Type a value in the **Angle** box.

You can also

Specify the point around which you want to rotate the object	Type values in the **H** and **V** boxes to specify the horizontal and vertical positions. Click **Apply**.

You can also rotate a selected object by dragging a rotation handle clockwise or counterclockwise.

To rotate an object around a ruler coordinate

1   Select an object.

2   Open the **Shape edit** flyout , and click the **Free transform** tool .

3   Disable the **Relative to object** button on the property bar.

4 Type values in any of the following **Center of rotation position** boxes:
   - **x** — lets you specify the point on the horizontal ruler around which the object will rotate
   - **y** — lets you specify the point on the vertical ruler around which the object will rotate

5 Type a value in the **Angle of rotation** box on the property bar.

6 Press **Enter**.

To mirror an object

1 Select an object.

2 Click **Window** ▶ **Dockers** ▶ **Transformations** ▶ **Scale**.

3 In the **Transformations** docker, click one of the following:
   - **Horizontal mirror** ⬛ — lets you flip the object left to right
   - **Vertical mirror** ⬛ — lets you flip the object top to bottom

   If you want to flip the object on a specific anchor point, enable the check box that corresponds to the anchor point you want to set.

4 Click **Apply**.

You can also mirror a selected object by holding down **Ctrl** and dragging a selection handle to the opposite side of the object.

You can open the **Transformations** docker by clicking **Arrange** ▶ **Transformations** and selecting an option from the flyout.

Grouping objects

When you group two or more objects, they are treated as a single unit. This lets you apply the same formatting, properties, and other changes to all the objects within the group at the same time. CorelDRAW also lets you group other groups to create nested groups.

You can also add and remove objects to and from a group and delete objects that are members of a group. If you want to edit a single object in a group, you can ungroup the objects.
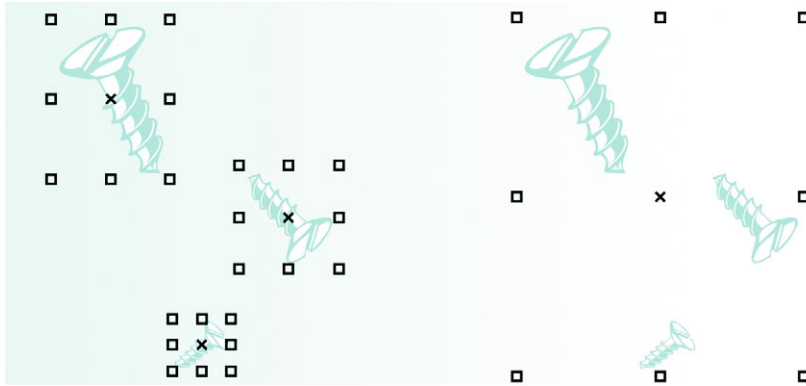
Single objects retain their attributes when they are grouped.

To group objects

1   Select the objects.

2   Click **Arrange ▸ Group**.

☜   You can select objects from different layers and group them; however, once grouped, the objects will reside on the same layer.

🔎   You can create a nested group, by selecting two or more groups of objects and clicking **Arrange ▸ Group.**

You can also group objects by clicking **Window ▸ Dockers ▸ Object manager**, and dragging an object's name in the **Object manager** docker over the name of another object.

To add an object to a group

1   Click **Window ▸ Dockers ▸ Object manager**.

2   In the **Object manager** docker, drag the name of the object to the name of the group you want to add it to.

To remove an object from a group

1   Click **Window ▸ Dockers ▸ Object manager**.

2 Double-click the name of the group in the **Object manager** docker.

3 Drag an object from the group to a position outside the group.

> If you're removing an object from a group, click the object in the object list, and drag it out of the group.

> If you want to delete an object that's in a group, select the object in the object list and click **Edit ▶ Delete**.

To ungroup objects

1 Select one or more groups.

2 Click **Arrange ▶ Ungroup**.

You can also ungroup all the nested groups in an object by clicking the **Ungroup all** button.

Combining objects

Combining two or more objects creates a single object with common fill and outline attributes. You can combine rectangles, ellipses, polygons, stars, spirals, graphs, or text. CorelDRAW converts these objects to a single curve object. If you need to modify the attributes of an object that is combined, you can break the combined object apart. You can extract a subpath from a combined object to create two separate objects. You can also weld two or more objects to create a single object. For information about welding objects, see "Welding and intersecting objects" on page 123.
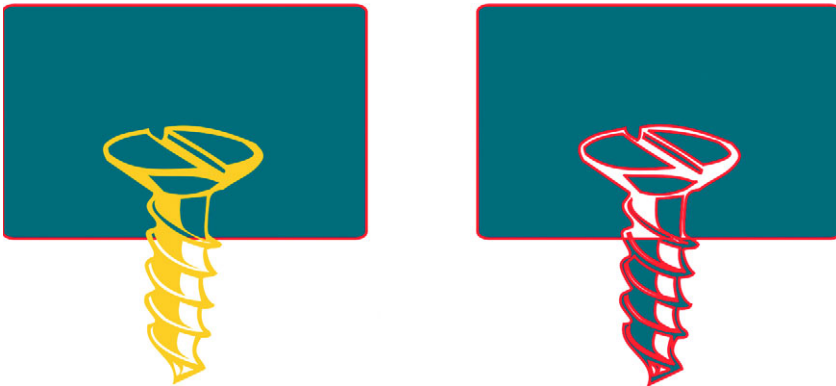
The two objects (left) are combined to create a single object (right). The new object has the properties of the last object selected before combining.

To combine objects

1 Select the objects.

2 Click **Arrange ▶ Combine**.

Combined text objects become larger blocks of text.

You can also combine selected objects by clicking the **Combine** button ⊕ on the property bar.

You can close open lines in a combined object by clicking **Arrange ▶ Close path**, and clicking a command.

To break apart a combined object

1 Select a combined object.

2 Click **Arrange ▶ Break curve apart**.

If you break apart a combined object that contains artistic text, the text breaks apart into lines first, then into words. Paragraph text breaks into separate paragraphs.

To extract a subpath from a combined object

1 Select a segment, node, or group of nodes on a combined object using the **Shape tool** 𝄖.

2 Click the **Extract subpath** button 🔧 on the property bar.

After you have extracted the subpath, the path's fill and outline properties are removed from the combined object.

From here

For more information about	In the Help index, see
Positioning an object using a different anchor point	positioning, using anchor points

Shaping objects

CorelDRAW lets you shape objects in various ways.

In this section, you'll learn about
- working with curve objects
- skewing and stretching objects
- smudging objects
- roughening objects
- applying distortion effects
- shaping objects using envelopes
- splitting and erasing portions of objects
- trimming objects
- welding and intersecting objects
- blending objects
- creating PowerClip objects

Working with curve objects

CorelDRAW lets you shape objects by manipulating their nodes and segments. An object's nodes are the tiny squares that display along the object's outline. The line between two nodes is called a segment. Moving an object's segments lets you make coarse adjustments to the object's shape, while changing the position of its nodes lets you fine-tune the shape of the object.

Most objects that are added to a drawing are not curve objects, with the exception of spirals and freehand and Bézier lines. Therefore, if you want to customize the shape of an object, it is recommended that you convert that object to a curve object. By converting objects to curves, you can shape them by adding, removing, positioning, as well as aligning and transforming their nodes.

Before you can manipulate an object's nodes, you must select them. When working with curve objects you can select individual, multiple, or all of the object's nodes. Selecting multiple nodes lets you shape different parts of an object simultaneously.

When you add nodes, you increase the number of segments, and therefore the amount of control you have over the shape of the object. You can also remove nodes to simplify an object's shape.

When you create an object, it is made up of one or multiple paths. If you are working on an open object, such as a freehand line, you can join its start and end nodes. When you join the start and end nodes, the two nodes are pulled together to create a closed object. You can add color to the inside of closed paths that you create. For information on applying fills, see "Filling objects" on page 141. If the paths consist of multiple subpaths, you can break paths apart to extract subpaths. For information on breaking paths apart see "Splitting and erasing portions of objects" on page 117.

After you create a curve object, you can align its nodes horizontally or vertically.

You can change the nodes on a curve object to one of four types: cusp, smooth, symmetrical, or line. Cusp nodes make the node's intersecting line take on the shape of a corner or point when you adjust the position of the node's control points. Smooth nodes make the node's intersecting line take on the shape of a curve. Each control point can be shortened or lengthened independently, giving you smaller or larger angles to work with. Symmetrical nodes make the node's intersecting line take on the shape of a curve as well as intersect the node at exactly the same angle. Line nodes let you shape objects by changing the shape of their segments. You can make a curve segment straight or a straight segment curved.
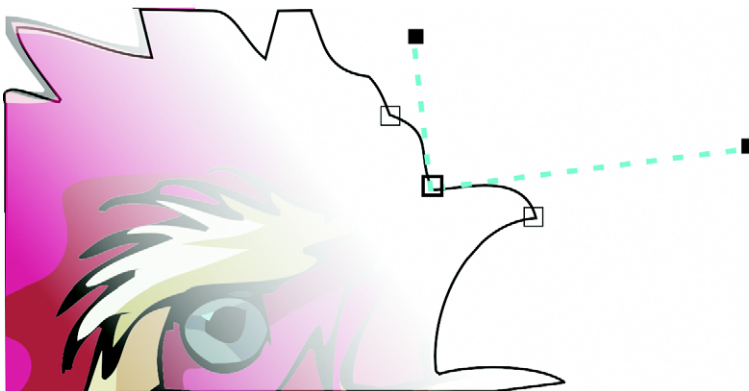
The components of a curve

You can also change the direction of a segment by reversing the position of its start and end nodes. The effect is transparent only when the ends of a segment are different.

You can also shape objects by stretching, scaling, rotating, and skewing their nodes. For example, you can scale the corner nodes of a curve object to enlarge the curve object proportionally. Stretching, on the other hand, elongates a curve object so that its shape is distorted. All or parts of a curve object can be rotated in a counterclockwise or clockwise direction. You can also skew nodes to shape a curve object.

To convert objects to curve objects

1   Select the object.

2   Click **Arrange ▶ Convert to curves**.

You can convert artistic text to curves so that you can shape individual characters.

You can also convert an object to a curve object by selecting the object and clicking the **Convert to curves** button ◯ on the property bar.

To select a node

1   Open the **Shape edit** flyout ‖ ⚲ ⚲ ⚲ ⚲ ⚲ ⚲ ‖, and click the **Shape** tool ⚲.

2   Select a curve object.

3   Click a node.

You can also

Select multiple nodes	Press **Shift**, and click each node.
Select all nodes on a selected curved	Click **Edit ▶ Select all ▶ Nodes**.
Deselect a node	Press **Shift**, and click a selected node.
Deselect multiple nodes	Press **Shift**, and click each selected node.
Deselect all nodes	Click a blank space in the drawing window.

When a curve is selected by using the **Shape** tool, you can select the first node in a curve object by pressing **Home**, or the last node by pressing **End**.

To add or remove a node

To	Do the following
Add a node	Open the **Shape edit** flyout ⎮↻ ◢ ◔ ◔ ✎ ↘ ✎⎮, click the **Shape** tool ↻, select a curve object, and double-click where you want to add a node.
Delete a node	Open the **Shape** edit flyout, click the **Shape** tool, select a curve object, and double-click a node.

⚡ You can also add a node on a selected line by opening the **Curve** flyout ⎮✐ ✑ ✐ ↘ ⓘ △ ↘ ▷⎮, clicking the **Pen** tool ◈, and clicking a point between any two nodes.

To join the end nodes of a single subpath

1 Open the **Shape edit** flyout ⎮↻ ◢ ◔ ◔ ✎ ↘ ✎⎮, and click the **Shape** tool ↻.

2 Click a subpath.

3 Click the **Auto-close curve** button ◔ on the property bar.

⚡ You can close multiple subpaths by clicking **Arrange ▶ Close path**. For more information, see "Closing multiple line segments" on page 54.

To join the nodes of multiple subpaths

1 Open the **Shape edit** flyout ⎮↻ ◢ ◔ ◔ ✎ ↘ ✎⎮, and click the **Shape** tool ↻.

2 Press **Shift**, and click a node from each subpath.

3 Click the **Extend curve to close** button ⓘ on the property bar.

✍ If you want to join nodes from separate curve objects, you must first combine them into a single curve object, and then join the end nodes of the new subpaths. For information about combining objects, see "Combining objects" on page 98.

To align nodes

1 Open the **Shape edit** flyout ⟦🔧 ♦ 🖊 ✏ ✎ ✂ ✐⟧, and click the **Shape** tool 🔧.

2 Select a curve object.

3 Press **Shift**, and select the nodes you want to align.

4 Click the **Align nodes** button ▦ on the property bar.

To make a curve cusp, smooth, or symmetrical

1 Open the **Shape edit** flyout ⟦🔧 ♦ 🖊 ✏ ✎ ✂ ✐⟧, and click the **Shape** tool 🔧.

2 Click a node.

3 On the property bar, click one of the following buttons:
   • **Make node a cusp** ⟋
   • **Make node smooth** ⟍
   • **Make node symmetrical** ⟋

🔆

> You can also change an existing node from one type to another using shortcut keys. To change a smooth node to a cusp node or a cusp node to a smooth node, click the node using the **Shape** tool and press **C**. To change a symmetrical node to a smooth node or a smooth node to a symmetrical node, click the node using the **Shape** tool and press **S**.

To manipulate a curve object's segments

1 Open the **Shape edit** flyout ⟦🔧 ♦ 🖊 ✏ ✎ ✂ ✐⟧, and click the **Shape** tool 🔧.

2 Select a curve object.

3 Drag a segment until it's the shape you want.

You can also

Straighten a curve segment	Click a curve segment, and click the **Convert curve to line** button ⟋ on the property bar.
Curve a straight segment	Click a straight segment, and click the **Convert line to curve** ⌐ button on the property bar.

You can also

Change the direction of the curve	Click a segment, and click the **Reverse curve direction** button ⟨ on the property bar.

To stretch, scale, rotate, or skew nodes

1   Open the **Shape edit** flyout ⟦ ⟨ ✎ ✎ ✎ ✎ ✎ ⟧, and click the **Shape** tool ⟨.

2   Select a curve object.

3   Select the nodes along the curve you want to transform.

4   On the property bar, click one of the following buttons:
    - **Stretch and scale nodes** ⊞
    - **Rotate and skew nodes** ⟳

5   Drag a set of handles to transform the nodes.

Skewing and stretching objects

You can skew and stretch objects in CorelDRAW. When you skew an object, you specify the degree by which you want to slant the object. Stretching changes an object's vertical and horizontal dimensions non proportionally.

CorelDRAW also lets you change the skew and sizing anchor point of an object from its default center position.

Skewing an object horizontally
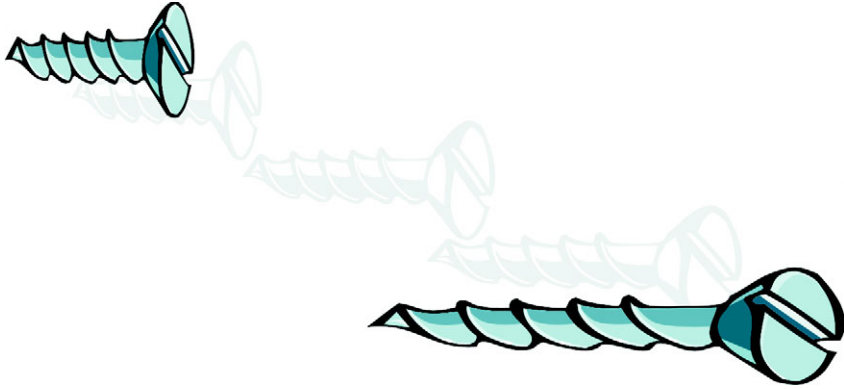
Stretching an object horizontally

To skew an object

1 Select an object.

2 Click **Arrange** ▶ **Transformations** ▶ **Skew**.

3 In the **Transformations** docker type a value in any of the following boxes:
   • **H** — lets you specify the number of degrees by which you want to skew the object horizontally
   • **V** — lets you specify the number of degrees by which you want to skew the object vertically

   If you want to change the object's anchor point, enable the **Use anchor point** check box, and enable the check box that corresponds to the anchor point you want to set.

4 Click **Apply**.

If you move the skew anchor point, you can reset it to the center again.

You can also skew an object interactively by dragging one of its skew handles.

To stretch an object

1 Select an object.

2 Click **Arrange** ▶ **Transformations** ▶ **Size**.

3   Enable the **Non-proportional** check box.

4   In the **Transformations** docker, type a value in the following boxes:
    - **H** — lets you specify the width of a selected object
    - **V** — lets you specify the height of a selected object

5   Click **Apply**.

The new values that you enter to stretch an object are the basis for a new ratio of the horizontal and vertical dimensions of the object. When you disable the **Non-proportional** check box, any resizing of the object is based on this new ratio. To revert the object to its original one-to-one proportions before transforming it again, you must disable the **Non-proportional** check box and then retype the original values.

You can stretch the sides of an object proportionally by disabling the **Non-proportional** check box, typing a value in either the **H** or **V** box, and pressing **Enter**.

You can also stretch an object from its center by pressing **Shift** and dragging a corner selection handle.

You can also stretch an object in increments of 100% by pressing **Ctrl**, and dragging a corner selection handle.

Smudging objects

Smudging lets you distort an object by dragging the outline of an object or a group of objects. When applying smudging to an object, you can control the extent and shape of the distortion whether you activate the controls for the graphics tablet stylus or use the settings that apply to a mouse.

The smudging effect responds to both the angle of rotation — or bearing — and the tilt angle of a graphics tablet stylus. Rotating the stylus changes the angle of the smudging effect and tilting the stylus flattens the brush tip and changes the shape of the smudging. If you are using a mouse, you can simulate the bearing and tilt of the stylus by specifying values. Increasing the bearing angle from 0 - 359° changes the angle of the brush stroke. As you decrease the tilt angle from 90° - 1°, you change the smudging shape by flattening the brush tip.

Smudging can respond to the pressure of a stylus on a tablet where the smudging widens with more pressure and narrows with less. If you are using a mouse or want to override stylus pressure, you can enter real values to simulate the pressure of a stylus on a graphics tablet. Negative values to -10 create a narrowing distortion, 0 maintains an even stroke width, and positive values to 10 create an expanding distortion.

Objects placed in the foreground and background have been shaped by outside smudging (sun's rays and blades of grass) and inside smudging (clouds).

Whether you are using a stylus or a mouse, you must specify the nib size. The nib size determines the width of the smudging applied to an object.

You can apply the smudging effect to the inside and outside of an object.

To smudge an object

1   Select an object using the **Pick** tool ![icon].

2   Open the **Shape edit** flyout ![icons], and click the **Smudge brush** tool ![icon].

3   Drag around the outline to distort it.

You can also

Change the size of the brush nib	Type a value in the **Size of the nib** box ![icon] 0.1 " on the property bar.
Change the size of the brush nib when using the graphics stylus	Click the **Use stylus pressure** button ![icon] on the property bar and apply pressure to the stylus.

You can also

Widen or narrow the smudging	Type a value between -10 and 10 in the **Add dry out to the effect** box ✎ 0 ⏷ on the property bar.
Specify the shape of the smudging	Type a value between 1 and 90 in the **Enter a fixed value for tilt settings** box ✎ 45.0° ⏷ on the property bar.
Change the shape of the smudging when using the graphics stylus	Click the **Use stylus tilt** button ✎ on the property bar.
Specify the angle of the nib shape for smudging	Type a value between 0 and 359 in the **Enter a fixed value for bearing settings** box ✎ 0.0° ⏷ on the property bar.
Change the angle of the nib shape for smudging when using the graphics stylus	Click the **Use stylus bearing** button ✎ on the property bar.
Smudge the inside of an object	Click the outside of an object and drag inwards.
Smudge the outside of an object	Click the inside of an object an drag outwards.

✍ You cannot apply smudging to Internet or embedded objects, linked images, grids, masks, mesh-filled objects, or objects with blend and contour effects.

💡 To get the minimum and maximum values for the smudging controls, right-click the control on the property bar and click **Settings**.

Roughening objects

The roughening effect lets you apply a jagged or spiked edge to objects, including lines, curves, and text. You can control the size, angle, direction, and number of the indentations whether you activate the graphics tablet stylus or apply settings to a mouse.

The roughening effect is determined either by movements of a graphics tablet stylus, by fixed settings, or by automatically applying perpendicular spikes to the line. Tilting

the stylus toward and away from the tablet's surface increases and decreases the size of the spikes. If you are using a mouse, you can specify the tilt angle from 1 - 90°. You can determine the direction of the spikes by changing the angle of rotation (or bearing) of the stylus as you apply the roughening effect to an object. When you are using a mouse, you can set the bearing angle from 0 - 359°. You can also increase or decrease the number of spikes that are applied as you drag.

The roughening effect also responds to the pressure of the stylus on the tablet. The more pressure you apply, the more spikes are created in the roughened area. If you are using a mouse, you can specify values to simulate the stylus pressure.

You can also change the brush nib size.

Roughening allows you to apply jags or spikes to part of an outline or path.
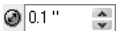
To roughen an object

1   Select an object using the **Pick** tool ▷.

2   Open the **Shape edit** flyout ⟨icons⟩, and click the **Roughen brush** tool ⟨icon⟩.

3   Point to the area on the outline you want to roughen, and drag the outline to distort it.

You can also

Specify the size of the roughening spikes	Type a value from .01" to 2" in the **Size of the nib** box ⊚ 0.1 "⇕ on the property bar.

You can also

Change the number of spikes in a roughened area	Type a value between 1 and 10 in the **Enter a value for frequency of spikes** box ✍ 1 ⬍ on the property bar.
Change the number of spikes in a roughened area when using a graphics stylus	Click the **Use stylus pressure** button ✍ on the property bar.
Specify the height of the roughening spikes	Type a value between 1 and 90 in the **Enter a fixed value for tilt settings** box ✍ 45.0° ⬍ on the property bar.
Increase the number of roughening spikes as you drag	Type a value between -10 and 10 in the **Add dry out to the effect** box ✍ 0 ⬍ on the property bar.
Change the height of the roughening spikes when using a graphics stylus	Click the **Use stylus tilt** button ✍ on the property bar.
Specify the direction of the roughening spikes	Choose **Fixed direction** from the **Spike direction** list box. Type a value between 0 and 359 in the **Enter a fixed value for bearing settings** box 0.0° ⬍ on the property bar.
Change the direction of the roughening spikes when using a graphics stylus	Choose **Stylus setting** from the **Spike direction** list box on the property bar.
Create roughening spikes perpendicular to the path or outline	Choose **Auto** from the **Spike direction** list box on the property bar.

☞ Objects with distortions, envelopes, and perspective applied to them are converted to curve objects before the roughening effect is applied.

✍ To make the tilt angle and bearing angle responsive to the graphics tablet stylus, right-click the roughened object, and select a command from the submenu.

To get the minimum and maximum values for the roughening controls, right-click the control on the property bar, and click **Settings**.

Applying distortion effects

You can apply three types of distortion effects to shape objects.

Distortion effect	Description
Push and pull	Lets you push the edges of an object in or pull the edges of an object out
Zipper	Lets you apply a saw tooth effect to the edges of the object. You can adjust the amplitude and frequency of the effect.
Twister	Lets you rotate an object to create a swirl effect. You can choose the direction of the swirl, as well as the origin, degree, and amount of rotation.

After you distort an object, you can change the effect by altering the center of distortion. This point is identified by a diamond-shaped handle, around which a distortion appears. It is similar to a mathematical compass, where the pencil moves around a stationary point. You can place the center of distortion anywhere in the drawing window, or choose to center it in the middle of an object so that the distortion is distributed evenly and the shape of the object changes in relation to its center.

You can create an even more dramatic effect by applying a new distortion to an already distorted object. You don't lose the effect of the original distortion if, for example, you apply a zipper distortion on top of a twister distortion. The CorelDRAW application also lets you remove and copy distortion effects.

To distort an object

1 Open the **Interactive tool** flyout, and click the **Interactive distortion** tool.

2 On the property bar, click one of the following buttons, and specify the settings you want:
   • **Push and pull distortion**
   • **Zipper distortion**
   • **Twister distortion**

3 Point to where you want to place the center of distortion, and drag until the object is the shape you want.

You can also

Change the center of distortion	Drag the diamond-shaped position handle to a new location.
Adjust the number of points on a zipper distortion	Move the slider on the center of the distortion handle.
Apply more than one distortion to an object	Click another distortion type on the property bar, click an object, and drag.

You can reapply the effects to distorted objects.

You can center a distortion by clicking the **Center distortion** button on the property bar.

To remove a distortion

1   Select a distorted object.

2   Click **Effects ▶ Clear distortion**.

Removing a distortion this way clears the most recent distortion you've applied.

You can also remove a distortion from a selected object by clicking the **Clear distortion** button on the property bar.

To copy a distortion

1   Select the object to which you want to copy a distortion.

2   Click **Effects ▶ Copy effect ▶ Distortion from**.

3   Click a distorted object.

You can also use the **Eyedropper** tool to copy the effect. For more information, see "To copy effects from one object to another object" on page 80.

Shaping objects using envelopes

CorelDRAW lets you shape objects, including lines, artistic text, and paragraph text frames by applying envelopes to them. Envelopes are made of multiple nodes that you can move to shape the envelope and, as a result, change the shape of the object. You can apply a basic envelope that conforms to the shape of an object, or you can also apply a preset envelope. After you apply an envelope, you can edit it or add a new envelope to continue changing the object's shape. CorelDRAW also lets you copy and remove envelopes.

You can edit an envelope by adding and positioning its nodes. Adding nodes gives you more control over the shape of the object contained in the envelope. CorelDRAW also lets you delete nodes, move multiple nodes simultaneously, change nodes from one type to another, and change a segment of an envelope to a line or curve. For more information about the different types of nodes, see "Working with curve objects" on page 101.

You can also change the mapping mode of an envelope to specify how the object fits to the envelope. For example, you can stretch an object to fit the basic dimensions of the envelope, and then apply the horizontal mapping mode to compress it horizontally so that it fits the shape of the envelope.

To apply an envelope

1   Select an object.

2   Open the **Interactive tools** flyout ⌗▤▨◫⌗▣▨, and click the **Interactive envelope** tool ▨.

3   On the property bar, click one of the following buttons:
    - **Envelope straight line mode** ◿ — creates envelopes based on straight lines, adding perspective to objects
    - **Envelope single arc mode** ◿ — creates envelopes with an arc shape on one side, giving objects a concave or convex appearance
    - **Envelope double arc mode** ◿ — creates envelopes with an S shape on one or more sides
    - **Envelope unconstrained mode** ⌒ — creates freeform envelopes, that let you change the properties of the nodes, and add and delete the nodes

4   Click the object.

5   Drag the nodes to shape the envelope.

    If you want to reset the envelope, press **Esc** before releasing the mouse.

You can also

Apply a preset envelope	Click the **Add preset** button on the property bar, and click an envelope shape.
Apply an envelope to an object with an envelope	Click the **Add new envelope** button 🔳 on the property bar, and drag the nodes to change the shape of the envelope.
Remove an envelope	Click **Effects ▶ Clear envelope**.

You can prevent the object's straight lines from being converted to curves by enabling the **Keep lines** button 🔳 on the property bar.

To copy an envelope

1 Select an object to which you want to copy an envelope.

2 Click **Effects ▶ Copy effect ▶ Envelope from**.

3 Select the object from which you want to copy the envelope.

You can also copy an envelope by selecting an object, clicking the **Copy envelope properties** button on the property bar, and selecting an object with the envelope you want to copy.

You can also use the **Eyedropper** tool 🔳 to copy an envelope. For more information, see "To copy effects from one object to another object" on page 80.

To edit an envelope's nodes and segments

1 Open the **Interactive tools** flyout 🔳, and click the **Interactive envelope** tool 🔳.

2 Select an object with an envelope.

3 Double-click the envelope to add a node or double-click a node to delete it.

You can also

Move several envelope nodes at once	Click the **Envelope unconstrained mode** button ⟋ on the property bar, marquee select the nodes you want to move, and drag any node to a new position.
Move opposing nodes an equal distance in the same direction	Press **Shift**, select two opposing nodes, and drag them to a new position.
Move opposing nodes an equal distance in the opposite direction	Click the **Envelope single arc mode** ◿ or **Envelope double arc mode** ◿ button on the property bar so that it appears raised, press **Shift**, and drag one of the nodes to a new position.
Change an envelope node type	Click the **Envelope unconstrained mode** button on the property bar so that it appears pressed, and click either the **Make node a cusp** ⋏, the **Make node smooth** ⋏, or the **Make node symmetrical** ⋏ button.
Change an envelope segment to a straight line or curve	Click the **Envelope unconstrained mode** button on the property bar so that it appears pressed, click a line segment, and click the **Convert curve to line** ╱ button or the **Convert line to curve** ⌒ button.

Splitting and erasing portions of objects

You can split a bitmap or vector object in two and reshape it by redrawing its path. You can split a closed object along a straight or jagged line. CorelDRAW lets you choose between splitting an object into two objects, or leaving it as one object composed of two or more subpaths. You can specify whether you want to close paths automatically or keep them open.

CorelDRAW lets you erase unwanted portions of bitmaps and vector objects. Erasing automatically closes any affected paths and converts the object to curves. If you erase connecting lines, CorelDRAW creates subpaths rather than individual objects. You can also delete portions of objects, called virtual line segments, that are between intersections.
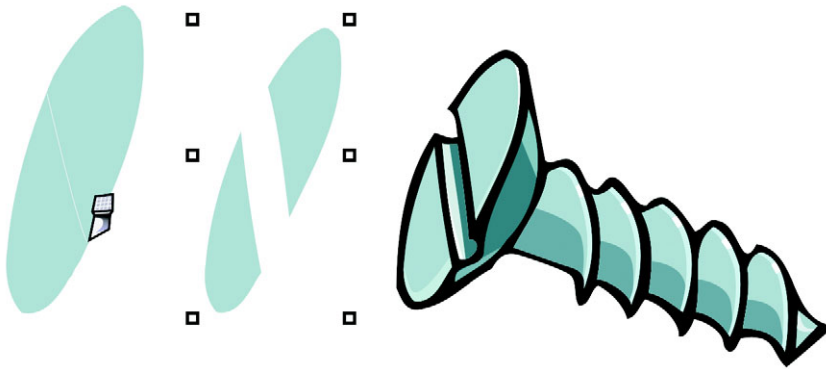
The Knife tool creates two separate objects by cutting the ellipse in half (left).
The two objects are separated and used to form the top of the screw (right).

To split an object

1 Open the **Shape edit** flyout , and click the **Knife** tool .

2 Position the **Knife** tool over the object's outline where you want to start cutting.

   The **Knife** tool snaps upright when positioned properly.

3 Click the outline to start cutting.

4 Position the **Knife** tool where you want to stop cutting, and click again.

You can also

Split an object along a freehand line	Point to where you want to start the cut, and drag to where you want it to end.
Split an object along a Bézier line	Press **Shift**, click where you want to start cutting an object, and click each time you want to change the direction of the line. If you want to constrain the line by 15-degree increments, press **Shift + Ctrl**.
Split an object into two subpaths	Click the **Leave as one object** button on the property bar.

By default, objects are split into two objects and paths are automatically closed.

When you use the **Knife** tool on a selected object, the object becomes a curve object.

To break a path

To	Do the following
Break a path	Open the **Shape edit** flyout ⟦🖊 ✏ ✎ ✐ ✑ ✒⟧, and click the **Shape** tool 🖊. Select a node on the path, and click the **Break curve** button ▸◂ on the property bar.
Extract a broken path from an object	Open the **Shape edit** flyout, and click the **Shape** tool. Right-click a path, and click **Break apart**. Select a segment, node, or group of nodes that represents the portion of the path you want to extract, and click the **Extract subpath** button ⟦⟧ on the property bar.

To erase portions of an object

1   Select an object.

2   Open the **Shape edit** flyout ⟦🖊 ✏ ✎ ✐ ✑ ✒⟧, and click the **Eraser** tool 🖉.

3   Drag over the object.

You can also

Change the size of the eraser nib	Type a value in the **Eraser thickness** box on the property bar, and press **Enter**.
Change the shape of the eraser nib	Click the **Circle/square** button on the property bar.
Maintain all the nodes of the area being erased	Disable the **Auto-reduce on erase** button on the property bar.

When you erase portions of objects, any affected paths are automatically closed.

You can erase straight lines by clicking where you want to start erasing, and then clicking where you want to finish erasing. Press **Ctrl** if you want to constrain the line's angle.

You can also erase an area of a selected object by double-clicking the area with the **Eraser** tool.

To delete a virtual line segment

1 Open the **Shape edit** flyout ⌈ ⟨⟩⟨⟩⟨⟩⟨⟩⟨⟩⟨⟩ ⌉, and click the **Virtual segment delete** tool ⟨⟩.

2 Move the pointer to the line segment you want to delete.

   The **Virtual segment delete** tool snaps upright when positioned properly.

3 Click the line segment.

   If you want to delete multiple line segments at one time, click the pointer to drag a marquee around all line segments you want to delete.

The **Virtual segment delete** tool does not work on linked groups such as drop shadows, text, or images.

Trimming objects

Trimming creates irregularly shaped objects by removing object areas that overlap. You can trim almost any object, including clones, objects on different layers, and single objects with intersecting lines. However, you cannot trim paragraph text, dimension lines, or masters of clones.

Before you trim objects, you must decide which object you want to trim (the target object) and which object you want to use to perform the trimming (the source object). For example, if you want to create a star-shaped cut out of a square object, the star is the source object because you are using it to trim the square. The square is the target object because it's the object you want to trim. The source object trims the part of the target object it overlaps.

The target object retains its fill and outline attributes. For example, if you trim a rectangle that is overlapped by a circle, the area of the rectangle that was covered by the circle is removed, creating an irregular shape.

CorelDRAW lets you trim objects in different ways. You can use a front object as the source object to trim an object behind it, as well as use the back object to trim a front object. You can also remove hidden areas of overlapping objects, so that only the visible areas remain in the drawing. Removing the hidden areas can reduce file size when you convert vector graphics to bitmaps.
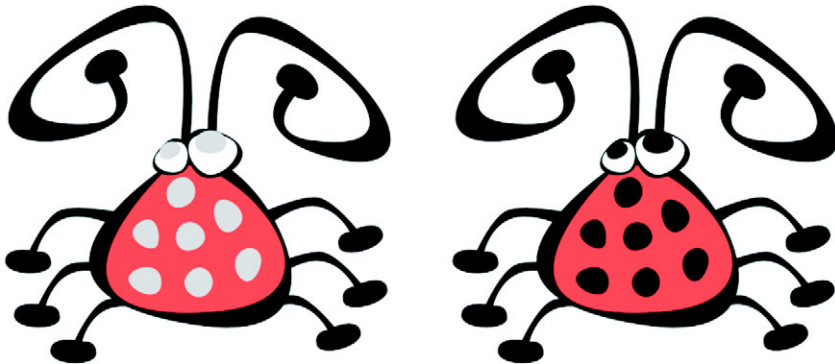
Trimming can be used to reduce the number of objects in a drawing. Instead of adding eyes and spots to the bug, areas (shown on the left in gray) are trimmed to reveal the black background (right).

The letter "A" is the front object used to trim the back object. A partial silhouette of the letter is created in the logo (right).

To trim an object

1   Select the source objects.

2 Hold down **Shift** and click the target object.

3 Click **Arrange ▸ Shaping ▸ Trim**.

👆 If you marquee select the objects, CorelDRAW trims the bottom-most selected object. If you select multiple objects individually, the last object selected is trimmed.

🔍 You can also trim objects by marquee selecting the source and target objects and clicking the **Trim** button 🗗 on the property bar.

To trim front and back objects

1 Marquee select the source and target objects.

2 Click **Arrange ▸ Shaping**, and click one of the following:
   • **Back minus front** — removes the front object from the back one
   • **Front minus back** — removes the back object from the front one

👆 You can trim the control object of a PowerClip object so that the object inside the PowerClip object will assume the new shape of the PowerClip container. For information about PowerClip objects, see "Creating PowerClip objects" on page 130.

Linked objects such as drop shadows, text on a path, artistic media, blends, contours, and extrusions are converted to curve objects before they are trimmed.

To trim overlapping areas among objects

1 Marquee select the objects you want to trim.

2 Click **Arrange ▸ Shaping ▸ Simplify**.

👆 You can trim the control object of a PowerClip object, so that the object inside the PowerClip object assumes the new shape.

Linked objects, such as drop shadows, text on a path, artistic media, blends, contours, and extrusions, are converted to curve objects before they are trimmed.

Welding and intersecting objects

You can create irregular shapes by welding and intersecting objects. You can weld or intersect almost any object, including clones, objects on different layers, and single objects with intersecting lines. However, you cannot weld or intersect paragraph text, dimension lines, or masters of clones.

You can weld objects to create one object with a single outline. The new object uses the welded objects' perimeter as its outline and adopts the fill and outline properties of the target object. All intersecting lines disappear.

You can weld objects regardless of whether they overlap each other. If you weld objects that do not overlap, they form a weld group that acts as a single object. In both cases, the welded object takes on the fill and outline attributes of the target object.

You can weld single objects with intersecting lines so that the object breaks into several subpaths, but its appearance remains the same.
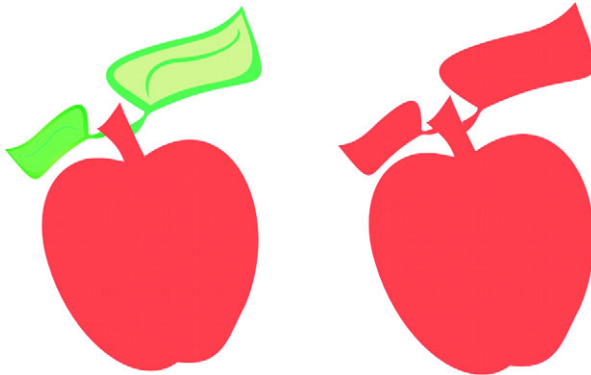
Welding the leaves to the apple creates a single object outline.

Intersecting creates an object from the area where two or more objects overlap. The shape of this new object can be simple or complex, depending on the shapes you intersect. The new object's fill and outline attributes depend on the object you define as the target object.

To weld an object

1   Select the source object or objects.

2   Hold down **Shift**, and click the target object.

3   Click **Arrange** ▶ **Shaping** ▶ **Weld**.

You can also weld objects by marquee-selecting the source and target objects and clicking the **Weld** button on the property bar.

To intersect objects

1   Select the source object.

2   Hold down **Shift**, and select the target object.

3   Click **Arrange** ▶ **Shaping** ▶ **Intersect.**

You can also intersect objects by selecting the source and target objects and clicking the **Intersect** button on the property bar.

To intersect multiple objects

1   Marquee select the source object or objects.

2   Hold down **Shift**, and click each target object.

3   Click **Arrange** ▶ **Shaping** ▶ **Intersect**.

You can also intersect objects by marquee-selecting the source and target objects and clicking the **Intersect** button on the property bar.

Blending objects

CorelDRAW lets you create blends, such as straight-line blends, blends along a path, and compound blends.

A straight-line blend shows a progression in shape and size from one object to another. The outline and fill colors of the intermediate objects progress along a straight-line path across the color spectrum. The outlines of intermediate objects show a gradual progression in thickness and shape.

After you create a blend, you can copy or clone its settings to other objects. When you copy a blend, the object takes on all the blend-related settings, except for their outline and fill attributes. When you clone a blend, changes you make to the original blend (also called the master) are applied to the clone.
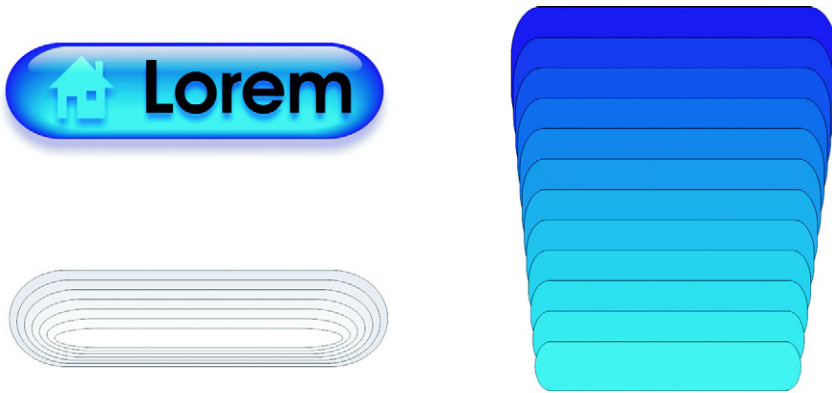
Straight-line blends can be used to create graphics with a glass-like appearance. The rollover button (left) contains a blend of tightly overlapped blended objects.

You can fit objects along part or all of a path's shape, and you can add one or more objects to a blend to create a compound blend.
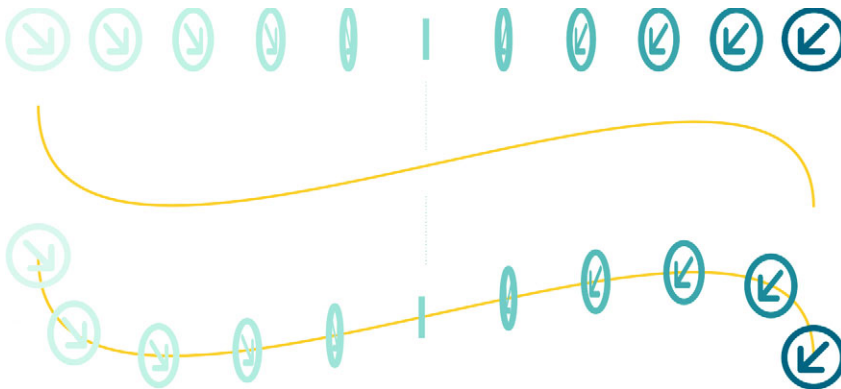
The straight-line blend (top) is fitted to a curved path (bottom).

You can change the appearance of a blend by adjusting the number and spacing of its intermediate objects, the blend's color progression, the nodes the blends map to, the blend's path, and the start and end objects. You can fuse the components of a split or compound blend to create a single object.

This compound blend consists of three blends.

You can also split and remove a blend.

By mapping nodes, you can control the appearance of a blend. Four nodes on the arrow are mapped to the four corners of a square, showing a more gradual transition (bottom).

To blend objects

To	Do the following
Blend along a straight line	Open the **Interactive tools** flyout ⏍, and click the **Interactive blend** tool ⏍. Select the first object, and drag over the second object. If you want to reset the blend, press **Esc** as you drag.
Blend an object along a freehand path	Open the **Interactive tools** flyout, and click the **Interactive blend** tool. Select the first object. Hold down **Alt** and drag to draw a line to the second object.
Fit a blend to a path	Open the **Interactive tools** flyout, and click the **Interactive blend** tool. Click the blend. Click the **Path properties** button ⏍ on the property bar. Click **New path**. Using the curved arrow, click the path to which you want to fit the blend.
Stretch the blend over an entire path	Select a blend that is already fitted on a path. Click the **Miscellaneous blend options** button ⏍ on the property bar, and enable the **Blend along full path** check box.
Create a compound blend	Using the **Interactive blend** tool, drag from an object to the start or end object of another blend.

To copy or clone a blend

1   Select the two objects you want to blend.

2   Click **Effects**, and click one of the following:
    • **Copy effect ▶ Blend from**
    • **Clone effect ▶ Blend from**

3   Select the blend whose attributes you want to copy or clone.

You can't copy or clone a compound blend.

You can also use the **Eyedropper** tool ✐ to copy a blend. For more information, see "To copy effects from one object to another object" on page 80.

To set the distance for intermediate objects in a blend fitted to a path

1   Select a blend.

2   Click the **Use steps or fixed spacing for blend** button ⊞ on the property bar.

3   Type a value in the **Number of steps or offset between blend shapes** box on the property bar.

4   Press **Enter**.

You can set object and color acceleration rates by clicking the **Object and color acceleration** button ⊡ on the property bar and moving the corresponding slider.

To set the color progression for intermediate objects in a blend

1   Select a blend.

2   On the property bar, click one of the following:
    • **Direct blend** ⊕
    • **Clockwise blend** ⊕
    • **Counterclockwise blend** ⊕

You can't create color progressions using blended objects filled with bitmaps, texture, pattern, or PostScript fills.

You can set how fast the object's colors transform from the first to the last object by clicking the **Object and color acceleration** button ⊡ on the property bar and moving the corresponding sliders.

To map the nodes of a blend

1   Select a blend.

2   Click the **Miscellaneous blend options** button ⊞ on the property bar.

3   Click the **Map nodes** button on the property bar.

4   Click a node on the start object and on the end object.

To work with the start or end objects in a blend

To	Do the following
Select the start or end object	Select a blend, click the **Start and end object properties** button 🔧 on the property bar, and click **Show start**, or **Show end**.
Change the start or end object of a blend	Select a blend, click the **Start and end object properties** button on the property bar, and click **New start**, or **New end**. Click an object outside the blend that you want to use as the start or end of the blend.
Fuse the start or end object in a split or compound blend	Hold down **Ctrl,** click a middle object in a blend, and then click a start or end object. Click the **Miscellaneous options** button 🔧 on the property bar. If you have selected the start object, click the **Fuse start** button 🔧. If you have selected the end object, click the **Fuse end** button 🔧.

🔆

You can reverse the direction of the blend by clicking **Arrange ▶ Order ▶ Reverse order**.

To change the blend path

1   Select a blend.

2   Click the **Path properties** button ⤵ on the property bar, and click **New path**.

3   Click the path you want to use for the blend.

You can also

Detach a blend from a path	Click the **Path properties** button ⤵ on the property bar, and click **Detach from path**.

You can also

Change the path of a selected freehand blend	Click the blend path with the **Shape** tool ⟨🔧⟩, and drag a path's node.

⟨💡⟩ To select the blend path, click the **Path properties** button and click **Show path**.

To split a blend

1 Select a blend.

2 Click the **Miscellaneous options** button ⟨🔧⟩ on the property bar.

3 Click the **Split** button ⟨🔧⟩.

4 Click the intermediate object at the point at where you want to split the blend.

⟨✋⟩ You can't split a blend at the intermediate object that is immediately adjacent to the start or end object.

To remove a blend

1 Select a blend.

2 Click **Effects ▶ Clear blend**.

⟨💡⟩ You can also remove a selected blend by clicking the **Clear blend** button ⟨🔧⟩ on the property bar.

Creating PowerClip objects

CorelDRAW lets you place vector objects and bitmaps, such as photos, inside other objects, or containers. A container can be any object, for example artistic text or a rectangle. When you place an object into a container that is larger than the container, the object, called the content, is cropped to fit the form of the container. This creates a PowerClip object.

Objects before becoming a PowerClip object: artistic text and a bitmap

You can create more complex PowerClip objects by placing one PowerClip object inside another PowerClip object to produce a nested PowerClip object. You can also copy the contents of one PowerClip object to another PowerClip object.

In the PowerClip object, the artistic text is the container, and the bitmap forms the contents. The bitmap is shaped to the letters of the artistic text.

After you create a PowerClip object you can modify the content and the container. For example, you can lock the content, so that when you move the container, the content moves with it. CorelDRAW also lets you extract the content from a PowerClip object, so that you can delete the content or modify it without affecting the container.

To create a PowerClip object

1 Select an object.
2 Click **Effects ▶ PowerClip ▶ Place inside container**.
3 Click the object you want to use as the container.

If you want to create a nested PowerClip object, hold down the right mouse button, drag the PowerClip object inside a container, and click **PowerClip inside**.

To copy the content of a PowerClip object

1 Select an object.
2 Click **Effects ▶ Copy effect ▶ PowerClip from**.
3 Click a PowerClip object.

To edit the content of a PowerClip object

1 Select a PowerClip object.
2 Click **Effects ▶ PowerClip ▶ Edit contents**.
3 Edit the contents of the PowerClip object.
4 Click **Effects ▶ PowerClip ▶ Finish editing this level**.

While you edit, the container displays in Wireframe mode and cannot be selected.

To lock or unlock the content of a PowerClip object

• Right-click a PowerClip object, and click **Lock contents to PowerClip**.

From here

For more information about	In the Help index, see
Changing the mapping mode of an envelope	envelopes, changing mapping modes
Extracting the content of a PowerClip object	PowerClip objects, extracting contents

Working with symbols

The CorelDRAW application lets you create objects and save them as symbols. Symbols are defined once and can be referenced many times in a drawing. Each time you insert a symbol into a drawing, you create an instance of the symbol. Symbol definitions, as well as information about instances, are stored in a symbol manager, which is part of the CorelDRAW (CDR) file. Using symbols for objects that appear many times in a drawing helps to reduce file size.

In this section, you'll learn about

- creating, editing, and deleting symbols
- using symbols in drawings
- managing collections and libraries
- sharing symbols between drawings

For information about modifying symbol instances and about unsupported object types, see "Reference: Working with symbols" in the Help.

The term "symbol," as it was used in earlier versions of CorelDRAW, has been replaced by "special character" in CorelDRAW 12. For more information about working with special characters, see "Embedding graphics and adding special characters" on page 232.

Creating, editing, and deleting symbols

Symbols are objects that are defined once and can be referenced many times in a drawing. You can have multiple instances of a symbol in a drawing with little impact on file size. Symbols make editing a drawing quicker and easier, as changes made to a symbol are automatically inherited by all instances.

Symbols are created from objects. When you convert an object to a symbol, the new symbol is added to the **Symbol manager**, and the selected object becomes an instance. You can also create a symbol from multiple objects. You can edit a symbol; any changes you make affect all instances in a drawing. The selection handles for symbols differ from

those for objects. Selection handles for symbols are blue; selection handles for objects are black. You can also delete a symbol instance and purge unused symbol definitions. Purging removes all symbol definitions that are not instanced in a drawing.

Using symbols for objects that appear many times helps to reduce file size.

To convert an object to a symbol

1   Select an object or multiple objects.

2   Click **Edit ▶ Symbol ▶ New symbol**.

Symbols cannot span layers. If you convert objects on different layers to a symbol, the objects are combined on the topmost object's layer. For more information about layers, see "Working with layers" on page 205.

You can also convert an existing object or objects to a symbol by dragging the object or objects to the **Symbol manager** docker.

To make a linked symbol internal

1   Select a symbol.

2   Click **Edit ▶ Symbol ▶ Break link**.

If other instances of the symbol are in the drawing, you are given the choice to break links to all instances. If you do, the internal symbol will then apply to all the instances.

You can also make a linked symbol internal by right-clicking a symbol and choosing **Break link**.

To edit a symbol

1   In the **Symbol manager** docker, choose a symbol from the **Symbols** list.

If you want to name or rename the symbol, double-click the symbol's name box, and type a name.

2   Click the **Edit symbol** button.

3   Modify the objects on the drawing page.

4   Click the **Finish editing object** tab in the bottom-left corner of the drawing window.

Changes made to a symbol are automatically made to all instances in the active drawing.

While working in symbol edit mode, you cannot add layers or save a drawing.

You can also edit a symbol by selecting an instance in the drawing window, and clicking the **Edit symbol** button on the property bar or holding down **Ctrl** and clicking a symbol.

While editing a symbol, you can insert an instance of another symbol, which creates a nested symbol. You cannot, however, insert an instance of the same symbol.

To edit a linked symbol

1   Click **File ▶ Open**.

2   Choose the drive and folder where the library is stored.

3   Click a library filename.

Library files have a **.csl** filename extension.

4   Click **Open**.

5   In the **Symbol manager** docker, click the active document, and choose a symbol from the **Symbols** list.

If you want to rename the symbol, click the name again, and type a new name.

6   Click the **Edit symbol** button ▨.

7   Modify the objects on the drawing page.

8   Click the **Finish editing object** tab in the bottom-left corner of the drawing window.

9   Click **File ▸ Save**.

✍   You may need permission to change files on the network.

To delete a symbol

1   In the **Symbol manager** docker, choose a symbol from the **Symbols** list.

2   Click the **Delete symbol** button ▨.

✍   When you delete a symbol, it is removed from the **Symbol manager**, and all instances of the symbol are removed from the drawing.

Using symbols in drawings

You can insert a symbol into a drawing, which creates a symbol instance. You can modify certain properties of a symbol instance, such as size and position, without affecting the symbol definition stored in the library. You can revert a symbol instance to an object or objects while preserving its properties. You can also delete a symbol instance.

To insert a symbol instance

1   Open the **Symbol manager** docker by clicking **Window ▸ Dockers ▸ Symbol manager**.

    If you want the symbol scaled automatically to match the current drawing scale, ensure that the **Scale to world units** button ▨ is enabled.

2   Choose a symbol from the **Symbols** list.

3   Click the **Insert symbol** button ▨.

✍   The term "symbol," as it was used in earlier versions of CorelDRAW, has been replaced by "special character" in CorelDRAW 12. For more information

about working with special characters, see "Embedding graphics and adding special characters" on page 232.

You can also insert a symbol instance by dragging a symbol from the **Symbol manager** docker to the drawing window.

To purge unused symbol definitions

1   In the **Symbol manager** docker, click the active document.
2   Click the **Purge unused definitions** button 📑.

To modify a symbol instance

1   Select a symbol instance.
2   Make any changes.

If a symbol contains multiple objects, all objects in the symbol instance are treated as if they were a group. You cannot modify individual objects in a symbol instance.

Not all properties of a symbol instance can be modified. For a list of properties that can be modified, see "Modifying symbol instances" on page 152.

When a symbol instance is selected, you can modify many object properties on the property bar.

To revert a symbol instance to an object or objects

1   Select a symbol instance.
2   Click **Edit ▶ Symbol ▶ Revert to objects**.

The symbol remains in the **Symbol manager**.

You can also revert a symbol instance to an object by right-clicking the symbol instance and clicking **Revert to objects**.

To delete a symbol instance

1   Select a symbol instance.

2   Press **Delete**.

The symbol remains in the **Symbol manager**.

Managing collections and libraries

Most of the symbols you will use have already been created and are stored in library files that are grouped into collections.

The **Symbol manager** docker always displays libraries and collections that are in your local **Symbols** folder. You can add collections and libraries to your **Symbols** folder from elsewhere on the network. When you insert a local or external symbol into a drawing, a copy of the symbol definition is added to the document, but it remains linked to the source symbol.

To add a collection or library

1   Click **Window ▶ Dockers ▶ Symbol manager**.

2   In the tree, click **Local Symbols** or **Network Symbols**.

3   Click the **Add library** button 🗗.

4   Locate and choose a collection or library.

5   Click **OK**.

By default, library files are referenced from their original location. If you want to copy a library to your **User Symbols** folder, enable the **Copy libraries locally** checkbox.

If you are adding a collection, you can enable the **Recursive** check box to include subfolders.

To delete a collection or library

1   In the **Symbol manager** docker, click a collection or library.

2   Press **Delete**.

The collection or library is removed from the tree in the **Symbol manager** docker, but files are not deleted.

Sharing symbols between drawings

In CorelDRAW, each drawing has its own library of symbols, which is part of the CorelDRAW (CDR) file. You can share symbols between drawings by copying and pasting. Copying symbols to the Clipboard leaves the originals in the library.

You can also copy and paste instances of a symbol to and from the Clipboard. Pasting a symbol instance places the symbol in the library and also places an instance of the symbol in the drawing. Subsequent pasting will place another instance of the symbol in the drawing without adding to the library. If a modified symbol instance is pasted into a drawing, the new instance maintains the properties of the original instance, and the new symbol definition in the library maintains the properties of the original symbol. Symbol instances are copied and pasted in the same way other objects are. For more information, see "Copying, duplicating, and deleting objects" on page 78.

To copy or paste symbols

To	Do the following
Copy symbols to the Clipboard	In the **Symbol manager** docker, choose the symbol or symbols from the **Symbols** list, right-click, and click **Copy**.
Paste symbols from the Clipboard	In the **Symbol manager** docker, right-click, and click **Paste**.

If a pasted symbol has the same name as an existing symbol, the new name is appended with an increment number. For example, a pasted symbol named "logo" would be renamed "logo1."

To export a symbol library

1   In the **Symbol manager** docker, click the active document.
2   Click the **Export library** button .

3   Choose the drive and folder where you want to save the library file.

4   Type a filename in the **File name** box.

5   Click **Save**.

To create a new library

1   Click **File ▸ Save**.

2   Choose the drive and folder where you want to store the library.

3   Type a filename in the **File name** box.

4   Choose **CSL - Corel Symbol Library** from the **Save as type** list box.

5   Click **Save**.

To add a symbol to an existing library

1   Click **File ▸ Open**.

2   Choose the drive and folder where the library is stored.

3   Choose **CSL - Corel Symbol Library** from the **Files of type** list box.

4   Choose the library file where you want to add a symbol.

5   Paste a symbol to the document.

6   Save the library file.

Filling objects

You can add colored, patterned, textured, and other fills to the inside of objects. You can customize a fill and set it as a default, so that each object you draw has the same fill.

In this section, you'll learn about

- applying uniform fills
- applying fountain fills
- applying pattern fills
- applying texture fills
- applying mesh fills
- working with fills

Applying uniform fills

You can apply a uniform fill to objects. Uniform fills are solid colors you can choose or create using color models and color palettes. For information about creating colors, see "Working with color" on page 153.

To apply a uniform fill

1 Select an object.
2 Open the **Interactive fill** flyout ‖ ◊ ▦ ‖, and click the **Interactive fill** tool ◊.
3 Choose **Uniform fill** from the **Fill type** list box on the property bar.
4 Specify the settings you want on the property bar, and press **Enter**.

You can also fill a selected object by clicking a color on the color palette.

You can mix colors in a uniform fill by selecting a filled object, pressing **Ctrl**, and clicking another color on the color palette.

Applying fountain fills

A fountain fill is a smooth progression of two or more colors that adds depth to an object. There are four types of fountain fills: linear, radial, conical, and square. A linear fountain fill flows in a straight line across the object, a conical fountain fill creates the illusion of light hitting a cone, a radial fountain fill radiates from the center of the object, and a square fountain fill is dispersed in concentric squares from the center of the object.

You can apply preset fountain fills, two-color fountain fills, and custom fountain fills to objects. Custom fountain fills can contain two or more colors, which you can position anywhere in the fill's progression. After you create a custom fountain fill, you can save it as a preset.

When you apply a fountain fill, you can specify attributes for the fill type you choose; for example, the direction of a fill's color blend, the fill's angle, center point, midpoint, and edge pad. You can also adjust the print and display quality of the fountain fill by specifying the number of fountain steps. By default, the fountain step setting is locked so that the print quality of the fountain fill is determined by the value specified in the print settings and the display quality is determined by the default value you set. However, you can unlock the fountain steps setting when you apply a fountain fill and specify a value that applies to both the print and view quality of the fill. For information about setting fountain fill steps for printing, see "Fine-tuning print jobs" in the Help.
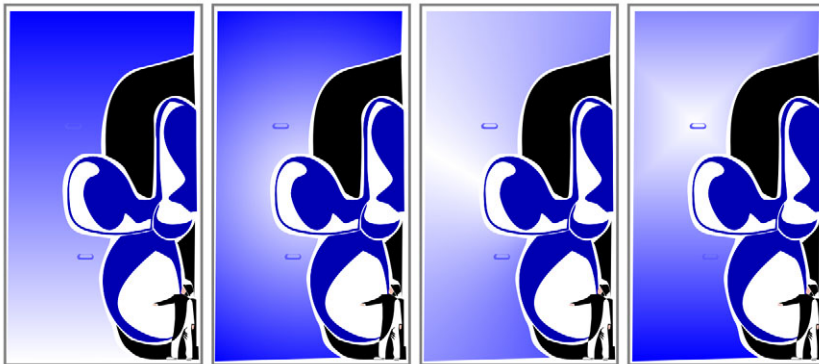
There are four types of fountain fills: (left to right) linear, radial, conical, and square.

To apply a preset fountain fill

1   Select an object.

2 Open the **Fill** flyout ▰▰▨▩▨✕▨ , and click the **Fountain fill dialog** button ▰ .

3 Choose a fill from the **Presets** list box.

4 Specify the settings you want.

To apply a two-color fountain fill

1 Select an object.

2 Open the **Interactive fill** flyout ▨ ▰ ▨ , and click the **Interactive fill** tool ▨ .

3 Choose a fountain fill from the **Fill type** list box on the property bar.

4 Open the **Fill dropdown** picker on the property bar, and click a color.

5 Open the **Last fill** picker on the property bar, and click a color.

6 Specify the settings you want.

⋇

You can mix colors in a two-color fountain fill by selecting one of the interactive vector handles, pressing **Ctrl**, and clicking a color on the color palette.

You can add a color to a fountain fill by dragging a color from the color palette to an object's interactive vector handle.

To apply a custom fountain fill

1 Select an object.

2 Open the **Fill** flyout ▰▰▨▩▨✕▨ , and click the **Fountain fill dialog** button ▰ .

3 Choose a fountain fill from the **Type** list box on the property bar.

4 Enable the **Custom** option.

5 Click the box at one end of the area just above the color band, and click a color on the color palette.

6 Click the box at the opposite end of the area just above the color band, and click a color.

7 Specify the attributes you want.

You can also

Add an intermediate color	Double-click between the two ends of the area just above the color band, and click a color on the color palette.
Change a color	Click the vector just above the color band, and click a color on the color palette.
Delete a color	Double-click the vector just above the color you want to delete.
Change the position of a color	Drag the vector just above the color to a new location.
Save the fill as a preset	Type a name in the **Presets** box, and click the **Add preset** button ⊕.

You can also create a custom fountain fill by dragging colors from the color palette in the drawing window onto the object's interactive vector handles.

Applying pattern fills

You can fill objects with two-color, full-color, or bitmap pattern fills.
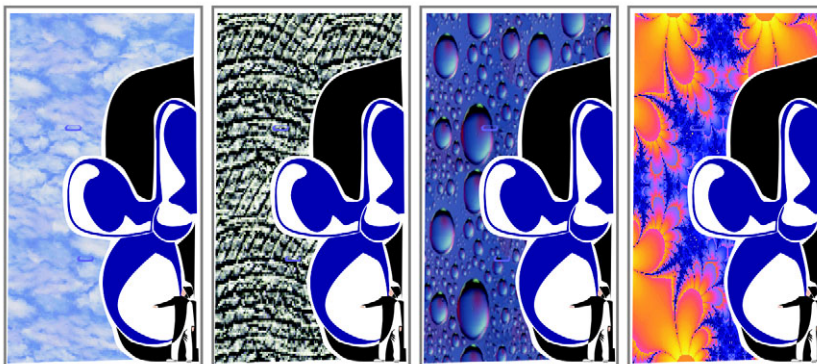
Examples of bitmap pattern fills

A two-color pattern fill is composed of only the two colors that you choose. A full-color pattern fill is a more complex vector graphic that can be composed of lines and fills. A

bitmap pattern fill is a bitmap image whose complexity is determined by its size, image resolution, and bit depth.

CorelDRAW provides preset pattern fills that you can apply to objects; however, you can also create your own pattern fills. For example, you can create pattern fills from objects that you draw or images that you import.

You can change the tile size of pattern fills. You can also specify exactly where these fills begin by setting the tile origin. CorelDRAW also lets you offset tiles in a fill. Adjusting the horizontal or vertical position of the first pattern, relative to the top of the object, affects the rest of the fill.

You can choose how the pattern fill appears by specifying whether to mirror the fill so that alternating tiles are the reflections of one another. If you want a pattern fill to change according to actions you perform on the filled object, you can specify that you want it to transform with the object. For example, if you enlarge an object filled with a pattern that transforms, the pattern becomes larger while the number of tiles is not increased.

To apply a two-color pattern fill

1   Select an object.

2   Open the **Interactive fill** flyout ‖ ℳ ⊞ ‖, and click the **Interactive fill** tool ℳ.

3   Choose **Two color pattern** from the **Fill type** list box on the property bar.

4   Open the **Fill dropdown** picker, and click a pattern.

5   Open the **Front** color picker, and click a color.

6   Open the **Back** color picker, and click a color.

💡

You can also mix colors in a two-color pattern fill by pressing **Ctrl** and clicking a color on the color palette.

You can mix a color with only one of the colors in the fill by pressing **Ctrl** and dragging a color to the interactive handle.

To apply a full-color or bitmap pattern fill

1   Select an object.

2   Open the **Interactive fill** flyout ‖ ℳ ⊞ ‖, and click the **Interactive fill** tool ℳ.

3   Choose one of the following from the **Fill type** list box on the property bar:

- Full-color pattern
- Bitmap pattern

4   Open the **Fill dropdown** picker, and click a pattern.

Applying texture fills

A texture fill is a randomly generated fill that you can use to give your objects a natural appearance. CorelDRAW provides preset textures, and each texture has a set of options that you can change. You can use colors from any color model or palette to customize texture fills. Texture fills can hold only RGB colors; however, other color models and palettes can be used as a reference to select colors. For information about color models, see "Understanding color models" on page 164.

You can change the tile size of texture fills. Increasing the resolution of a texture tile increases the accuracy of the fill. You can also specify exactly where these fills begin by setting the tile origin. CorelDRAW also lets you offset tiles in a fill. Adjusting the horizontal or vertical position of the first tile, relative to the top of the object, affects the rest of the fill.

You can rotate, skew, adjust the tile size, and change the center of the texture to create a custom fill.

If you want a texture fill to change according to the actions you perform on the filled object, you can specify that you want the fill to transform with the object. For example, if you enlarge an object filled with a texture that transforms, the texture becomes larger instead of increasing the number of tiles.

Texture fills are powerful features that can enhance a drawing. However, they also increase the size of a file and the time it takes to print, so you may want to use them in moderation.

To apply a texture fill

1   Select an object.

2   Open the **Fill** flyout ▨▨▨▨▨▨▨, and click the **Texture fill dialog** button ▨.

3   Choose a texture library from the **Texture library** list box.

4   Choose a texture from the **Texture** list.

You can also

Create a custom texture fill	Specify the settings you want in the **Style name** area.
Change the size of texture tiles	Click **Tiling**, and type values in the **Width** and **Height** boxes.
Set the tile origin of a texture fill	Click **Tiling**, and type values in the **X** and **Y** boxes in the **Origin** area.
Offset the tile origin of a texture fill	Click **Tiling**, and enable the **Row** or **Column** option. Type an amount of offset in the **% of tile size** box.
Rotate a texture fill	Click **Tiling**, and type a value in the **Rotate** box.
Skew a texture fill	Click **Tiling**, and type a value in the **Skew** box.
Mirror a texture fill	Click **Tiling**, and enable the **Mirror fill** check box.

You can modify the texture you choose from the texture library and save it to another library, but you cannot save textures to or overwrite textures in the texture library.

You can save a custom texture fill by clicking the plus sign (+) in the **Texture fill** dialog box and typing a name in the **Texture name** box.

Applying mesh fills

When you fill an object with a mesh fill, you can create unique effects. For example, you can create smooth color transitions in any direction without having to create blends or contours. When you apply a mesh fill, you specify the number of columns and rows in the grid, and you specify the grid's intersecting points. After you have created a mesh object, you can edit the mesh fill grid by adding and removing nodes or intersections. You can also remove the mesh.

A mesh fill can be applied only to closed objects or a single path. If you want to apply a mesh fill to a complex object, you must first create a mesh-filled object and combine it with the complex object to form a PowerClip object. For more information about working with PowerClip objects, see "Creating PowerClip objects" on page 130.

You can add color to a patch of a mesh fill and to the individual intersection nodes. You can also choose to mix colors for a more blended appearance.

To apply a mesh fill to an object

1   Select an object.

2   Open the **Interactive fill** flyout ‖ ✍ 苗 ‖, and click the **Interactive mesh fill** tool 苗.

3   Type the number of columns in the top portion of the **Grid size** box on the property bar.

4   Type the number of rows in the bottom portion of the **Grid size** box on the property bar, and press **Enter**.

5   Adjust the grid nodes on the object.

You can also

Add an intersection	Click once within a grid, and click the **Add intersection** button ⬓ on the property bar.
Add a node	Hold down **Shift**, and double-click where you want to add the node.
Remove a node or an intersection	Click a node, and click the **Delete node(s)** button ▭ on the property bar.
Shape the mesh fill	Drag a node to a new location.
Remove the mesh fill	Click the **Clear mesh** button ⊚ on the property bar.

If the mesh object contains color, adjusting the intersection nodes of the mesh affects how the colors blend together.

You can also marquee select or freehand marquee select nodes to shape an entire area of the mesh.

You can add an intersection by double-clicking in a space, or you can add a single line by double-clicking a line.

To add color to a patch in a mesh fill

1 Select a mesh-filled object.

2 Open the **Interactive fill** flyout ‖ ✎ ▦ ‖, and click the **Interactive mesh fill** tool ▦.

3 Drag a color from the color palette to a patch in the object.

You can also

Color an intersection node in a mesh fill	Click an intersection node, and click a color on the color palette.
Mix a color in a mesh fill	Select part of the mesh, press **Ctrl**, and click a color on the color palette.

You can also drag a color from the color palette to an intersection node.

You can also freehand marquee select nodes to apply a color to an entire area of the mesh.

Working with fills

There are a number of tasks that are common to all types of fills. You can choose a default fill color so that every object you add to a drawing has the same fill. You can also remove any fill, copy it to another object, or use it to fill an area surrounded by an open curve.

To choose a default fill color

1 Click a blank area on the drawing page to deselect all objects.

2 Open the **Fill** flyout ‖ ◣ ▀ ⊗ ▦ ▦ × ▦ ‖, and click the **Fill color** dialog.

3 In the **Uniform fill** dialog box, enable any of the following check boxes:
  • **Graphic** — applies the default fill color to shapes you draw
  • **Artistic text** — applies the default fill color to artistic text you add
  • **Paragraph text** — applies the default fill color to paragraph text you add

4   Specify any fill settings.

To remove a fill

1   Select an object.

2   Open the **Fill** flyout ▨▬⊗▦▩✕▧, and click the **No fill** button ✕.

To copy a fill to another object

1   Open the **Eyedropper** flyout ⫶ ⚲ ⚲⫶, and click the **Eyedropper** tool ⚲.

2   Choose **Sample color** from the list box on the property bar.

3   Click the **Sample size** flyout on the property bar, and enable one of the following
    options:
    • **1X1** — lets you choose the average color in a 1X1 pixel area of the object
    • **3X3** — lets you choose the average color in a 3X3 pixel area of the object
    • **5X5** — lets you choose the average color in a 5X5 pixel area of the object

4   Click the object whose fill you want to copy.

5   Open the **Eyedropper** flyout ⫶ ⚲ ⚲⫶, and click the **Paintbucket** tool ⚲.

6   Click the object to which you want to apply the fill.

Fills you copy may not match the original fill. The closest equivalent RGB color
is applied.

If you want to sample a color from your desktop, click the **Eyedropper** tool,
choose **Sample color** from the list box on the property bar, and click **Select
from desktop**. Click anywhere on your desktop to sample a color.

From here

For more information about	In the Help index, see...
Changing fountain fill quality	fountain fills, print quality
Setting the display quality for fountain fills	fountain fills, display quality
Creating pattern fills	pattern fills
Applying PostScript texture fills	PostScript

For more information about	In the Help index, see...
Showing fills in open curves	curves, filling open

Working with color

Your application lets you choose and create colors using a wide variety of industry-standard palettes, color mixers, and color models. You can create and edit custom color palettes to store frequently used colors for future use.

You can also customize how color palettes display on your screen by changing the size of swatches, the number of rows in palettes, and other properties.

In this section, you'll learn about

- choosing colors
- creating custom color palettes

Choosing colors

You can choose fill and outline colors using fixed or custom color palettes, color viewers, color harmonies, or color blends.

For information about applying the colors you choose, see "Applying uniform fills" on page 141 and "Formatting lines and outlines" on page 52.

When you want to use a color that already exists in an object or document, you can sample the color to achieve an exact match. For more information, see "To copy a fill to another object" on page 150.

Choosing a color using the default color palette

A color palette is a collection of color swatches. You can choose fill and outline colors using the default color palette, which contains 99 colors from the CMYK color model. The selected fill and outline colors display in the color swatches on the status bar.

Choosing a color using fixed or custom color palettes

Fixed color palettes are provided by third-party manufacturers. Some examples of these are PANTONE®, HKS Colors, and TRUMATCH®. It may be useful to have on hand

a manufacturer's swatch book, which is a collection of color samples that shows exactly what each color looks like when printed.

Some fixed color palettes — PANTONE, HKS Colors, TOYO, DIC, Focoltone, and SpectraMaster — are collections of spot colors. If you create color separations when you print, each color from these color palettes requires a separate printing plate. This can significantly affect the cost of your print job. If you want to use these colors, but you don't want to use spot colors, convert the spot colors to process colors when printing. For more information, see "Printing color separations" on page 285.

Custom color palettes can include colors from any color model or fixed color palette. You can save a custom color palette for future use. For more information about working with custom color palettes, see "Creating custom color palettes" on page 158 and "Opening and editing custom color palettes" in the Help.

Choosing a color using color viewers

Color viewers give a representation of a range of colors using either one-dimensional or three-dimensional shapes. The default color viewer is based on the HSB color model, but you can use this viewer to choose CMYK, CMY, or RGB colors. For information about color models, see "Understanding color models" in the Help.

Choosing a color using color harmonies

Color harmonies work by superimposing a shape, such as a rectangle or a triangle, over a color wheel. Each vertical row in the color grid begins with the color located at one of the points on the superimposed shape.

The colors at each corner of the shape are always complementary, contrasting, or harmonious, depending on the shape you choose. The color harmonies allow you to choose the color model you prefer to use, and are most useful when you're choosing several colors for a project.

Choosing a color using color blends

When you choose a color using color blends, you combine base colors to get the color you want. The color blender displays a grid of colors that it creates from the four base colors you choose.

To choose a color using the default color palette

To	Do the following
Choose a fill color for a selected object	Click a color swatch.
Choose an outline color for a selected object	Right-click a color swatch.
Choose from different shades of a color	Click and hold a color swatch to display a pop-up color picker, and click a color.
View more colors in the default color palette	Click the scroll arrows at the top and bottom of the color palette.

You can display color names by pointing to a swatch.

To choose a color using a fixed or custom color palette

1 Select an object.

2 Open one of the following flyouts:
    • the **Fill** flyout, and click the **Fill color dialog** tool ▨.
    • the **Outline** flyout, and click the **Outline color dialog** tool ▨.

3 Click the **Palettes** tab.

4 Choose a fixed or custom palette from the **Palette** list box.

5 Move the color slider to set the range of colors displayed in the color selection area.

6 Click a color in the color selection area.

Each color swatch on a fixed color palette is marked with a small white square.

You should use the same color model for all colors in a drawing; the colors will be consistent and you will be able to predict the colors of the final output more accurately. It is preferable to use the same color model that you are using for the final output. For more information about reproducing colors accurately, see "Managing color for display, input, and output" on page 159.

You can display or hide the names of fixed or custom colors by clicking **Options ▶ Show color names**.

You can swap the **Old** color (of the selected object) and the **New** color (which has been chosen in the color selection area) by clicking **Options ▶ Swap colors**.

To choose a color using a color viewer

1 Select an object.

2 Open one of the following flyouts:
   - the **Fill** flyout, and click the **Fill color dialog** tool ▰.
   - the **Outline** flyout, and click the **Outline color dialog** tool ▰.

3 Click the **Models** tab.

4 Choose a color model from the **Model** list box.

5 Click **Options ▶ Color viewers**, and click a color viewer.

6 Move the color slider.

7 Click a color in the color selection area.

If you choose a color that is out of the printer's gamut, CorelDRAW displays the closest in-gamut color. This color is displayed in the **Reference** area, in the small swatch beside the **New** color. You can either choose this closest in-gamut color or you can correct the out-of-gamut color. For information about color correction, see "Managing color for display, input, and output" on page 159.

You should use the same color model for all colors in a drawing; the colors will be consistent and you will be able to predict the colors of the final output more accurately. It is preferable to use the same color model that you are using for the final output.

You can swap the **Old** color (of the selected object) and the **New** color (which has been chosen in the color selection area) by clicking **Options ▶ Swap colors**.

To choose a color using color harmonies

1 Select an object.

2 Open one of the following flyouts:
   - the **Fill** flyout, and click the **Fill color dialog** tool ▰.
   - the **Outline** flyout, and click the **Outline color dialog** tool ▰.

3   Click the **Mixers** tab.

4   Click **Options ▶ Mixers ▶ Color harmonies**.

5   Choose a shape from the **Hues** list box.

6   Choose an option from the **Variation** list box.

7   Drag the black dot on the color wheel.

8   Click a color swatch on the color palette below the color wheel.

✍   If you choose a color that is out of the printer's gamut, CorelDRAW displays the closest in-gamut color. This color is displayed in the **Reference** area, in the small swatch beside the **New** color. You can either choose this closest in-gamut color, or you can correct the out-of-gamut color. For information about color correction, see "Managing color for display, input, and output" on page 159.

💡   You can change the number of swatches in the color grid by dragging the **Size** slider.

To choose a color using color blends

1   Select an object.

2   Open one of the following flyouts:
    • the **Fill** flyout, and click the **Fill color dialog** tool .
    • the **Outline** flyout, and click the **Outline color dialog** tool .

3   Click the **Mixers** tab.

4   Click **Options ▶ Mixers ▶ Color blend**.

5   Open each color picker, and click a color.

6   Click a color in the color selection area.

✍   You can only blend colors that are in the default color palette. If you want to blend other colors, change the default color palette.

💡   You can change the cell size of the color grid by moving the **Size** slider.

You can swap the **Old** color (of the selected object) and the **New** color (which has been chosen in the color selection area) by clicking **Options ▶ Swap colors**.

Creating custom color palettes

Custom color palettes are collections of colors that you save. A number of preset custom color palettes are available; however, you can create color palettes from scratch. Custom color palettes are useful when you frequently choose the same colors, or when you want to work with a set of colors that look good together.

You can create a custom color palette by choosing each color manually, or by using colors in an object or an entire area.

To create a custom color palette

1   Click **Window ▶ Color palettes ▶ Palette editor**.
2   Click **New palette** .
3   Type a filename.
4   Click **Save**.

To create a color palette from an object

1   Select an object.
2   Click **Window ▶ Color palettes ▶ Create palette from selection**.
3   Type a filename.
4   Click **Save**.

To create a color palette from a document

1   Click **Window ▶ Color palettes ▶ Create palette from document**.
2   Type a filename.
3   Click **Save**.

Managing color for display, input, and output

You may find that the colors displayed on your monitor don't match the colors of a scanned image or of a printer's output. Color management lets you reproduce colors accurately by using color profiles and by correcting colors for display.

In this section, you'll learn about

- understanding the Color management dialog box
- working with color profiles
- choosing advanced color management settings
- correcting colors for display

Understanding the Color management dialog box

Color management is the process of matching colors between devices, such as scanners, digital cameras, printers, and monitors. Your application features color management controls designed to help you achieve the best possible color matches.

The **Color management** dialog box, with its default settings, looks like this:
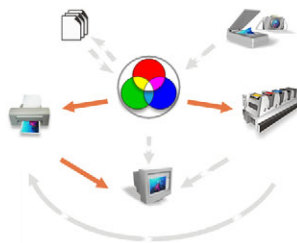
The Color management dialog box

You can activate the following visual elements:

- **Scanner/digital camera** icon
- **Separations printer** icon
- **Monitor** icon
- **Composite printer** icon
- **Import/export** icon
- **Internal RGB** icon
- **Arrows**

You can click the **Monitor** icon, the **Import/export** icon, the **Internal RGB** icon, and the **Arrows** to choose color management options and advanced settings.

You can click the caption text under the icons to choose color profiles for each device. You can also get other color profiles from the application CD or online. For more information, see "Working with color profiles" on page 161. To help you choose the appropriate profile, check the manufacturer's documentation for a device.

In addition, you can click the arrows between device icons to turn the color profiles on or off. The arrows appear orange when on, and grayed and broken when off. You can use the arrows to correct colors between devices, and control how colors are displayed.

The following table contains descriptions of what happens when an arrow is on or off.

When a device is corrected for color, at least two profiles are used — one for each device. For example, if the printer colors are being corrected using Internal RGB, both the Internal RGB and printer profiles are used. If you use simulation to display colors on your monitor as they are printed, three profiles are used: the Internal RGB, printer, and monitor profiles.

Convention	Description	Examples
From the **Scanner/digital camera** to **Internal RGB**	The scanner/digital camera profile and the Internal RGB profiles are used for color correction.	The profiles are not used.
From **Internal RGB** to the **Monitor**	Colors are calibrated for display using the Internal RGB and monitor color profiles.	The profile is not used.

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Convention	Description	Examples
From **Internal RGB** to the **Composite printer**	The printer and Internal RGB profile are used for color correction.	The profile is not used.
From the **Composite printer** to the **Monitor**	The monitor simulates a composite printer output.	The monitor does not simulate a composite printer output.
From **Internal RGB** to the **Separations printer**	The separations printer and RGB profiles are used for color correction.	The profile is not used. You can override this setting in the **Print** dialog box.
From the **Separations printer** to the **Monitor**	The monitor simulates color separations printer output.	The monitor does not simulate color separations printer output.
From the **Separations printer** to the **Composite printer**	The composite printer simulates separations printer display.	The composite printer does not simulate separations printer display.
From **Internal RGB** to **Import/Export**	Internal RGB profiles are embedded.	ICC profiles are not embedded.
From **Import/Export** to **Internal RGB**	Embedded ICC profiles are used.	ICC profiles are ignored.

Working with color profiles

A color management system helps you achieve accurate colors across a variety of devices consistently. The first stage in setting up your color management system is to choose color profiles for your monitor and each of the devices you use, such as scanners, digital cameras, and printers.

Understanding color management

Each device has a range of colors, or color space, that it uses. For example, a monitor displays a different set of colors than a printer reproduces. So, you may see some colors on the screen that cannot be printed.

You can use a color management system to translate colors from one device to another. Color profiles define the color space for your monitor and for the input and output devices you use.

For more information about using color management in your application, see "Understanding the Color management dialog box" on page 159.

Choosing color profiles

Different brands and models of monitors, scanners, digital cameras, and printers have different color spaces, and thus require different color profiles. Some widely used profiles are installed with your application.

Standard ICC (International Color Consortium) color profiles are used in your application. You can choose color profiles for a:

- monitor
- scanner/digital camera
- composite printer
- separations printer
- internal RGB color space

Obtaining additional color profiles

If you need additional profiles or updates, you can get them from the application CD, or you can download them.

To choose a color profile

1 Click **Tools ▶ Color management**.
2 Click a profile name under one of the following icons:
   - **Scanner/digital camera**
   - **Separations printer**
   - **Monitor**
   - **Composite printer**
   - **Internal RGB**
3 Choose a profile from the list box.

By default, color profiles are stored in the application's **Color** folder.

You can access other color profiles.

To copy a color profile from the CD

1   Click **Tools** ▶ **Color management**.

2   Below a device icon, click a color profile list box, and choose **Get profile from disk**.

3   Insert the application CD.

4   In the **Browse for folder** dialog box, choose the folder where the profiles are located.

 If you want to load color profiles that you have stored in a different location, such as on a network or on your hard disk, you can choose the folder where the profiles are located.

5   In the **Install from disk** dialog box, choose the color profile you want to copy.

6   Click **Choose**.

To download a color profile

1   Click **Tools** ▶ **Color management**.

2   Below a device icon, click a color profile list box, and choose **Download profiles**.

3   In the dialog box, enable the check box for each profile you want to download.

4   Click **Download**.

5   In the **Save as** dialog box, choose a destination for the color profile.

6   If you want to store the new color profile with the existing profiles, download it to the application's **Color** folder.

You can also

Choose a different profile type	Click the **Profile type** list box, and choose a type.
Specify your connection speed	Click the **Connection speed** list box, and choose a speed. The faster your connection speed, the shorter the download time.
Update the profiles list	Click **Refresh**.

You can also

Return to the main **Color management** dialog box	Click **Cancel**.

Choosing advanced color management settings

Once you choose color profiles, the color management system uses a Color Matching Module (CMM) to match colors between devices as closely as possible. Your application uses the Kodak® Color Management System by default. You can also choose different rendering intents, which control how the color management system converts colors between different color spaces.

When you import or export graphics, you can embed, or attach, color profiles. By embedding a color profile, you can ensure color integrity; anyone viewing or printing your work will use the same colors that you used.

By enabling the gamut alarm, you can preview which on-screen colors cannot be printed. The colors that cannot be reproduced are highlighted.

The gamut alarm highlights colors that a printer cannot reproduce

There are advanced settings for separations and composite printers; you can link a color profile to a specific printer.

Using color styles, you can choose to turn color management off or to optimize the color display.

To choose a color engine and rendering intent

1   Click **Tools ▶ Color management**.

2   Click on the **Internal RGB** ⬤.

3   In the **Advanced settings** dialog box, from the **Rendering intent** list box, choose one of the following:
    * **Absolute colorimetric** — preserves the white point throughout conversion
    * **Automatic** — default setting, which uses saturation for vector graphics and perceptual for bitmaps
    * **Perceptual** — good for a variety of images, especially bitmaps and photographic images
    * **Relative colorimetric** — good for producing proofs on inkjet printers
    * **Saturation** — good for vector graphics (lines, text, and solid colored objects)

4   Choose an option from the **Color engine** list box.

The Microsoft ICM 2.0 Color Matching Module (CMM) is not available for Windows NT® 4.0.

To embed color profiles

1   Click **Tools ▶ Color management**.

2   Click the **Import/export** icon 📑.

3   In the **Import** area, enable one of the following options:
    * **Use embedded ICC profile**
    * **Always convert using**
    * **Ignore embedded ICC profile**

4   In the **Export** area, enable one of the following options:
    * **Embed internal RGB profile**
    * **Always embed using**
    * **Do not embed ICC profiles**

When you enable the **Always convert using** import options, as well as the **Always embed using** export option, you can choose a profile from the list box.

When you enable the **Embed internal RGB profile** or the **Always embed using export** options, certain file formats are exported with an embedded ICC profile. These file formats are: TIFF, encapsulated PostScript (EPS), Corel

PHOTO-PAINT (CPT), CorelDRAW (CDR), JPEG, Portable Document
Format (PDF), and Adobe® Photoshop® (PSD).

To enable the gamut alarm

1 Click **Tools ▶ Color management**.

2 Click the **Monitor** icon 🖥️.

3 Enable the **Highlight display colors out of printer gamut** check box.

   If you want to show CMYK in percentages, enable the **Show CMYK in
   percentages** check box.

🔆
   You can map spot colors into CMYK gamut by enabling the **Map spot colors
   into CMYK gamut** check box.

   You can change the warning color of the gamut alarm by opening the
   Warning color picker and choosing a color.

To choose advanced printer settings

1 Click **Tools ▶ Color management**.

2 Click one of the following icons:
   - **Composite printer** 🖨️
   - **Separations printer** 🖨️

3 Choose a setting from the list box.

✍️
   If you choose an advanced setting, that setting overrides the profile that
   displays under the printer icon in the **Color management** dialog box.

To use color management styles

1 Click **Tools ▶ Color management**.

2 Choose one of the following from the **Style** list box:
   - **Color management off**
   - **Default settings**
   - **Optimized for desktop printing**
   - **Optimized for professional output**
   - **Optimized for the Web**

Some color management settings, such as **Default**, **Optimized for desktop printing**, and **Optimized for professional output**, can result in on-screen colors appearing dull. This is due to an on-screen printer simulation of the output.

You can add or delete a color management style by clicking the **Add preset** ⊞ or **Remove preset** ⊟ buttons.

Correcting colors for display

You can correct colors so that they display as accurately as possible on screen. If you correct only the display colors, the colors are shown according to the internal RGB, and monitor color profiles.

If you display colors as they will print, on-screen colors simulate output using the Internal RGB, monitor, and printer color profiles. Simulating printer output may cause on-screen colors to appear dull.

To correct colors for display

- Click **Tools ▶ Color management**.

To	Do the following
Correct display colors	Click the arrow from the **Internal RGB** 🔵 icon to the **Monitor** icon 🖥️.
Display simulation of a composite printer output	Click the arrow from the **Composite printer** icon 🖨️ to the **Monitor** icon 🖥️.
Display simulation of a color separations printer output	Click the arrow from the **Separations printer** icon 🖨️ to the **Monitor** icon 🖥️.
Display simulation of a separations printer on a composite printer	Click the arrow from the **Separations printer** icon 🖨️ to the **Composite printer** icon 🖨️.

Arrows appear orange when they are turned on, and grayed and broken when they are turned off. For more information about using the arrows for color correction, see "Understanding the Color management dialog box" on page 159.

The display simulation of a separations printer on a composite printer does not affect output.

Adding three-dimensional effects to objects

You can create the illusion of three-dimensional depth in CorelDRAW objects by adding contour, perspective, extrusion, or drop shadow effects.

In this section, you'll learn about

- contouring objects
- applying perspective to objects
- creating vector extrusions
- creating drop shadows

Contouring objects

You can contour an object to create a series of concentric lines that progress to the inside or outside of the object. CorelDRAW also lets you set the number and distance of the contour lines.

After contouring an object, you can copy or clone its contour settings to another object.

You can also change the colors of the fill between the contour lines and the contour outlines themselves. You can set a color progression in the contour effect, where one color blends into another. The color progression can follow a straight, clockwise, or counterclockwise path through the color range of your choice.
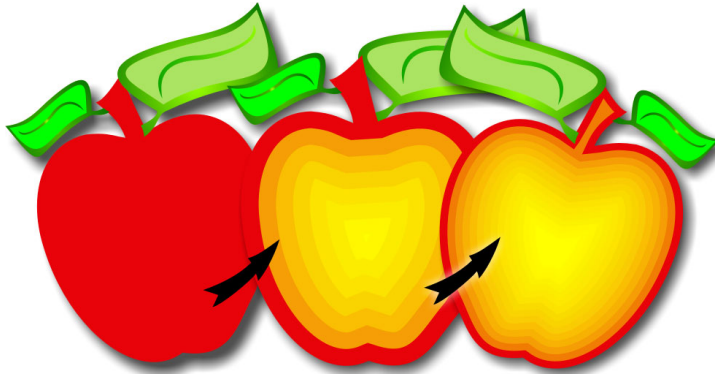
A center contour has been applied to the above object. The number of contour lines, as well as the distance between lines, can be changed.
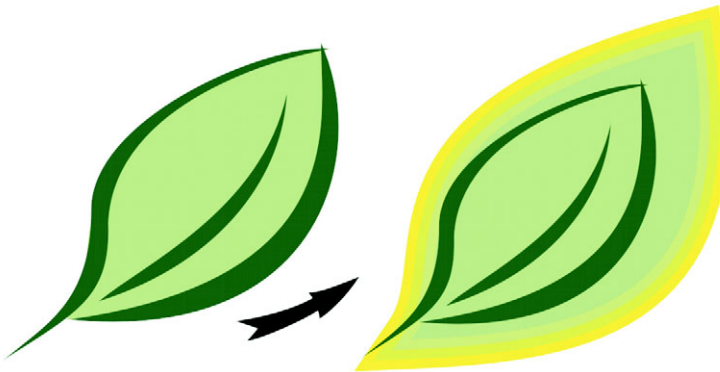
An outside contour has been applied to the above object. Note that an outside contour projects from the outside edge of the object.

To contour an object

1   Open the **Interactive tools** flyout ⬚⬚⬚⬚⬚⬚⬚, and click the **Interactive contour tool** ▣.

2   Click an object or a set of grouped objects, and drag the start handle toward the center to create an inside contour.

3   Move the object slider to change the number of contour steps.

Specify the number of contour lines	Click the **Inside** button ▦ on the property bar, and type a value in the **Contour steps** box on the property bar.
Specify the distance between contour lines	Type a value in the **Contour offset** box on the property bar.
Accelerate contour line progression	Click the **Object and color acceleration** button ▣ on the property bar, and move the object slider.

You can create an outside contour by dragging the start handle away from the center.

To copy or clone a contour

1 Select the object you want to contour.

2 Click **Effects** and click one of the following:
 • **Copy effect ▶ Contour from**
 • **Clone effect ▶ Contour from**

3 Click a contour object.

You can also use the **Eyedropper** tool ✐ to copy a contour. For more information, see "To copy effects from one object to another object" on page 80.

To set the fill color for a contour object

1 Open the **Interactive tools** flyout ▦▤▥▦▦▦▦, and click the **Interactive contour** tool ▣.

2 Select a contour object.

3 Open the **Fill** color picker on the property bar, and click a color.

If the original object has a fountain fill, a second color picker displays.

You can accelerate the fill color progression by clicking the **Object and color acceleration** button 🔲 on the property bar.

You can change the contour center's color by dragging a color from the color palette to the end fill handle.

To specify an outline color for the contour object

1   Open the **Interactive tools** flyout ⌷▦▨▨⌀▫⅌, and click the **Interactive contour tool** 🔲.

2   Select a contour object.

3   Open the **Outline** color picker on the property bar, and click a color.

To set the fill progression

1   Open the **Interactive tools** flyout ⌷▦▨▨⌀▫⅌, and click the **Interactive contour tool** 🔲.

2   Select a contour object.

3   Click one of the following buttons on the property bar:
   • **Linear contour colors** 🔳
   • **Clockwise contour colors** 🔳
   • **Counterclockwise contour colors** 🔳

Applying perspective to objects

You can create a perspective effect by shortening one or two sides of an object. This effect gives an object the appearance of receding in one or two directions, thereby creating a one-point perspective or a two-point perspective.

Perspective effects can be added to objects or grouped objects. You can also add a perspective effect to linked groups, such as contours, blends, extrusions, and objects created with the **Artistic media** tool. You can't add perspective effects to paragraph text, bitmaps, or symbols.
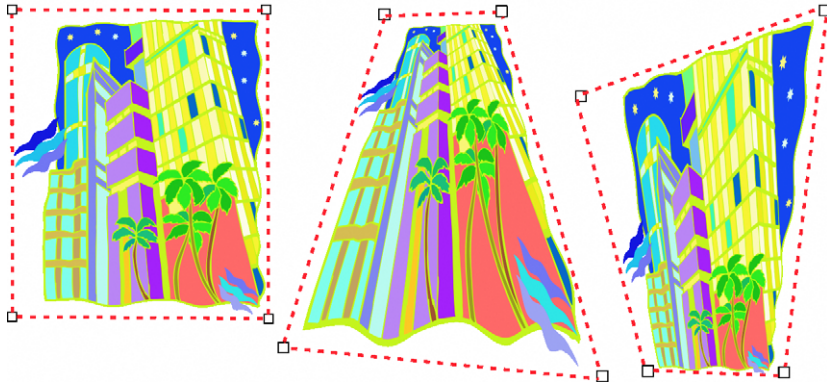
The original graphic (left) with one-point (middle) and two-point (right) perspectives applied to it.

After you apply a perspective effect, you can copy it to other objects in a drawing, adjust it, or remove it from the object.

To apply a perspective

To

Apply a one-point perspective	Click **Effects ▶ Add perspective**. Press **Ctrl,** and drag a node.
Apply a one-point perspective	Click **Effects ▶ Add perspective**. Press **Ctrl,** and drag a node.
Apply a two-point perspective	Click **Effects ▶ Add perspective**. Drag the nodes on the outside of the grid to apply the effect you want.

Pressing **Ctrl** constrains the node's movement to the horizontal or vertical axis to create a one-point perspective effect.

You can move opposing nodes the same distance in opposite directions by pressing **Ctrl + Shift** as you drag.

To copy an object's perspective effect

1   Select an object to which you want to apply a perspective effect.

2   Click **Effects ▶ Copy effect ▶ Perspective from**.

3   Select an object whose perspective effect you want to copy.

　　　You can also use the **Eyedropper** tool 🖋 to copy a perspective effect. For more information, see "To copy effects from one object to another object" on page 80.

To adjust the perspective

1   Open the **Shape edit** flyout ⟦ 🖊 🖋 🖌 🖍 🖉 🖊 ⟧, and click the **Shape** tool 🖊.

2   Select an object that has a perspective effect.

3   Drag a node to a new position.

　　　You can also adjust the perspective by dragging one or both of the vanishing points.

　　　You can move opposing nodes the same distance in opposite directions by pressing **Ctrl + Shift** while dragging the node.

To remove an object's perspective effect

1   Select an object that has a perspective effect.

2   Click **Effects ▶ Clear perspective**.

Creating vector extrusions

You can make objects appear three-dimensional by creating vector extrusions. You can create vector extrusions by projecting points from an object and joining them to create an illusion of three dimensions. CorelDRAW also lets you apply a vector extrusion to an object in a group.

After you create an extrusion, you can copy or clone its attributes to a selected object. Cloning and copying transfer the extrusion attributes of an extruded object to another. However, the cloned extrusion settings cannot be edited independently from the master.

You can change an extruded form by rotating it and rounding its corners.

CorelDRAW also lets you remove a vector extrusion.

Bevels

Another way in which you can give an object a three-dimensional appearance is by applying a beveled edge to an extrusion. A bevel creates the illusion that an object's extruded edges are cut on an angle. You can specify the angle and depth values of the bevel to control the effect.

Extruded fills

You can apply fills to an entire vector extrusion or to the extruded surfaces of a vector extrusion. You can cover each surface individually with the fill, or you can drape the fill so that it blankets the entire object with no breaks to the pattern or texture.
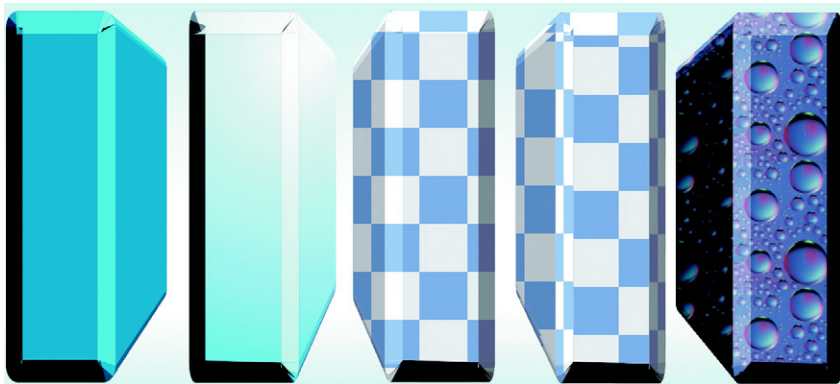
Extruded fills:(left to right) solid color, solid color with lighting, draped two-color pattern, undraped two-color pattern, draped bitmap

Lighting

You can enhance vector extrusions by applying light sources. You can add up to three light sources to project toward the extruded object with varying intensity. When you no longer need light sources, you can remove them.

Vanishing points

You can create a vector extrusion in which the lines of the extrusion converge at a vanishing point. The vanishing point of a vector extrusion can be copied to another object so that both objects appear to recede toward the same point.
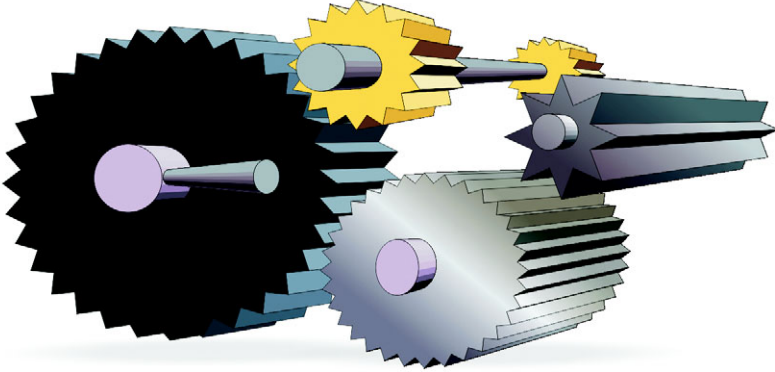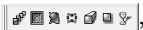
Vector extrusions with the same vanishing point

You can also give two vector extrusions different vanishing points.
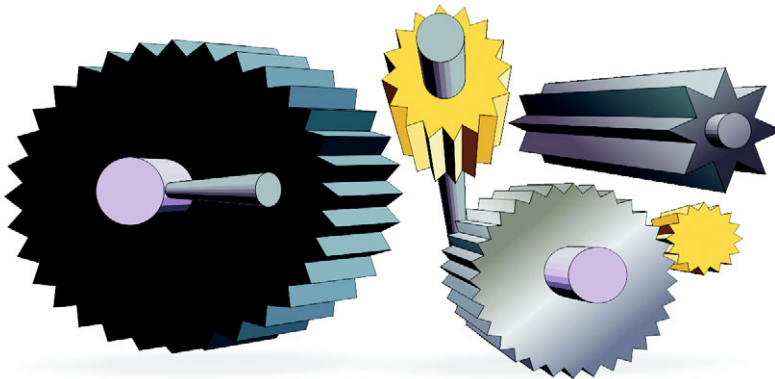
Vector extrusions with different vanishing points

To create a vector extrusion

1 Open the **Interactive tools** flyout ⟦⬚⬚⬚⬚⬚⬚⬚⟧, and click the **Interactive extrude tool** ⬚.

2 Choose an extrusion type from the **Extrusion type** list box on the property bar.

3 Select an object.

4 Drag the object's selection handles to set the direction and depth of the extrusion.

If you want to reset the extrusion, press **Esc** before releasing the mouse button.

You can also

Apply preset settings to a vector extrusion	Select an extrude object, click **Interactive extrude** tool, and choose a preset setting from the **Preset** list box on the property bar.

To copy or clone a vector extrusion

1 Select the object you want to extrude.

2 Click **Effects** and click one of the following:
 • **Copy effect ▸ Extrude from**
 • **Clone effect ▸ Extrude from**

3 Click an extruded object.

You can also use the **Eyedropper** tool to copy a vector extrusion. For more information, see "To copy effects from one object to another object" on page 80.

To change a vector extrusion's form

To	Do the following
Rotate an extrusion	Select an extruded object. Click the **Extrude rotation** button on the property bar. Drag the extrusion in the direction you want.
Round the corners of an extruded rectangle or square	Open the **Shape edit** flyout , and click the **Shape** tool . Drag a corner node along the outline of the rectangle or square.

To remove a vector extrusion

1 Select an extruded object.

2 Click **Effects ▸ Clear extrude**.

You can also remove a vector extrusion by clicking the **Clear extrude** button on the property bar.

To apply a fill to a vector extrusion

1 Select an extruded object with the **Interactive extrude** tool .

2 Click the **Color** button on the property bar.

3 Click one of the following buttons:
   • **Use object fill** — applies the object's fill to the extrusion.
   • **Use solid color** — applies a solid color to the extrusion
   • **Use color shading** — applies a gradient fill to the extrusion

You can apply an unbroken pattern or texture fill to an object by enabling the **Drape fills** check box before you click the **Use object fill** button.

To apply beveled edges to a vector extrusion

1 Open the **Interactive tools** flyout , and click the **Interactive extrude** tool .

2 Select an extruded object.

3 Click the **Bevels** button on the property bar.

4 Enable the **Use bevel** check box.

5 Type a value in the **Bevel depth** box.

6 Type a value in the **Bevel angle** box.

You can also set the bevel depth and angle by using the **Interactive display** box in the bevel list box.

You can show only the bevel and hide the extrusion by enabling the **Show bevel only** check box.

To add light to a vector extrusion

1 Select an extruded object.

2 Click the **Lighting** button on the property bar.

3   Click any of the three **Light** buttons 🔅.

The lights appear as numbered circles in the preview window.

4   Drag the numbered circles in the **Light intensity preview** window to position the lights.

If you want to create more realistic shading, enable the **Use full color range** check box.

You can also

Adjust the intensity of a light source	Select a light in the **Light intensity preview** window and move the **Intensity** slider.
Remove a light source	Click an active **Light** button.

To change the vanishing point of a vector extrusion

To	**Do the following**
Lock a vanishing point	Double-click an extruded object. Choose **VP locked to object** or **VP locked to page** from the **Vanishing point properties** list box on the property bar.
Copy a vanishing point	Double-click an extruded object whose vanishing point you want to change. Choose **Copy VP** from the **Vanishing point properties** list box on the property bar. Select the extruded object that has the vanishing point you want to copy.
Set one vanishing point for two extrusions	Double-click an extruded object. Choose **Shared vanishing point** from the **Vanishing point properties** list box on the property bar. Select the extruded object that has the vanishing point you want to share.

Creating drop shadows

Drop shadows simulate light falling on an object from one of five particular perspectives: flat, right, left, bottom, and top. You can add drop shadows to most objects or groups of objects, including artistic text, paragraph text, and bitmaps.

When you add a drop shadow, you can change its perspective, and you can adjust attributes such as color, opacity, fade level, angle, and feathering.
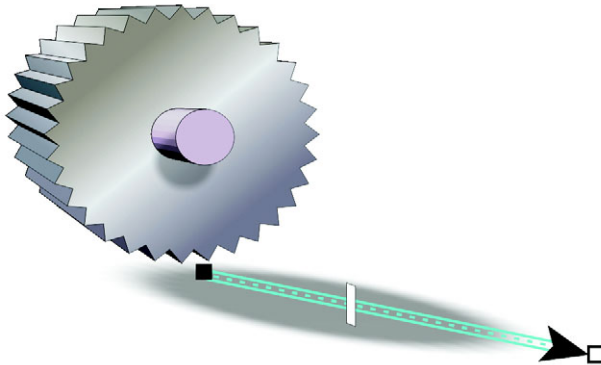
A drop shadow applied to an object

After you create a drop shadow, you can copy it or clone it to a selected object. When you copy a drop shadow, the original and copy have no connection and can be edited independently. With cloning, the master object's drop shadow attributes are automatically applied to its clone.
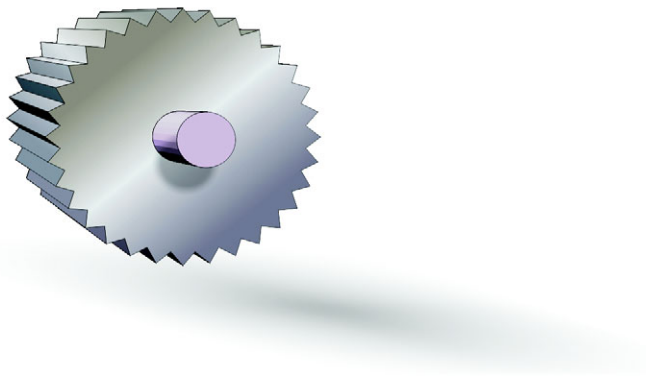
The feathered effect softens the edges of a drop shadow.

By separating a drop shadow from its object, you can gain more control over the drop shadow itself. Drop shadows are bitmaps, so any feature or effect that can be used to modify a bitmap can be applied to a drop shadow. You can also set the rendering resolution of a drop shadow.

You can also remove a drop shadow.

To add a drop shadow

1   Open the **Interactive tools** flyout ![icon], and click the **Interactive drop shadow** tool ![icon].
2   Click an object.
3   Drag from the center or side of the object until the drop shadow is the size you want.
4   Specify any attributes on the property bar.

You can't add drop shadows to linked groups, such as blended objects, contoured objects, beveled objects, extruded objects, objects created with the **Artistic media** tool ![icon], or other drop shadows.

To copy or clone a drop shadow

1   Select the object to which you want to copy or clone a drop shadow.
2   Click **Effects** and click one of the following:
    • **Copy effect** ▶ **Drop shadow from**
    • **Clone effect** ▶ **Drop shadow from**
3   Click the drop shadow of an object.

You can also use the **Eyedropper** tool ![icon] to copy a drop shadow. For more information, see "To copy effects from one object to another object" on page 80.

To separate a drop shadow from an object

1   Select an object's drop shadow.
2   Click **Arrange** ▶ **Break drop shadow group apart**.
3   Drag the shadow.

To adjust the resolution of a drop shadow

1   Click **Tools ▶ Options**.

2   In the **Workspace** list of categories, click **General**.

3   Type a value in the **Resolution** box.

To remove a drop shadow

1   Select an object's drop shadow.

2   Click **Effects ▶ Clear drop shadow**.

You can also remove a drop shadow from an object by clicking the **Clear drop shadow** button on the property bar.

From here

For more information about	In the Help index, see...
copying three-dimensional effects	effects, copying
Filling objects	fills

Changing the transparency of objects

You can apply a transparency to an object so that all objects behind it show through. The CorelDRAW application also lets you specify how the color of the transparent object combines with the color of the object beneath it.

In this section, you'll learn about

- applying transparencies
- applying merge modes

Applying transparencies

When you apply a transparency to an object, you make the objects beneath it partially visible. You can apply transparencies using the same kind of fills you apply to objects; that is, uniform, fountain, texture, and pattern. For more information about these fills, see "Filling objects" on page 141.

By default, CorelDRAW applies all transparencies to the object's fill and outline; however, you can specify whether you want the transparency to apply only to the object's outline or fill.

You can also copy a transparency from one object to another.

When you position a transparency over an object, you can freeze it, making the view of the object move with the transparency.

To apply a uniform transparency

1 Select an object.
2 Open the **Interactive tools** flyout , and click the **Interactive transparency** tool .
3 On the property bar, choose **Uniform** from the **Transparency type** list box.
4 Click a color on the color palette.

5 Type a value in the **Starting transparency** box on the property bar, and press **Enter**.

To apply a fountain transparency

1 Select an object.

2 Open the **Interactive tools** flyout ⬚⬚⬚⬚⬚⬚⬚, and click the **Interactive transparency** tool 🔲.

3 On the property bar, choose one of the following fountain transparencies from the **Transparency type** list box:
  - **Linear**
  - **Radial**
  - **Conical**
  - **Square**

4 Reposition the interactive vector handles that display, or point to where you want the transparency to start on the object, and drag to where you want the transparency to end.

  If you want to reset the transparency, press **Esc** before releasing the mouse button.

5 Type a value in the **Transparency midpoint** box on the property bar, and press **Enter**.

⚡ You can create a custom fountain transparency by dragging colors, whose shades convert to grayscale, from the color palette onto the object's interactive vector handles ⬚⟋⬚.

To apply a textured transparency

1 Select an object.

2 Open the **Interactive tools** flyout ⬚⬚⬚⬚⬚⬚⬚, and click the **Interactive transparency** tool 🔲.

3 Choose **Texture** from the **Transparency type** list box on the property bar.

4 Choose a sample from the **Texture library** list box on the property bar.

5 Open the **First transparency picker** on the property bar and click a texture.

6 On the property bar, type values in the following boxes:
  - **Starting transparency** — lets you change the opacity of the starting color
  - **Ending transparency** — lets you change the opacity of the ending color

To apply a pattern transparency

1 Select an object.

2 Open the **Interactive tools** flyout ⌗▣▨▨▨▨▨, and click the **Interactive transparency** tool ▨.

3 From the **Transparency type** list box on the property bar, choose one of the following:
   • **Two-color pattern** — a simple picture composed of "on" and "off" pixels. The only shades included in the picture are the two that you assign.
   • **Full-color pattern** — a picture composed of lines and fills, instead of dots of color like bitmaps. These vector graphics are smoother and more complex than bitmap images and are easier to manipulate.
   • **Bitmap pattern** — a color picture composed of patterns of light and dark or differently colored pixels in a rectangular array.

4 Open the **First transparency** picker on the property bar, and click a pattern.

5 On the property bar, type values in the following boxes:
   • **Starting transparency**
   • **Ending transparency**

To specify the extent of a transparency

1 Open the **Interactive tools** flyout ⌗▣▨▨▨▨▨, and click the **Interactive transparency** tool ▨.

2 Select an object to which a transparency has been applied.

3 From the **Transparency target** list box on the property bar, choose one of the following:
   • **Fill**
   • **Outline**
   • **All**

To copy a transparency to another object

1 Select an object to which you want to apply a transparency.

2 Click **Effects** ▶ **Copy effect** ▶ **Lens from**.

3 Using the horizontal cursor, select the object with the transparency you want to copy.

To freeze the contents of a transparency

1   Open the **Interactive tools** flyout ⌨▣▩✿▨◨✑, and click the **Interactive transparency** tool ▧.

2   Select an object to which a transparency has been applied.

3   Click the **Freeze** button ❋ on the property bar.

✍

The view of the object beneath the transparency moves with it; however, the actual object remains unchanged.

Applying merge modes

You can apply a merge mode to a transparency to specify how the color of a transparency is combined with the color of the object behind it.

Merge mode	Description
Normal	Applies the transparency color on top of the base color
Add	Adds the values of the transparency color and the base color
Subtract	Adds the values of the transparency color and the base color together, and then subtracts 255
Difference	Subtracts the transparency color from the base color and multiplies by 255. If the transparency color value is 0, the result will always be 255.
Multiply	Multiplies the base color by the transparency color, and then divides by 255. This has a darkening effect, unless you are applying color to white. Multiplying black with any color results in black. Multiplying white with any color leaves the color unchanged.

Merge mode	Description
Divide	Divides the base color by the transparency color, or conversely, divides the transparency color by the base color, depending on which color has the higher value
If lighter	Replaces any base color pixels that are a darker color with the transparency color. Base color pixels that are lighter than the transparency color are not affected.
If darker	Replaces any base color pixels that are a lighter color with the transparency color. Base color pixels that are darker than the transparency color are not affected.
Texturize	Converts the transparency color to grayscale, and then multiplies the grayscale value by the base color
Hue	Uses the hue of the transparency color, as well as the saturation and lightness of the base color. If you are adding color to a grayscale image, there will be no change because the colors are desaturated.
Saturation	Uses the lightness and hue of the base color and the saturation of the transparency color
Lightness	Uses the hue and saturation of the base color and the lightness of the transparency color
Invert	Uses the transparency color's complementary color. If a transparency color value is 127, there will be no change because the color value falls in the center of the color wheel.
Logical AND	Converts the transparency and base colors to binary values, and then applies the Boolean algebraic formula AND to these values

Merge mode	Description
Logical OR	Converts the transparency and base colors to binary values, and then applies the Boolean algebraic formula OR to these values
Logical XOR	Converts the transparency and base colors to binary values, and then applies the Boolean algebraic formula XOR to these values
Red	Applies the transparency color to the red channel of RGB objects
Green	Applies the transparency color to the green channel of RGB objects
Blue	Applies the transparency color to the blue channel of RGB objects

To apply a merge mode

1 Open the **Interactive tools** flyout ![flyout icon], and click the **Interactive transparency** tool ![tool icon].

2 Select an object with a transparency.

3 Choose a merge mode from the **Transparency operation** list box on the property bar.

From here

For more information about	In the Help index, see...
Filling objects	fills

Using lenses with objects

Lenses contain creative effects that let you change the appearance of an object without actually changing the object.

In this section, you'll learn about

*   applying lenses
*   editing lenses

Applying lenses

Lenses change how the object area beneath the lens appears, not the actual properties and attributes of the objects. You can apply lenses to any vector object, such as a rectangle, ellipse, closed path, or polygon. You can also change the appearance of artistic text and bitmaps. When you apply a lens over a vector object, the lens itself becomes a vector image. Likewise, if the lens is placed over a bitmap, the lens also becomes a bitmap.

After you apply a lens, you can copy it and use it with another object.

The lens types applied to the original (far left): (left to right) Heat map, Magnify, and a Custom color map

The following are the types of lenses you can apply to objects.

Lens	Description
Brighten	Lets you brighten and darken object areas and set the rate of the brightness and darkness
Color add	Lets you simulate an additive light model. The colors of the objects beneath the lens are added to the color of the lens as if you were mixing colors of light. You can choose the color and the amount of color you want to add.
Color limit	Lets you view an object area with only black and the lens color showing through. For example, if you place a green color limit lens over a bitmap, all colors except green and black are filtered out in the lens area.
Custom color map	Lets you change all the colors of the object area beneath the lens to a color ranging between two colors you specify. You can choose the range's start and end colors and the progression between the two colors. The progression can follow a direct, forward, or reverse route through the color spectrum.
Fish eye	Lets you distort, magnify, or shrink the objects beneath the lens, according to the percentage value you specify
Heat map	Lets you create the effect of an infrared image by mimicking the heat levels of colors in object areas beneath the lens
Invert	Lets you change the colors beneath the lens to their complementary CMYK colors. Complementary colors are colors that are opposite one another on the color wheel.

Lens	Description
Magnify	Lets you magnify an area on an object by an amount that you specify. The magnify lens overrides the original object's fill, making the object look transparent.
Tinted grayscale	Lets you change the colors of object areas beneath the lens to their grayscale equivalents. Tinted grayscale lenses are particularly effective for creating sepia-tone effects.
Transparency	Lets you make an object look like a piece of tinted film or colored glass
Wireframe	Lets you display the object area beneath the lens with the outline or fill color you choose. For example, if you set red for the outline and blue for the fill, all areas beneath the lens appear to have red outlines and blue fills.

To apply a lens

1   Select an object.

2   Click **Effects ▶ Lens**.

3   Choose a lens type from the list box in the **Lens** docker.

4   Specify the settings you want.

You cannot apply the lens effect directly to linked groups such as contoured objects, beveled objects, extruded objects, drop shadows, paragraph text or objects created with the **Artistic media** tool.

You can preview the different types of lenses in real-time before auto-applying one to a drawing by clicking the **Lock** button and then choosing a lens and settings to preview. When you find the lens you want to use, click the **Lock** button again, and click **Apply**.

To copy a lens

1 Select an object.

2 Click **Effects ▸ Copy effect ▸ Lens from**.

3 Click the object whose lens you want to copy.

Editing lenses

You can edit a lens to change how it affects the area beneath it. For example, you can change the viewpoint of a lens, indicated by an X in the drawing window, to display any part of a drawing. The viewpoint represents the center point of what is being viewed through the lens. You can position the lens anywhere in the drawing window, but it always shows the area around its viewpoint marker. For example, you can use the viewpoint marker on the Magnify lens to enlarge part of a map.

You can also display a lens only where it overlaps other objects or the background. As a result, the lens effect is not seen where the lens covers blank space (white space) in the drawing window.

Freezing the current view of a lens lets you move the lens without changing what's displayed through it. In addition, changes you make to the areas beneath the lens have no effect on the view.

To edit a lens

1 Select an object.

2 Click **Effects ▸ Lens**.

3 Enable the **Viewpoint** check box on the **Lens** docker.

   If you want to display a lens only where it covers other objects, enable the **Remove face** check box.

4 Click **Edit** to display the viewpoint marker.

5 Drag the viewpoint marker in the drawing window to a new location.

6 Click **End**.

   If you want to freeze the current view of a lens, enable the **Frozen** check box.

7 Click **Apply**.

Working with pages and layout tools

The CorelDRAW application allows you to specify the size, orientation, unit of scale, and background of the drawing page. You can customize and display page grids and guidelines to help you organize objects and place them exactly where you want. For example, if you are designing a newsletter, you can set the dimensions of the pages and create guidelines for positioning columns and heading text. When you are laying out an advertisement, you can align graphics and advertisement copy along guidelines and arrange graphic elements within a grid. Rulers can help you position grids, guidelines, and objects along a scale using units of your choosing. Also, you can add and delete pages.

Page layout settings and tools are fully customizable and can be used as defaults for other drawings.

In this section, you'll learn about
- specifying the page layout
- choosing a page background
- adding, renaming, and deleting pages
- using the rulers
- calibrating the rulers
- setting up the grid
- setting up guidelines
- setting the drawing scale

Specifying the page layout

You can begin working on a drawing by specifying settings for the size, orientation, and layout style of the page.

There are two options for specifying a page size: choosing a preset page size or creating your own. You can choose from many preset page sizes ranging from legal-size paper

and envelopes to posters and Web pages. If a preset page size does not meet your needs, you can create a custom page size by specifying a drawing's dimensions.

The orientation of the page can be landscape or portrait. With landscape orientation the drawing's width is greater than its height, and with portrait orientation the drawing's height is greater than its width. Any pages you add to a drawing project assume the current orientation; however, you can give single pages in a drawing project a different orientation. The options you choose when specifying the page layout can be used as a default for all new drawings you create. You can also adjust the page size and orientation settings to match the standard paper settings for printing.

To set the page size and orientation

To	Do the following
Choose a preset page size	Click **Layout ▶ Page setup**, and choose a paper type from the **Paper** list box.
Specify a custom page size	Click **Layout ▶ Page setup**, and choose **Custom** from the **Paper** list box, and type values in the **Width** and **Height** boxes.
Set the page orientation	Click **Layout ▶ Page setup**, and enable the **Landscape** or the **Portrait** option.
Set the page orientation for an individual page in a multi-page document	Go to the page. Click the bottom half of the **Set default or current page size and orientation** button on the property bar, and click the **Landscape** or **Portrait** button.

To apply page size and orientation settings to all pages in a drawing, select the top half of the **Set default or current page size and orientation** button, and disable the **Resize current page only** check box in the **Size** dialog box.

You can also specify the page size and orientation for individual pages by clicking **View ▶ Page sorter view**, selecting the bottom half on the **Set default or current page size and orientation** button, clicking a page, and specifying your options using the buttons on the property bar.

To set the default page layout

1 Click **Tools ▶ Options**.

2   In the list of categories, click **Document**.

3   Enable the **Save options as defaults for new documents** check box.

4   Enable the **Page options** check box.

The next new document is created with the page size and orientation options that were last specified with the **Resize current page only** check box disabled.

Choosing a page background

You can choose the color and type of background for a drawing. For example, you can use a solid color if you want a uniform background. If you want a more intricate or dynamic background, you can use a bitmap. Some examples of bitmaps include textured designs, photographs, and clipart.

When you choose a bitmap as the background, it is embedded in the drawing by default. This is the recommended option. However, you can also link the bitmap to the drawing so that if you later edit the source image, the change is automatically reflected in the drawing. If you send a drawing with a linked image to someone else, you must also send the linked image.

You can make a background bitmap printable and exportable, or you can save computer resources by exporting and printing a drawing without the background bitmap.

If you no longer need a background, you can remove it.

To use a solid color as the background

1   Click **Layout ▶ Page background**.

2   Enable the **Solid** option.

3   Open the **Color** picker, and click a color.

To use a bitmap as the background

1   Click **Layout ▶ Page background**.

2   Enable the **Bitmap** option.

3   Click **Browse**.

4   Choose a file format from the **Files of type** list box.

5   Locate the folder where the file is stored.

6 Double-click the filename.

7 Enable one of the following options:
   • **Linked** — links the bitmap to the drawing so that changes made to the source file are reflected in the bitmap background
   • **Embedded** — embeds the bitmap in the drawing so that changes made to the source file are not reflected in the bitmap background

   If you want the background to be printed and exported with the drawing, enable the **Print and export background** check box.

8 Enable one of the following options:
   • **Default size** — lets you use the bitmap's current size
   • **Custom size** — lets you specify the dimensions of the bitmap. Type values in the **H** and **V** boxes.

   If you want to specify non proportional height and width values, disable the **Maintain aspect ratio** check box.

If the bitmap is smaller than the drawing page, it is tiled across the drawing page. If it is larger than the drawing page, it is cropped to fit the drawing page.

A background bitmap is not an object and cannot be edited.

To remove a background

1 Click **Layout ▶ Page background**.

2 Enable the **No background** option.

Adding, renaming, and deleting pages

CorelDRAW lets you add a page to a drawing, rename it any time, and delete a single page or an entire range of pages.

You can change the order of pages after you have created a multi-page drawing. You can also move objects from one page to another.

To add a page

1 Click **Layout ▶ Insert page**.

2 Type the number of pages you want to add in the **Insert pages** box.

3 Enable one of the following options:

- **Before**
- **After**

If you want to insert before or after a page other than the current page, type the page number in the **Page** box.

⌖ You can also add pages by clicking the **Add page** button on the Document window, if you're on the first or last page.

You can also choose where to add a page by right-clicking a page tab in the Document window, and clicking **Insert page after** or **Insert page before**.

To rename a page

1 Click **Layout ▶ Rename page**.

2 Type the name of the page in the **Page name** box.

To delete a page

1 Click **Layout ▶ Delete page**.

2 In the **Delete page** dialog box, type the number of the page you want to delete.

⌖ You can delete a range of pages by enabling the **Through to page** check box and typing the number of the last page to delete in the **Through to page** box.

To change the order of pages

1 Click **View ▶ Page sorter view**.

2 Drag a page to its new location.

You can also

Copy a page	Right-click, drag the page to its new location, and choose **Copy here** from the list box.
Return to normal view	Double-click a page.

⌖ You can also change the order of pages by dragging the page tabs on the Document Navigator at the bottom of the drawing window.

To move an object to another page

- Drag the object over the page number tab of the page you want to move the object to, and without letting go of the mouse button, drag the object to position it on the page.

Using the rulers

You can display rulers in the drawing window to help you draw, size, and align objects precisely. You can hide the rulers or move them to another position in the drawing window. You can also customize the ruler settings to suit your needs. For example, you can set the ruler origin, choose a unit of measure, and specify how many marks or ticks display between each full unit mark.

By default, CorelDRAW applies the same units used for the rulers to the duplicate and nudge distances. You can change the default so that you can specify different units for these and other settings. For information about nudging, see "Positioning objects" on page 80.

To hide or display the rulers

- Click **View** ▶ **Rulers**.

  A check mark beside the **Rulers** command indicates the rulers are displayed.

To move a ruler

- Hold down **Shift**, and drag a ruler to a new position in the drawing window.

To customize ruler settings

1 Click **View** ▶ **Grid and ruler setup**.

2 In the **Document** list of categories, click **Rulers**.

3 In the **Units** area, choose a unit of measure from the **Horizontal** list box.

   If you want to use a different unit of measure for the vertical ruler, disable the **Same units for horizontal and vertical rulers** check box, and choose a unit of measure from the **Vertical** list box.

4 In the **Origin** area, type values in the following boxes:
   - **Horizontal**
   - **Vertical**

5   Type a value in the **Tick divisions** box.

If you change the unit of measure for rulers, the unit of measure for nudge distances automatically changes as well, unless you first disable the **Same units for duplicate distance, nudge and rulers** check box in the **Nudge** area.

You can access ruler settings directly by double-clicking a ruler.

You can specify nudge settings by typing values in the **Nudge, Super nudge, and Micro nudge** boxes in the **Nudge** area.

Calibrating the rulers

You can have one inch on your screen equal one inch of "real" distance. This lets you work using real-world distances as opposed to relative distances that depend on screen resolution. This tool is particularly useful when working with signs, or when drawing in 1:1 zoom mode.

Before you can perform this procedure, you must have a clear plastic ruler for comparing real-world and on-screen distances. This ruler should use the same unit of measurement you set for the CorelDRAW rulers. For information about ruler settings, see "Using the rulers" on page 198.

To calibrate the rulers to match real-world distance

1   Click **Tools ▶ Options**.

2   In the **Toolbox** list of categories, double-click **Toolbox**, and click **Zoom, hand tool**.

3   Click **Calibrate rulers**.

4   Place a clear plastic ruler under the on-screen horizontal ruler.

5   Click the Up or Down Arrow on the **Horizontal** box to match one unit of measurement on the on-screen ruler with one unit of measurement on the actual ruler.

6   Place the ruler beside the on-screen vertical ruler.

7   Click the Up or Down Arrow button on the **Vertical** box to match one unit of measurement on the on-screen ruler with one unit of measurement on the actual ruler.

Setting up the grid

The grid is a series of intersecting dashed lines or dots that you can use to precisely align and position objects in the drawing window. You can set the distance between the grid lines or dots by specifying the frequency or spacing. Frequency refers to the number of lines or dots that display between each horizontal and vertical unit. Spacing refers to the exact distance between each line or dot. High frequency values or low spacing values can help you align and position objects more precisely.

You can have objects snap to the grid so that when you move the objects, they jump between grid lines.

To display or hide the grid

- Click **View ▶ Grid**.

A check mark beside the **Grid** command indicates that the grid is displayed.

To set the distance between the grid lines

1 Click **View ▶ Grid and ruler setup**.

2 Enable one of the following options:
   - **Frequency** — specifies grid spacing as the number of lines per unit of measure
   - **Spacing** — specifies grid spacing as the distance between each grid line

3 Type values in the following boxes:
   - **Horizontal**
   - **Vertical**

The unit of measure used for grid spacing is the same as that used for rulers. For information about ruler settings, see "To customize ruler settings" on page 198.

To have objects snap to the grid

1 Click **View ▶ Snap to grid**.

2 Move the objects using the **Pick** tool.

Setting up guidelines

Guidelines are lines that can be placed anywhere in the drawing window to aid in object placement. There are three types of guidelines: horizontal, vertical, and slanted. By default, the application displays guidelines you can add to the drawing window, but you can hide them at any time.

You can add a guideline wherever you need one; however, you can also choose to add preset guidelines. There are two types of preset guidelines: Corel presets and user defined presets. Examples of Corel presets include guidelines that display at one-inch margins, and guidelines that display at newsletter column borders. User defined presets are guidelines whose location you specify. For example, you can add preset guidelines that display margins at a distance you specify or that define a column layout or grid. After you add a guideline, you can select it, move it, rotate it, lock it in place, or delete it.

You can have objects snap to the guidelines so that when an object is moved near a guideline, it can only be centered on the guideline or lined up on either side of the guideline.

Guidelines always use the unit of measure specified for rulers. For information about ruler settings, see "To customize ruler settings" on page 198.

Guidelines can be placed in the drawing window to aid in object placement.

To display or hide the guidelines

• Click **View ▶ Guidelines**.

A check mark beside the **Guidelines** command indicates that the guidelines are displayed.

To add a horizontal or vertical guideline

1   Click **View ▶ Guidelines setup**.

2   In the list of categories, click one of the following:
    • **Horizontal**
    • **Vertical**

3   Specify the guideline settings you want.

4   Click **Add**.

You can also add a guideline by dragging from the horizontal or vertical ruler in the drawing window.

To modify guidelines

To	Do the following
Select a single guideline	Click the guideline using the **Pick** tool ⬚.
Select all guidelines	Click **Edit ▶ Select all ▶ Guidelines**.
Move a guideline	Drag a guideline to a new position in the drawing window.
Rotate a guideline	Click a guideline twice using the **Pick** tool ⬚, and rotate it when skewing handles display.
Lock a guideline	Click a guideline using the **Pick** tool ⬚, and click **Arrange ▶ Lock object**.
Unlock a guideline	Click a guideline using the **Pick** tool ⬚, and click **Arrange ▶ Unlock object**.
Delete a guideline	Click a guideline using the **Pick** tool ⬚, and press **Delete**.

To	Do the following
Delete a preset guideline	Click **View ▶ Guidelines setup**, and click **Presets** in the list of categories. Disable the check box beside the preset guideline you want to delete.

You can also lock or unlock a guideline by right-clicking the guideline, and then clicking **Lock object** or **Unlock object**.

You can access the guidelines setup directly by right-clicking a ruler, and then clicking **Guidelines setup**.

To have objects snap to the guidelines

1 Click **View ▶ Snap to guidelines**.

2 Drag the object to the guideline.

If you want to snap the center of an object to a guideline, select the object and move it over the guideline until its center of rotation snaps to the guideline.

Setting the drawing scale

You can choose a preset or custom drawing scale to relate distances in a drawing to real-world distances. For example, you can specify that one inch in the drawing corresponds to one meter in reality. A preset drawing scale lets you set a typical scale, such as 1:2 or 1:10, while a custom drawing scale lets you set any distance on the page equal to a real-world distance. For example, you can set a more accurate, precise scale that includes decimal numbers, such as 4.5 to 10.6.

Drawing scales are particularly useful if you are creating a technical or architectural drawing with dimension lines. For information about dimension lines, see "Drawing flow and dimension lines" on page 59.

The checkered effect in this graphic was created using a grid.

To choose a preset drawing scale

1   Click **View ▶ Grid and ruler setup**.

2   In the **Document** list of categories, click **Rulers**.

3   Click **Edit scale**.

4   Choose a drawing scale from the **Typical scales** list box.

From here

For more information about	In the Help index, see...
Adding guidelines	guidelines, adding
Creating custom drawing scales	scale

Working with layers

You can work with layers to help you organize and arrange objects in complex illustrations.

In this section, you'll learn about

- creating layers
- changing layer properties and stacking order
- moving and copying objects between layers
- printing layers

Creating layers

All CorelDRAW drawings consist of stacked objects. The vertical order of these objects — the stacking order — contributes to the appearance of the drawing. You can organize these objects using invisible planes called layers.

Layering gives you added flexibility when organizing and editing the objects in complex drawings. You can divide a drawing into multiple layers, each containing a portion of the drawing's contents. For example, using layers can help you organize an architectural plan for a building. You can organize the building's various components (for example, plumbing, electrical, structural) by placing them on separate layers. You can display pages only and layers only.

You can also display selected objects. Hiding a layer lets you identify and edit the objects on other layers. You also reduce the time CorelDRAW needs to refresh your drawing when you edit it.
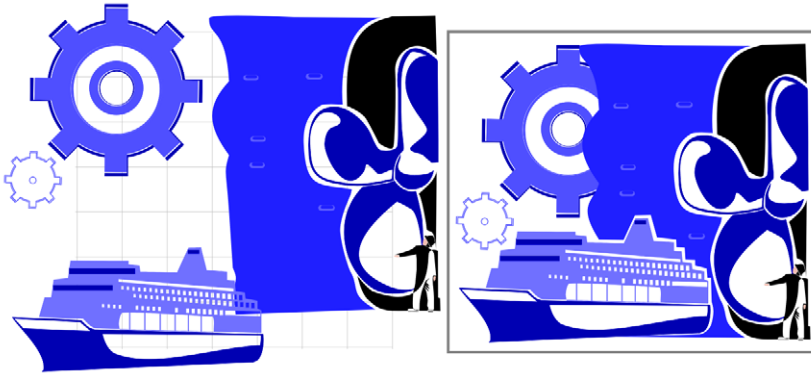
Drawings can be assembled by placing objects on various levels or layers.
Layering lets you change foregrounds and backgrounds independently.

Each new file has one Master Page that contains and controls three default layers: the Grid, Guides, and Desktop layers. The Grid, Guides, and Desktop layers contain the grid, guidelines, and objects outside the borders of the drawing page. The Desktop layer lets you create drawings you might want to use later. You can specify settings for the grid and guidelines on the Master Page. You can specify settings, for example color, for each layer on the Master Page.

You can add one or more master layers to a Master Page. This layer contains information that you want to display on every page of a multipage document. For example, you can use a master layer to place a header, footer, or static background on every page.

To create a layer

To	Do the following
Create a layer	Click **Tools ▶ Object manager**. Click the flyout button ⟨▸⟩, and click **New layer**.
Create a master layer	Click **Tools ▶ Object manager**. Click the flyout button, and click **New master layer**.

☞ To use a layer in the drawing, you must first make the layer active. In the **Object manager** docker the active layer is highlighted in red. When you start a drawing, the default layer (Layer 1) is the active layer.

When you create a master layer, it moves to the Master Page.

〜 You can also add a layer by clicking the **New layer** button 🖳 in the **Object manager** docker.

You can make any layer a master layer by right-clicking the layer name, and clicking **Master**.

To display or hide a layer

1 Click **Tools ▶ Object manager**.
2 Click the **Eye** icon 👁 beside the layer name.

The layer is hidden when the **Eye** icon is grayed.

〜 You can also display or hide a layer by right-clicking the layer in the **Object manager** docker and clicking **Visible**.

To display pages, layers, and objects

To	
Display pages	Click **Window ▶ Dockers ▶ Object manager**. Click the flyout button ▸, and then click **Show pages**.
Display layers	Click **Window ▶ Dockers ▶ Object manager**. Click the **Layer manager view** button 🖳.
Display objects	Click **Window ▶ Dockers ▶ Object manager.** Click the flyout button ▸, and then click **Expand to show selection**.

To delete a layer

1 Click **Tools ▶ Object manager**.
2 Click the name of a layer.
3 Click the flyout button ▸, and click **Delete layer**.

When you delete a layer, you also delete all the objects on it. To keep an object on the layer you're deleting, move it to a different layer first.

You can delete any unlocked layer except the three default layers of the Master Page (Grid, Guides, or Desktop).

To specify settings for a layer on the Master Page

1 Click **Tools** ▶ **Object manager**.

2 Right-click the layer, and click **Properties**.

3 Change the settings and click **OK**.

Changing layer properties and stacking order

By default, each new layer has its editing, printing, and display properties enabled and its master layer property disabled; however, you can change these properties.

You can set a layer's editing properties to make a layer active, and allow the editing of all layers or the active layer only. When you are making changes to a drawing, you can lock a layer to prevent accidental changes to its objects. When you lock a layer, you cannot select or edit it.

Renaming layers can be used to indicate their contents, position in the stacking order, and relationship with other layers.

You can change a layer's place in the stacking order.

To set a layer's editing properties

• Click **Tools** ▶ **Object manager**.

To	Do the following
Make a layer active	Click the name of a layer.
Allow editing of all layers	Click the flyout button ⊡, and click **Edit across layers**.
Allow editing of the active layer only	Click the flyout button ⊡, and disable **Edit across layers**.

To	Do the following
Lock or unlock a layer	Click the **Pencil** icon ✐ beside the layer name.

☞ If you disable the **Edit across layers** button 📝, you can work on the active layer and the Desktop layer only. You can't select or edit objects on inactive layers.

You can't "lock" or "unlock" the Grid layer.

💡 You can also allow editing of the active or of all layers by enabling or disabling the **Edit across layers** button in the **Object manager** docker. Editing across layers is enabled when the button appears pressed.

You can also lock or unlock a layer by right-clicking the layer in the Object manager docker and clicking **Editable**.

To rename a layer

1   Click **Tools ▶ Object manager**.
2   Right-click the layer name, and click **Rename**.

💡 You can also rename a layer by clicking the layer name and typing a new name.

To change the position of a layer in the stacking order

1   Click **Tools ▶ Object manager**.
2   In the **Layers** list, drag a layer name tag to the new position.

Moving and copying objects between layers

You can move or copy selected objects to new layers, including layers on the Master Page to another page and back.

Moving or copying an object to a layer below its current layer causes the object to become the top object on its new layer. Similarly, moving or copying an object to a layer above its current layer causes the object to become the bottom object.

To move or copy an object to another layer

1 Click **Tools ▶ Object manager**.

2 Click an object in the **Object manager**.

3 Click the flyout button ⬝▸, and click one of the following:
   - **Move to layer**
   - **Copy to layer**

4 Point to the layer to which you want to move or copy the object, and click.

✎ When moving objects to or from a layer, the layers must be unlocked.

🖉 You can move and copy an object to another layer by dragging an object to a new layer in the **Object manager** docker.

Printing layers

Enabling the print setting of a layer lets you print the layer and its contents. If you disable a layer's print setting, the layer and its contents won't appear when you print the drawing.

To enable or disable printing for a specific layer

1 Click **Tools ▶ Object manager**.

2 Click the **Printer** icon 🖨 beside the layer name.

✎ Disabling the printing of a layer prevents its contents from displaying in full-screen previews. For information about full-screen previews, see "Previewing a drawing" on page 38.

🖉 You can also enable or disable the printing of a layer by right-clicking the layer in the **Object manager** docker and clicking **Printable**.

Adding and formatting text

The CorelDRAW application lets you use text to create documents or annotate drawings.

In this section, you'll learn about

- adding and selecting text
- encoding text
- changing the appearance of text
- finding, editing, and converting text
- aligning and spacing text
- shifting and rotating text
- moving text
- fitting text to a path
- formatting paragraph text
- combining and linking paragraph text frames
- wrapping paragraph text around objects and text
- embedding graphics and adding special characters
- displaying nonprinting characters

Adding and selecting text

There are two types of text you can add to drawings — artistic text and paragraph text. Artistic text can be used to add short lines of text to which you can apply a wide range of effects, such as drop shadows. Paragraph text can be used for larger bodies of text that have greater formatting requirements. You can add both paragraph and artistic text directly in the drawing window.

You can add artistic text along an open or closed path. You can also fit existing artistic and paragraph text to a path. For more information, see "Fitting text to a path" on page 224.

When adding paragraph text, you must first create a text frame. By default, paragraph text frames remain the same size regardless of how much text they contain. Any text that continues past the bottom-right border of the text frame is hidden until you either enlarge the text frame or link it to another text frame. You can fit text to a frame, which automatically adjusts the point size of text so that the text fits perfectly in the frame. For information about fitting text to a frame, see "To fit text to a paragraph text frame" on page 227. You can also have paragraph text frames automatically expand and shrink as you type, so that the text fits perfectly in the frame.

You can insert a paragraph text frame inside a graphic object. This lets you use objects as containers for text so that you can use different shapes for text frames. You can also separate text from an object. When you do, the text retains its shape, and you can move or modify the text and the object independently.
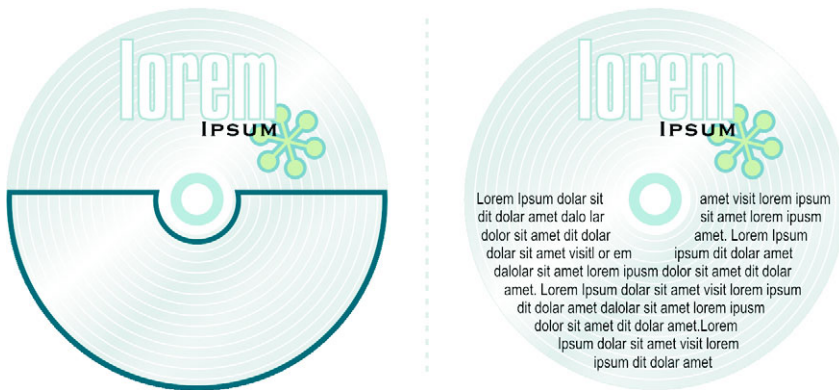
Paragraph text placed inside an object. The object is made invisible by removing its outline.

When you import or paste text, you have the option of maintaining formatting, maintaining fonts and formatting, or discarding fonts and formatting. Maintaining fonts ensures that imported and pasted text retains its original font type. Maintaining formatting ensures that formatting information such as bullets, columns, and bold or italic formatting is preserved. If you choose to discard fonts and formatting, the imported or pasted text takes on the properties of the selected text object, or if none is selected, the default font and formatting properties. For more information about importing files, see "Importing files" on page 299. For more information about pasting, see "To paste an object into a drawing" on page 78.

To modify text, you must first select it. You can select entire text objects or specific characters.

To add artistic text

- Click anywhere in the drawing window using the **Text** tool ▨, and type.

To add paragraph text

To	Do the following
Add paragraph text	Click the **Text** tool ▨. Drag in the drawing window to size the paragraph text frame, and type.
Add paragraph text inside an object	Click the **Text** tool. Move the pointer over the object's outline, and click the object when the pointer changes to an **Insert in object** pointer. Type inside the frame.
Separate a paragraph text frame from an object	Select the object using the **Pick** tool ▨, and click **Arrange ▶ Break paragraph text inside a path apart**.
Have paragraph text frames automatically adjust to fit text	Click **Tools ▶ Options**. In the list of categories, double-click **Text**, and click **Paragraph**. Enable the **Expand and shrink paragraph text frames to fit text** check box.

Enabling the **Expand and shrink paragraph text frames to fit text** check box on the **Paragraph** page of the **Options** dialog box affects only new text frames. Existing paragraph text frames remain fixed in size.

You can adjust the size of a paragraph text frame by clicking the text frame using the **Pick** tool, and dragging any selection handle.

To set options for importing and pasting text

1 Import or paste the text.
2 In the **Importing / pasting text** dialog box, enable one of the following options:
   - **Maintain fonts and formatting**
   - **Maintain formatting only**

• **Discard fonts and formatting**

If you want to use the same formatting options whenever you import or paste text, enable the **Don't show this warning again** check box.

Clicking **Cancel** will cancel the import or paste operation.

If you choose to maintain fonts and a required font is not installed on your computer, the PANOSE font matching system substitutes the font for you. For more information, see "Substituting unavailable fonts" on page 235.

You can re-enable the **Importing / pasting text** dialog box by clicking **Tools ▶ Options**, clicking **Warnings** in the **Workspace** list of categories, and enabling the **Pasting and importing text** check box.

To select text

To select	Do the following
An entire text object	Click the text object using the **Pick** tool ▯.
Specific characters	Drag across the text using the **Text** tool ▯.

You can select multiple text objects by holding down **Shift** and clicking each text object using the **Pick** tool.

Encoding text

After opening or importing a drawing that contains text in a language different from the language of your operating system, you may find that text does not display correctly. To correctly display text, you can change the encoding. Encoding determines the character set of text.

Encoding settings do not help display correctly text outside the drawing window, such as keywords, file names, and text entries in the **Object manager** and **Object data manager** dockers. You have to use code page settings in the **Open** or **Import** dialog boxes to set the proper characters for such text.

To correctly display text in any language

1   Click **Text** ▶ **Encode**.

2   In the **Text encoding** dialog box, choose the **Other encoding** option.

3   From the **Other encoding** list box, choose an encoding setting that makes the text readable.

The preview window displays the text with the current encoding setting.

Changing the appearance of text

You can change the default text style, so that all new artistic or paragraph text you create has the same properties. You can enhance artistic text and paragraph text by modifying their character properties. For example, you can change the font type and size or make the text bold or italic. You can also change the position of text to subscript or superscript, which is useful if a drawing contains scientific notation. You can add underlines, strikethrough lines, and overlines to text. You can change the thickness of these lines, as well as the distance between the lines and the text. You can also change the color of text.

You can change the case of text to lowercase or uppercase without deleting or replacing letters. You can increase or decrease font size by a specified increment amount. By default, the unit of measure is points. You can change this setting for the active drawing and all subsequent drawings you create.

Greeking text lets you increase the redraw speed by representing text under a certain size with lines. This is useful when showing prototypes of documents or drawings. You can make text readable again by reducing the greeking value or by zooming in on the text.

To change the default text style

1   Click a blank space in the drawing window using the **Pick** tool ▯.

2   Click **Text** ▶ **Format text**.

3   Click the **Character** tab.

4   Specify the properties you want.

Following each property change you make, by default you must specify whether the changes are applied to artistic text, paragraph text, or both. You can override this default by disabling the **Auto apply** button ▯ next to **Apply**.

To have changes to the default text style apply to future documents, click **Tools ▶ Save settings as default**.

You can make the style of an existing text frame or object the default style by clicking **Tools ▶ Graphic and text styles**, and dragging the text frame or object over either the **Default artistic text** or the **Default paragraph text** icon on the **Graphic and text** docker.

To change character properties

1 Select the text.

2 Click **Text ▶ Format text**.

3 Click the **Character** tab.

4 Specify the character attributes you want.

You can also make selected text bold, italic, or underlined by clicking the **Bold** button ⓑ, **Italic** button 𝐼, or **Underline** button 𝖴 on the property bar.

To change the color of text

1 Select the text using the **Text** tool 𝔸.

2 Click a color on the color palette.

You can change the color of an entire text object by selecting it with the Pick tool ▹ and dragging a color swatch from the color palette to the text object.

To change text case

1 Select the text.

2 Click **Text ▶ Change case**.

3 Enable one of the following options:
   • **Sentence case** — capitalizes the initial letter of the first word in each sentence
   • **Lowercase** — makes all text lowercase
   • **Uppercase** — makes all text uppercase
   • **Title case** — capitalizes the initial letter of each word
   • **Toggle case** — reverses the case; all uppercase letters become lowercase and all lowercase letters become uppercase

To resize text

To	Do the following
Increase the size of text	Select the text using the **Text** tool , hold down **Ctrl**, and press **8** on the number pad.
Decrease the size of text	Select the text using the **Text** tool, hold down **Ctrl**, and press **2** on the number pad.
Specify the amount by which to resize text	Click **Tools ▶ Options**. Click **Tools ▶ Options**. In the list of categories, click **Text**, and type a value in the **Keyboard text increment** box. If you want to change the default unit of measure, choose a unit from the **Default text units** list box.

You must be in **Num lock** mode to increase or decrease the size of text.

To greek text

1 Click **Tools ▶ Options**.

2 In the list of categories, click **Text**.

3 Type a value in the **Greek text below** box.

Finding, editing, and converting text

You can find text in a drawing and replace it automatically. You can edit text directly in the drawing window or in a dialog box.

CorelDRAW lets you convert artistic text to paragraph text if you require more formatting options, and paragraph text to artistic text if you'd like to apply special effects.

You can also convert both paragraph and artistic text to curves. This transforms characters into single line and curve objects, letting you add, delete, or move the nodes of individual characters to alter their shape. For more information, see "Working with curve objects" on page 101. When you convert text to curves, the appearance of the text is preserved, including font, style, character position and rotation, spacing, and any

other text settings and effects. Any linked text objects are also converted to curves. If you convert paragraph text in a fixed-sized frame to curves, any text that overflows the frame is deleted. For information about fitting text to a frame, see "Formatting paragraph text" on page 226.

To find text

1 Click **Edit ▶ Find and replace ▶ Find text**.

2 Type the text you want to find in the **Find what** box.

If you want to find the exact case of the text you specified, enable the **Match case** check box.

3 Click **Find next**.

To find and replace text

1 Click **Edit ▶ Find and replace ▶ Replace text**.

2 Type the text you want to find in the **Find what** box.

If you want to find the exact case of the text you specified, enable the **Match case** check box.

3 Type the replacement text in the **Replace with** box.

4 Click one of the following buttons:
  • **Find next** — finds the next occurrence of the text specified in the **Find what** box
  • **Replace** — replaces the selected occurrence of the text specified in the **Find what** box. If no occurrence is selected, **Replace** finds the next occurrence.
  • **Replace all** — replaces every occurrence of the text specified in the **Find what** box

To edit text

1 Select the text.

2 Click **Text ▶ Edit text**.

3 Make changes to the text in the **Edit text** dialog box.

You can also

Edit text in the drawing window	Select the text using the **Text** tool , and edit it.

You cannot edit text that has been converted to curves.

To convert text

To convert	Do the following
Paragraph text to artistic text	Select the text using the **Pick** tool ⬚, and click **Text ▸ Convert to artistic text**.
Artistic text to paragraph text	Select the text using the **Pick** tool, and click **Text ▸ Convert to paragraph text**.
Artistic or paragraph text to curves	Select the text using the **Pick** tool, and click **Arrange ▸ Convert to curves**.

You cannot convert paragraph text to artistic text when the paragraph text is linked to another frame, has special effects applied to it, or overflows its frame.

You can also convert text to curves by right-clicking the text using the **Pick** tool and clicking **Convert to curves**.

Aligning and spacing text

You can align both paragraph and artistic text horizontally. Aligning paragraph text lines up text relative to the paragraph text frame. You can horizontally align all paragraphs or only selected paragraphs in a paragraph text frame. You can vertically align all paragraphs in a paragraph text frame. You can also align text to another object.
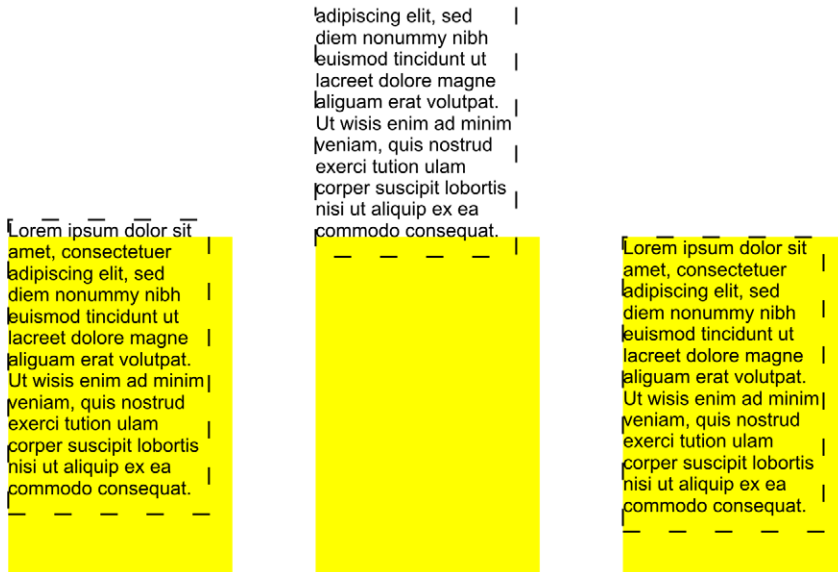
You can align a text object to other objects using the first line baseline, last line baseline, or the edge of the text bounding box.

Artistic text can be aligned horizontally, but not vertically. When you align artistic text, it is aligned with the entire text object. If characters have not been shifted horizontally, applying no alignment produces the same result as applying left alignment.

You can change character and word spacing in selected paragraphs, or in an entire paragraph text frame or artistic text object. Changing character spacing between selected or specific text is also referred to as tracking; changing character spacing in an entire block of text is also called kerning. You can change the line spacing of text, which is also referred to as leading. Changing the leading for artistic text applies the spacing to lines of text separated by a carriage return. For paragraph text, leading applies only to lines of text within the same paragraph. You can also change the spacing before and after paragraphs in paragraph text, and you can kern selected characters. Kerning balances the optical space between letters.

To align text horizontally

1   Select the text object using the **Pick** tool .

2   Click **Text ▶ Format text**.

3   Click the **Paragraph** tab.

4 Choose an item from the **Alignment** list box.

To align selected paragraphs in a paragraph text frame, select them using the **Text** tool 🅰.

To align paragraph text vertically in a text frame

1 Select the paragraph text.

2 Click **Text** ▶ **Format text**.

3 Click the **Columns** tab.

4 Choose an alignment option from the **Vertical justification** list box.

To align text to an object

1 Hold down **Shift,** select the text, and then select the object.

2 Click **Arrange** ▶ **Align and distribute** ▶ **Align and distribute**.

3 Choose one of the following from the **For text source objects use** list box:
   • **First line baseline** — aligns the text using the baseline of the first line of text
   • **Last line baseline** — aligns the text using the baseline of the last line of text
   • **Bounding box** — aligns the text using its bounding box

4 Enable one of the following horizontal alignment check boxes:
   • **Left**
   • **Right**
   • **Center**

5 Enable one of the following vertical alignment check boxes:
   • **Top**
   • **Bottom**
   • **Center**

6 Click **Apply**.

The object used to align the left, right, top, or bottom edges is determined by the order of creation or order of selection. If you marquee select the objects before you align them, the last object created will be used. If you select the objects one at a time the last object selected will be the reference point for aligning the others. If you've applied a linear transformation, such as rotation,

to the text and are aligning with a baseline, the objects align using the baseline point of the starting edge of the text object.

If you are aligning text objects to each other and have elected to align with the first line baseline or last line baseline, the vertical and horizontal alignment check boxes are grayed. The baseline points of the text objects are aligned to each other.

You can also align objects by selecting them and clicking the **Align and distribute** button on the property bar.

To change the spacing of text

1   Select the text.
2   Click **Text ▶ Format text**.
3   Click the **Paragraph** tab.
4   In the **Spacing** area, type values in any of the boxes.

Character and word spacing can only be applied to entire paragraphs, or to an entire paragraph text frame or artistic text object.

Values represent a percentage of the space character. The **Character** values range from -100 to 2000 percent. All other values range from 0 to 2000 percent.

You can also change the spacing between words and characters proportionately by selecting the text object using the **Shape** tool ⟨⟩ and dragging the **Interactive horizontal spacing** arrow in the bottom-right corner of the text object. Drag the **Interactive vertical spacing** arrow in the bottom-left corner of the text object to change the line spacing proportionately.

To apply range kerning to selected characters

1   Select two or more characters using the **Text** tool ⟨A⟩.
2   Click **Text ▶ Format text**.
3   Click the **Character** tab.
4   Type a value in the **Range kerning** box.

Shifting and rotating text

Shifting artistic and paragraph text vertically and horizontally can create an interesting effect. You can also rotate characters. Straightening text pulls the text into its original position. You can return vertically shifted characters to the baseline without affecting their rotation angle.
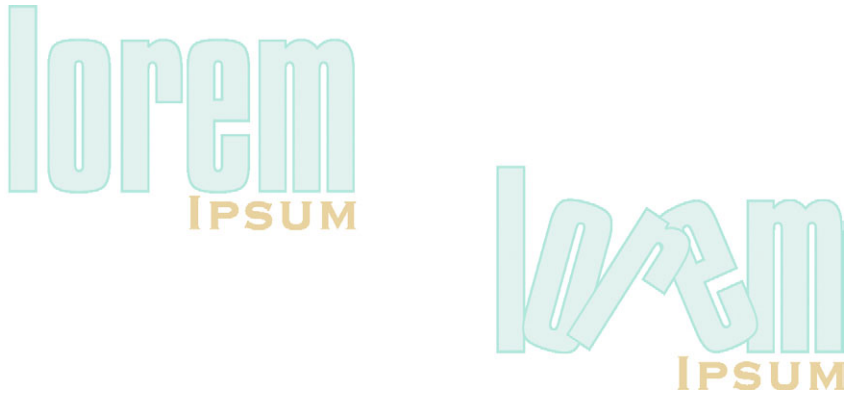
Rotated characters

To shift or rotate a character

1 Select the character or characters using the **Text** tool ⒜.

2 Click **Text ▶ Format text**.

3 Click the **Character** tab.

4 In the **Shift** area, type a value in one of the following boxes:
  - **Horizontal** ⤬⊣ — a positive number moves characters to the right, and a negative number moves characters to the left
  - **Vertical** ⌄⊤ — a positive number moves characters up, and a negative number moves characters down
  - **Rotate** ⥀ — a positive number rotates characters counter-clockwise, and a negative number rotates characters clockwise

You can also shift or rotate characters whose nodes you select using the **Shape** tool ⌖ by typing values in the **Horizontal shift** box, **Vertical shift** box, or **Angle of rotation** box on the property bar.

To straighten a shifted or rotated character

1 Select the text.

2 Click **Text ▶ Straighten text**.

To return a vertically shifted character to the baseline

1 Open the **Shape edit** flyout ⟦ 🔧 ✎ ✐ ✑ ✒ ✓ ⟧, and click the **Shape** tool 🔧.

2 Select the text object, and select the node to the left of the character.

3 Click **Text ▶ Align to baseline**.

Moving text

CorelDRAW lets you move paragraph text between frames, and artistic text between artistic text objects. You can also move paragraph text to an artistic text object, and artistic text to a paragraph text frame.

To move text

1 Select the text using the **Text** tool 🅰.

2 Drag the text to another paragraph text frame or artistic text object.

You can also

Move text within the same frame or object	Select the text, and drag it to a new position.
Move or copy selected text to a new text object	Right-click and drag the text to a new position, and click **Copy here** or **Move here**.

Fitting text to a path

You can add artistic text along the path of an open object (for example, a line) or a closed object (for example, a square). You can also fit existing text to a path. Artistic text can be fitted to an open or closed path. Paragraph text can be fitted to open paths only.

After you fit text to a path, you can adjust the text's position relative to that path. For example, you can place the text on the opposite side of the path, or you can adjust the distance between the text and the path.

CorelDRAW treats text fitted to a path as one object; however, you can separate the text from the object if you no longer want it to be part of the path. When you separate text from a curved or closed path, the text retains the shape of the object to which it was fitted. Straightening the text reverts it to its original appearance.

To add text along a path

1   Select a path using the **Pick** tool ![pointer].
2   Click **Text ▶ Fit text to path**.
3   Point to the path, and click when the pointer changes to the **Fit to path** pointer ![pointer].
4   Type along the path.

If the text is fitted to a closed path, the text is centered along the path. If the text is fitted to an open path, the text flows from the point of insertion.

You can't fit text to the path of another text object.

You can also fit text to a path by clicking the **Text** tool ![tool] and pointing to a path. When the pointer changes to a **Fit to path** pointer, click where you want the text to begin, and type.

To fit text to a path

1   Select a text object using the **Pick** tool ![pointer].
2   Click **Text ▶ Fit text to path**.
    The pointer changes to a thick, black arrow.
3   Click a path.

To adjust the position of text fitted to a path

1   Using the **Pick** tool ![pointer], select the text fitted to a path.
2   Choose a setting from any of the following list boxes on the property bar:
    • **Text orientation** — the angle at which the text sits on the path
    • **Vertical placement** — the vertical alignment of the text relative to the path
    • **Distance from path** — the distance between the text and the path to which it is fit

- **Text placement** — the side of the path on which the text is fitted
- **Horizontal offset** — the horizontal position of the text along the path

You can also change the horizontal position of fitted text by selecting it with the **Shape** tool 🔎 and dragging the character nodes you want to reposition.

Using the **Pick** tool, you can move text along the path by dragging the small red node that displays beside the text.

To separate text from a path

1 Select the fitted text using the **Pick** tool 🔍.
2 Click **Arrange ▶ Break text apart**.

To straighten text

1 Select the fitted text using the **Pick** tool 🔍.
2 Click **Arrange ▶ Break text apart**.
3 Click **Text ▶ Straighten text**.

Formatting paragraph text

CorelDRAW offers various formatting options for paragraph text. For example, you can fit text to a paragraph text frame. Fitting text to a frame increases or decreases the point size of text so that it fits the text frame exactly. You can also use columns to lay out text-intensive projects such as newsletters, magazines, and newspapers. You can create columns of equal or varying widths and gutters.

Applying drop caps to paragraphs enlarges the initial letter and insets it into the body of text. You can customize a drop cap by changing its settings. For example, you can change the distance between the drop cap and the body of text, or specify the number of lines of text you want to appear beside the drop cap. You can remove the drop cap at any point, without deleting the letter.

You can use bulleted lists to format information. You can have text wrap around bullets, or you can offset a bullet from text to create a hanging indent. CorelDRAW lets you customize bullets by changing their size, position, and distance from text. After you add a bullet, you can remove it without deleting the text.

You can add tabs to indent paragraph text. You can also remove tabs and change tab alignment. Setting trailing leader tabs automatically creates dots that precede the tab.

Indenting changes the space between a paragraph text frame and the text that it contains. You can indent an entire paragraph, the first line of a paragraph, all but the first line of a paragraph (a hanging indent), or from the right side of the frame. You can also remove an indent without deleting or retyping text.

Hyphenating splits words between lines when the whole word does not fit on one line. You can have CorelDRAW hyphenate automatically. You can specify hyphenation settings such as the minimum number of letters before and after a hyphen, and the hot zone.

Paragraph text frame formatting can be applied to selected frames only, selected frames and frames they are currently linked to, or to all selected and subsequently linked frames. For information about setting these options, see "To choose paragraph text frame formatting options" in the Help.

To fit text to a paragraph text frame

1   Select a paragraph text frame.

2   Click **Text ▶ Fit text to frame**.

> If you fit text to linked paragraph text frames, the application adjusts the size of text in all of the linked text frames. For more information about linking frames, see "Combining and linking paragraph text frames" on page 228.

To add columns to paragraph text frames

1   Select a paragraph text frame.

2   Click **Text ▶ Format text**.

3   Click the **Columns** tab.

4   Type a value in the **Number of columns** box.

5   Specify the settings and options you want.

> You can change the size of columns and gutters by dragging a side selection handle in the drawing window with the **Text** tool ▲.

To add a drop cap

1 Select the paragraph text.

2 Click **Text ▶ Format text**.

3 Click the **Effects** tab.

4 Choose **Drop cap** from the **Effect type** list box.

5 Click one of the following icons:
   - **Dropped** — wraps text around the drop cap
   - **Hanging indent** — offsets the drop cap from the body of text
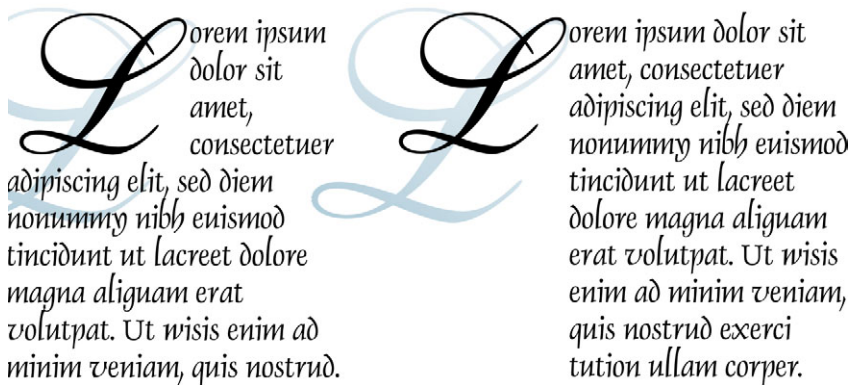
You can add a drop cap (left) or a hanging indent drop cap(right).

You can also

Specify the number of lines beside a drop cap	Type a value in the **Dropped lines** box.
Specify the distance between the drop cap and the body of text	Type a value in the **Distance from text** box.
Remove drop caps	Choose **None** from the **Effect type** list box.

Combining and linking paragraph text frames

You can combine paragraph text frames. You can also break paragraph text frames apart into subcomponents — columns, paragraphs, bullets, lines, words, and characters.

Every time you break apart a text frame, the subcomponents are placed into separate paragraph text frames.

Linking paragraph text frames directs the flow of text from one text frame to another if the amount of text exceeds the size of the first text frame. If you shrink or enlarge a linked paragraph text frame, or change the size of the text, the amount of text in the next text frame is automatically adjusted. You can link paragraph text frames before or after you type text.

You cannot link artistic text. However, you can link a paragraph text frame to an open or closed object. When you link a paragraph text frame to an open object (for example, a line), the text flows along the path of the line. Linking a text frame to a closed object (for example, a rectangle) inserts a paragraph text frame and directs the flow of text inside the object. If text exceeds the open or closed path, you can link the text to another text frame or object. You can also link to paragraph text frames and objects across pages.

After linking paragraph text frames, you can redirect the flow from one object or text frame to another. When you select the text frame or object, a blue arrow indicates the direction of the text flow. You can hide or display these arrows.

You can make text flow between frames and objects by linking the text.

You can remove links between multiple paragraph text frames, and between paragraph text frames and objects. When you have only two linked paragraph text frames and you remove the link, the text flows into the remaining paragraph text frame. Removing a link between paragraph text frames with a series of links redirects the flow of text into the next paragraph text frame or object.

By default, CorelDRAW applies paragraph formatting such as columns, drop caps, and bullets to only the selected paragraph text frames; however, you can change your

settings so that formatting is applied to all linked frames, or all selected and subsequently linked frames. For example, if you apply columns to the text in one text frame, you can choose whether you want all of the linked frames to also be formatted in columns. For information about paragraph formatting, see "Formatting paragraph text" on page 226.

To combine or break apart paragraph text frames

1 Select a text frame.

If you are combining text frames, hold down **Shift** and select subsequent text frames using the **Pick** tool ![pick tool icon].

2 Click **Arrange**, and click one of the following:
   • **Combine**
   • **Break paragraph text apart**

![hand icon]

Text frames with envelopes, text fitted to a path, and linked frames cannot be combined.

If you select a text frame with columns first, the combined text frame will have columns.

To link paragraph text frames and objects

1 Select the starting text frame using the **Text** tool ![text tool icon].

2 Click the **Text flow** tab ![tab icon] at the bottom of the text frame or object.

If the frame cannot hold all the text, the tab contains an arrow ![arrow icon].

3 When the pointer changes to a **Link to** pointer ![link pointer icon], click the frame or object into which you want to continue the text flow.

If the frame or object is on a different page, first click the corresponding **Page** tab on the Document Navigator.

![hand icon]

If a text frame is linked, the **Text flow** tab changes ![tab icon], and a blue arrow indicates the direction of text flow. If the linked text is on another page, the page number and a dashed blue line are displayed. To hide or display these indicators, see "To choose paragraph text frame formatting options" on page 36.

To link paragraph text frames successfully, the text frames cannot be automatically sized. For information, see "Adding and selecting text" on page 211.

To change text flow to a different text frame or object

1   Using the **Pick** tool ⬚, click the **Text flow** tab ⬚ at the bottom of the text frame or object from which you want to change the link.

2   Select the new text frame or object into which you want the text flow to continue.

Wrapping paragraph text around objects and text

You can change the shape of text by wrapping paragraph text around an object, artistic text, or a paragraph text frame. You can wrap text using contour or square wrapping styles. The contour wrapping styles follow the curve of the object. The square wrapping styles follow the bounding box of the object. You can also adjust the amount of space between paragraph text and the object or text, as well as remove any wrapping style you apply.

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Wrapping text around an object using the contour wrapping style (left) and the square wrapping style (right)

To wrap paragraph text around an object or text

1   Select the object or text around which you want to wrap text.

2   Click **Window** ▸ **Dockers** ▸ **Properties**.

3   In the **Object properties** docker, click the **General** tab.

4   Choose a wrapping style from the **Wrap paragraph text** list box.

If you want to change the amount of space between wrapped text and the object or text, type a value in the **Text wrap offset** box.

5   Click the **Text** tool ![A], and drag to create a paragraph text frame over the object or text.

6   Type text in the paragraph text frame.

You can wrap existing paragraph text around a selected object by applying a wrapping style to the object and dragging the paragraph text frame over the object.

To remove a wrapping style

1   Select the wrapped text or the object it wraps.

2   Click **Window ▶ Dockers ▶ Properties**.

3   In the **Object properties** docker, click the **General** tab.

4   Choose **None** from the **Wrap paragraph text** list box.

Embedding graphics and adding special characters

You can embed a graphic object or bitmap in text. The graphic object or bitmap is treated as a text character. As a result, you can apply formatting options according to the type of text in which you embed the graphic object. You can also remove an embedded object from text, after which the object returns to its original state.

You can add special characters to text as text objects or as graphic objects. When you add special characters as text, you can format the characters as you do the text. When you add special characters as graphic objects, the characters are curves. Consequently, you can edit them as you would other graphic objects.

You can also change objects, such as company logos or modified letters, into special characters, and then add them to a character set. This lets you add an object to text as a text or graphic object. The object is automatically resized to match the proportions of other characters in the set.

You can create patterns with special characters by tiling them across the page. Each character in the pattern is a separate object to which you can apply effects. You can change the spacing between the rows and columns in which the characters are arranged.

To embed a graphic object in text

1   Select a graphic object.

2   Click **Edit**, and click one of the following:
    • **Cut**
    • **Copy**

3   Using the **Text** tool ⒶA, click where you want to embed the graphic object.

4   Click **Edit ▸ Paste**.

To remove an embedded object from text

1   Select an embedded object using the **Text** tool ⒶA.

2   Click **Edit ▸ Cut**.

3   Click the **Pick** tool ⬚, and click outside the text object.

4   Click **Edit ▸ Paste**.

From here

For more information about	In the Help index, see
Adding bullets to paragraph text	bullets, adding to text
Adding tabs to paragraph text	tabs, adding to text
Indenting paragraph text	indenting, paragraph text
Hyphenating paragraph text	hyphenating, paragraph text
Removing and changing text links	linking, paragraph text
Choosing paragraph text frame formatting options	text frames, formatting options
Adding special characters to text	special characters, adding to text
Displaying nonprinting characters	nonprinting characters

Managing fonts

CorelDRAW has several features that allow you to manage fonts.

In this section, you'll learn about
- substituting unavailable fonts
- embedding fonts
- using Bitstream® Font Navigator®

Substituting unavailable fonts

You can use PANOSE font matching to access a list of fonts that can be used as substitutes for fonts used in a drawing but not installed on your computer.

You can set font matching options. You can use font matching in text only, in both text and text styles, or you can turn off font matching. With font matching, you can accept the default substitute font, or you can choose another font to substitute for the missing font. You can apply the substitution temporarily or permanently to the active drawing.

You can build a list of exceptions to font substitutions. Exceptions override default font substitutions. You can also specify font equivalents. This is useful when sharing drawings across the two platforms because sometimes the same font has a different spelling for its name on each platform.

To set font matching options

1 Click **Tools ▶ Options**.
2 In the list of categories, double-click **Text**, and click **Fonts**.
3 Click **PANOSE font matching**.
4 In the **PANOSE font matching preferences** dialog box, enable one of the following options:
   - **Never use font matching** — applies default font substitutions for both text in the document and text styles

- **Use font matching for text** — lets you select font substitutions for text in the document and applies default font substitutions for text styles
- **Use font matching for text and styles** — lets you select font substitutions for both text in the document and text styles

To substitute a missing font

1   Open a drawing.

2   Enable one of the following options:
- **Show fonts in the same code page** — displays only missing fonts that support the code page of the active drawing
- **Show all fonts** — displays all missing fonts

3   In the **Font matching results** dialog box, choose a missing font.

    If you want to override the default substitution, choose a font from the bottom list box.

4   Enable one of the following options:
- **Temporary** — replaces the missing font with the substitution, but only in the current session of the drawing
- **Permanent** — permanently makes the font substitution in the document. When you save the file and reopen it, the new font automatically displays.

✍

    In order for the **Font matching results** dialog box to display, the drawing that you open must contain fonts that aren't installed on your computer.

To build a list of exceptions to font substitutions

1   Click **Tools ▶ Options**.

2   In the list of categories, double-click **Text**, and click **Fonts**.

3   Click **PANOSE font matching**.

4   In the **PANOSE font matching preferences** dialog box, click **Exceptions**.

5   In the **PANOSE font matching exceptions** dialog box, click **Add**.

6   In the **Add matching exception** dialog box, type the name of the font you want to replace in the **Missing font** box.

7   Choose a font that is installed on your computer from the **Substituted font** list.

To match more Windows and Macintosh fonts

1 Click **Tools ▶ Options**.

2 In the list of categories, double-click **Text**, and click **Fonts**.

3 Click **PANOSE font matching**.

4 In the **PANOSE font matching preferences** dialog box, click **Spellings**.

5 Click **Add**.

6 Choose a Windows font name from the **Windows name** list box.

7 Type the Macintosh® spelling for the font in the **Macintosh name** list box.

Embedding fonts

You can choose to embed fonts in a drawing. Embedding fonts ensures that all fonts used in a drawing are available when the drawing is opened on another computer. When fonts are embedded, font substitution is not required, and a drawing displays and prints the same way on all computers. For more information about font substitution, see "Substituting unavailable fonts" on page 235.

To embed fonts in a file

1 Click **File ▶ Save as**.

2 Click **Options**.

3 Enable the **Embed fonts using TrueDoc®** check box.

4 Click **Save**.

Only characters used in the drawing are embedded in the file.

Using Bitstream Font Navigator

Bitstream Font Navigator is a font management system included with your application. Font Navigator lets you store up to 2000 fonts in a database (or "catalog"). You can access fonts quickly, organize them, and preview them before using them. See the Font Navigator documentation for information about installing and using Font Navigator.

Working with bitmaps

You can convert a vector graphic to a bitmap. Also, you can import and crop bitmaps in the CorelDRAW application.

You can also add color masks, watermarks, special effects, and change the color and tone of the images.

In this section, you'll learn about

- converting vector graphics to bitmaps
- adding bitmaps
- cropping and editing bitmaps
- using Digimarc® watermarks to identify bitmaps
- applying special effects to bitmaps
- applying color and tone effects
- transforming color and tone effects
- removing dust and scratch marks from bitmaps

Converting vector graphics to bitmaps

When you convert a vector graphic to a bitmap, you can apply special effects in the CorelDRAW application that are unavailable to vector graphic or objects. As you convert the vector, you can select the color mode of the bitmap. A color mode determines the number and kind of colors that make up the bitmap, so that file size is also affected.

You can also determine settings such as the aliasing, background transparency, and color profile, as you convert it a vector graphic to a bitmap.

To convert a vector graphic to a bitmap

1 Select an object.

2 Click **Bitmaps ▶ Convert to bitmap**.

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3   Choose a color mode from the **Color** list box.

4   Choose a resolution from the **Resolution** list box.

5   Enable any of the following check boxes:
    • **Anti-aliasing** — smooths the edges of the bitmap
    • **Transparent background** — makes the background of the bitmap transparent
    • **Apply ICC profile** — applies the International Color Consortium profiles to
      standardize colors across devices and color spaces

Making the background of a bitmap transparent lets you see images or a
background otherwise obscured by the bitmap background.

Adding bitmaps

You can import a bitmap into a drawing either directly or by linking it to an external
file. When you link to an external file, edits to the original file are automatically
updated in the imported file.

To import a bitmap

1   Click **File ▶ Import**.

2   Choose the folder where the bitmap is stored.

3   Select the file.

    If you want to link the image to the drawing, enable the **Link bitmap externally**
    check box.

4   Click **Import**.

5   Click where you want to place the bitmap.

    If you want to center the image on the drawing page, press **Enter**.

Ensure that **All file formats** is chosen from the **Files of type** list box when you
import an image.

The status bar provides information about the bitmap, including color mode,
size, and resolution after it has been placed on the page.

You can import a bitmap in its original size by pressing **Spacebar** when you click the **Import** button.

Linking to a bitmap results in a smaller file size than importing the bitmap directly.

Cropping and editing bitmaps

After you add a bitmap to a drawing, you can crop, resample, and resize the bitmap. Cropping removes unwanted areas of a bitmap. When you resample a bitmap, you can change the image size, the resolution, or both by adding or removing pixels. For example, if you make an image larger without resampling, you can lose details because the image's pixels are spread over a greater area. By resampling, you can add pixels to preserve more detail from the original image. Resizing an image maintains the same number of pixels in a smaller or larger area. For example, you can lose details when you make an image larger without resampling because the image's pixels are spread over a greater area. Upsampling adds pixels to maintain some of the original's details.

With resampling, you can either increase the resolution of an image by adding pixels (upsampling) or decrease the resolution by subtracting pixels (downsampling).

To crop a bitmap

1 Open the **Shape edit** flyout , and click the **Shape** tool .
2 Select a bitmap.
3 Drag the bitmap's corner nodes to the shape you want.

If you want to add a node, double-click the node boundary by using the **Shape** tool where you want the node to display.

4 Click **Bitmaps ▶ Crop bitmap**.

 You cannot crop a bitmap comprised of more than one object.

 You can also crop a selected bitmap after you drag the bitmap's corner nodes by clicking the **Crop bitmap** button ⊞ on the property bar.

To resample a bitmap

1 Select a bitmap.

2 Click **Bitmaps ▶ Resample**.

3 In the **Resolution** area, type values in any of the following boxes:
   - **Horizontal**
   - **Vertical**

If you want to maintain the proportions of the bitmap, enable the **Maintain aspect ratio** check box.

If you want to maintain the file size, enable the **Maintain original size** check box.

 You can also resample a selected bitmap by clicking the **Resample** button ⊞ on the property bar.

Enable the **Anti-alias** check box to minimize the jagged appearance of curves.

To resize a bitmap

1 Select a bitmap.

2 Click **Bitmaps ▶ Resample**.

3 Choose a unit of measure from the list box beside the **Width** and **Height** boxes.

4 Type values in any of the following boxes:
   - **Width**
   - **Height**

If you want to minimize the jagged appearance of curves, enable the **Anti-alias** check box.

You can maintain the proportions of the bitmap by enabling the **Maintain aspect ratio** check box and typing a value in either the **Width** or **Height** box.

You can also resample the bitmap as a percentage of its original size by typing values in the % boxes.

Applying special effects to bitmaps

You can apply a wide range of special effects to bitmaps, such as three-dimensional and artistic effects.

Adding plug-in filters to CorelDRAW provides additional features and effects that you can use to edit images. You can add plug-in filters and you can remove them when you no longer need them.

Special effect type	Description
3-D	Lets you create the illusion of three-dimensional depth. The 3-D effects include embossing, page curl, and perspective.
Art strokes	Lets you apply hand-painted techniques. The art stroke media and styles include crayon, impressionist, pastels, watercolor, and pen and ink.
Blur	Lets you blur an image to simulate gradual change, movement, or speckling. The blur effects include Gaussian blur, motion blur, and zoom.
Camera	Lets you simulate the effect produced by diffusion filters of a diffusion lens.
Color transform	Lets you create photographic illusions by using color reduction and replacements. The color transform effects include half-tones, psychedelic, and solarizing.

Special effect type	Description
Contour	Lets you highlight and enhance the edges of an image. The contour effects include edge tracing and highlighting.
Creative	Lets you apply a variety of textures and shapes to an image. The creative effects include fabric, glass block, crystal fragments, vortex, and stained glass.
Distort	Lets you distort image surfaces. The distort effects include ripples, blocks, swirl, and tile.
Noise	Lets you modify the graininess of an image. The noise effects include adding noise, applying dust and scratch, and diffusing to change an image's granularity.
Sharpen	Lets you create a sharpening effect to focus and enhance edges. The sharpen effects include accentuating edge detail and sharpening smooth areas.
Plug-ins	Lets you apply effects from a third-party filter to bitmaps in CorelDRAW. An installed plug-in appears at the bottom of the **Bitmaps** menu.
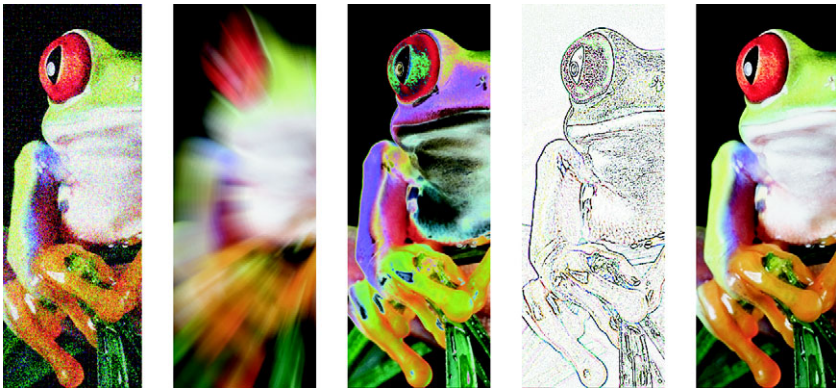
Left to right: Add noise effect, Zoom blur effect, Solarize color transform effect, Edge detect contour effect, Sharpen effect
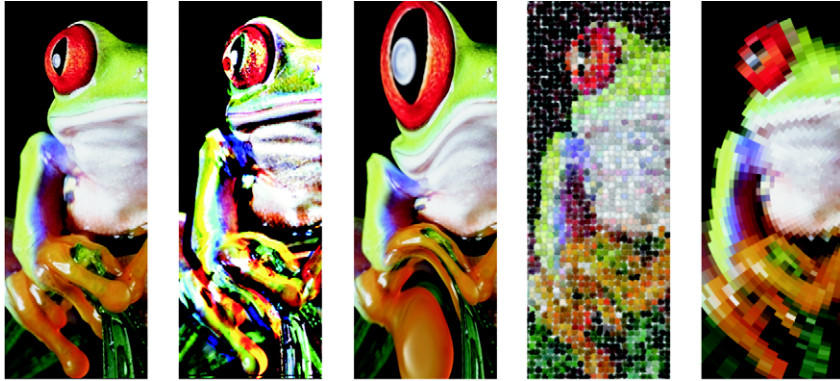
Left to right: Original image, Emboss effect, Cubist artistic effect, Mosaic creative effect, Distort pixelate effect

CorelDRAW automatically inflates a bitmap to make a special effect cover the entire image. You can disable the automatic inflate and manually specify how much you want to inflate the bitmap.

To apply a special effect

1   Select a bitmap.

2   Click **Bitmaps**, choose a special effect type, and click an effect.

3   Adjust any special effect settings.

To add a plug-in filter

1   Click **Tools ▶ Options.**

2   In the list of categories, double-click **Workspace**, and click **Plug-ins**.

3   Click **Add**.

4   Choose a folder containing a plug-in.

To remove a plug-in filter, click a plug-in folder from the **Plug-in folders** list, and click **Remove**.

Applying color and tone effects

CorelDRAW lets you apply color and tone to a bitmap. For example, you can replace colors, shift them between different color modes and adjust the brightness, lightness, and darkness of colors.

By applying color and tone effects, you can restore detail lost in shadows or highlights, remove color casts, correct underexposure or overexposure, and generally improve the quality of the bitmaps.

You can apply the following color and tone effects.

Effect	Description
Contrast enhancement	Lets you adjust the tone, color, and contrast of a bitmap while preserving shadow and highlight detail. An interactive histogram lets you shift or compress brightness values to printable limits. The histogram can also be adjusted by sampling values from the bitmap.
Local equalization	Lets you enhance contrast near edges to reveal detail in both light and dark regions. You can set the height and width around the region to accentuate contrast.
Sample/Target balance	Lets you adjust color values in a bitmap with sample colors taken from the image. You can choose sample colors from the dark, midtone, and light ranges of an image and apply target colors to each of the sample colors.
Tone curve	Lets you perform color corrections precisely by controlling individual pixel values. By changing pixel brightness values, you can make changes to shadows, midtones, and highlights.
Brightness-contrast-intensity	Lets you adjust the brightness of all colors and the difference between light and dark areas.

Effect	Description
Color balance	Lets you add cyan or red, magenta or green, and yellow or blue to selected tones in a bitmap.
Gamma	Lets you accentuate detail in low contrast areas without affecting shadows or highlights.
Hue-Saturation-Lightness	Lets you adjust the color channels in a bitmap and change the position of colors in the spectrum. This effect allows you to change colors and their richness, as well as the percentage of white in an image.
Selective color	Lets you change color by changing the percentage of spectrum CMY process colors from the red, yellow, green, cyan, blue, and magenta color spectrums in a bitmap. For example, decreasing the percentage of magenta in the reds spectrum results in a color shift toward yellow.
Replace colors	Lets you replace one bitmap color with another color. A color mask is created to define the color to be replaced. Depending on the range you set, you can replace one color or shift an entire bitmap from one color range to another. You can set the hue, saturation, and lightness for the new color.
Desaturate	Lets you reduce the saturation of each color in a bitmap to zero, remove the hue component, and convert each color to its grayscale equivalent. This creates a grayscale image without changing the color mode.
Channel mixer	Lets you mix color channels to balance the colors of a bitmap. For example, if a bitmap has too much red, you can adjust the red channel in an RGB bitmap to improve image quality.

To apply a color or tone effect

1 Select a bitmap.

2 Click **Effects ▶ Adjust**, and click a color or tone effect.

3 Specify any settings.

Removing dust and scratch marks from bitmaps

You can quickly improve the appearance of a bitmap by removing dust and scratch marks. The dust and scratch filter works by eliminating the contrast between pixels that exceed the contrast threshold you set. You can set a radius to determine how many pixels are affected by the changes. The settings you choose depend on the size of the blemish and the area surrounding it. For example, if you have a white scratch that is 1 or 2 pixels wide on a dark background, you can set a radius of 2 or 3 pixels and set the contrast threshold higher than if the same scratch was on a light background.

To remove dust and scratch marks from a bitmap

1 Click **Effects ▶ Correction ▶ Dust and scratch**.

2 Move the following sliders:
    • **Radius** — lets you set the range of pixels used to produce the effect. Set the radius as low as possible to retain image detail.
    • **Threshold** — lets you set the amount of noise reduction. Set the threshold as high as possible to retain image detail.

From here

For more information about	In the Help index, see
Inflating bitmaps manually	bitmaps, inflating
Using Digimarc watermarks to identify bitmaps	watermarks
Working with colors in bitmaps	colors, bitmaps
Transforming color and tone effects	tone, effects in bitmaps

Changing color modes in bitmaps

Changing an image to another color mode, such as RGB, CMYK or Grayscale, changes a bitmap's color structure.

In this section, you'll learn about

- changing the color mode of bitmaps
- changing bitmaps to black-and-white images

Changing the color mode of bitmaps

The colors of the images that you work with in CorelDRAW are based on color modes. Color modes define the color characteristics of images and are described by their component colors. The CMYK color mode is composed of cyan, magenta, yellow, and black values and the RGB color mode is composed of red, green, and blue values.

Although you may not be able to see the difference between an image in the CMYK color mode and an image in the RGB color mode on screen, the images are quite different. For the same image dimensions, an RGB image has a smaller file size than a CMYK image and the RGB color space, or gamut, can display more colors. Therefore, images intended for the Web or desktop printers, which require accurate color fidelity, are generally in RGB mode. Where accurate print reproduction is needed, such as on a commercial printing press, images are generally created in CMYK mode. Paletted color images attempt to preserve color fidelity while reducing the small file size, making them ideal for on-screen uses.

Each time you convert an image, you may lose color information. For this reason, you should save an edited image before you change it to a different color mode. For more information about color modes, see "Working with color" on page 153.

CorelDRAW supports the following color modes:

Color

Black-and-White (1-bit)	Grayscale (8-bit)

Color

Duotone (8-bit)	Paletted (8-bit)
RGB Color (24-bit)	Lab Color (24-bit)
CMYK Color (32-bit)	

To change the color mode of a bitmap

1 Click a bitmap.

2 Click **Bitmaps ▶ Mode**, and click one of the following:
   - **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)**

The mode which the selected bitmap is in will not be available in the menu.

Changing bitmaps to black-and-white images

You can change any image to a black-and-white image. In addition to conversion settings such as threshold, screen type, and intensity, there are seven conversion options that affect how the converted images will look.

Conversion

Line art	Produces a high-contrast, black-and-white image. Colors with a grayscale value lower than the threshold value that you set change to black, while colors with a grayscale value higher than the threshold value change to white.

Conversion

Ordered	Organizes the gray levels into repeating geometric patterns of black and white pixels. Solid colors are emphasized and image edges are hard. This option is best suited for uniform colors.
Halftone	Creates different shades of gray by varying the pattern of black and white pixels in an image. You can choose the screen type, angle for the halftone, lines per unit, and the unit of measure.
Cardinality-Distribution	Creates a textured look by applying a calculation and distributing the result to the screen.
Jarvis	Applies the Jarvis algorithm to the screen. This form of error diffusion is suitable for photographic images.
Stucki	Applies the Stucki algorithm to the screen. This form of error diffusion is suitable for photographic images.
Floyd-Steinberg	Applies the Floyd-Steinberg algorithm to the screen. This form of error diffusion is suitable for photographic images.

To change a bitmap to a black-and-white image

1 Click a bitmap.

2 Click **Bitmaps ▶ Mode ▶ Black-and-white (1-bit)**.

3 Choose an option from the **Conversion** list box.

4 Move the **Intensity** slider.

   If you want to view different parts of the image, you can drag the image in the **Preview** window.

   The **Intensity** slider is not available for the **Halftone** conversion option.

From here

For more information about	In the Help index, see...
Changing bitmaps to the paletted color mode	paletted color mode
Changing bitmaps to duotones	duotone color mode

Creating Web-enabled objects

CorelDRAW lets you create Web-enabled objects for optimum viewing in browsers. You can convert text to a Web-compatible format so that it can be edited in a browser, add Web form objects such as options and check boxes, and create interactive rollovers from CorelDRAW objects.

In this section, you'll learn about
- using preset Internet objects
- optimizing bitmaps for the World Wide Web
- creating rollovers
- creating Web-compatible text
- working with bookmarks and hyperlinks

Using preset Internet objects

CorelDRAW provides you with a set of Internet objects, such as options, Java™ applets, text edit boxes, and check boxes that you can use when designing an HTML page. You can customize Internet objects by adjusting their parameters.

If a document contains form-related Internet objects such as check boxes, you need a CGI script address to enable these Internet objects to work once the document is published to the World Wide Web as an HTML file.

After you create a preset Internet object, you can save it as an HTML page. For information about optimizing, see "Optimizing bitmaps for the World Wide Web" on page 254.

To add or customize an Internet object

To	Do the following
Add an Internet object	Click **Edit ▶ Insert Internet object**, and click the object you want. Click where you want to place the Internet object.
Customize an Internet object	Right-click an Internet object, and click **Properties**. In the **Object properties** docker, click the **Internet** tab, and specify the attributes you want to add.
Add a CGI Script address to an Internet object	Deselect any objects, right-click, and click **Properties**. Click the **Form** tab, and type the CGI script address in the **URL of CGI script** box. Choose an HTML equivalent method from the **Method** list box and a frame type from the **Target** list box.

All Internet objects, except for Java applets and embedded files, require a CGI script address to function properly after you publish a drawing to the World Wide Web.

To save objects to a Web-compatible format

1   Click **File ▶ Publish to the Web ▶ HTML**.

2   Choose the HTML layout from the **HTML layout method** list box.

3   Choose a destination folder.

4   Choose an image subfolder.

5   Choose an export range.

You can check to see whether there are any issues by clicking the **Issues** tab.

Optimizing bitmaps for the World Wide Web

You can save objects and optimize them for the World Wide Web. When you optimize an image for the Web, you can export to a GIF, JPEG, JPEG 2000, PNG 8-bit, and

PNG 24-bit file type, choose a Web preset, and compare the previewed results. The Web presets are optimized for color, dithering, compression, and smoothing, depending on the file type you choose. You can compare up to four file types by viewing their download speed, image quality, file size, color range, and compression size as well as by panning and zooming in the image. You can also add and delete Web presets of your own.

To save and optimize a bitmap to Web-compatible format

1 Click **File ▶ Publish to the Web ▶ Web image optimizer**.

2 Choose a speed from the **Connection speed** list box.

3 Choose one of the following pane display options:
   - **Single pane** ▢
   - **Double-vertical panes** ▥
   - **Double-horizontal panes** ▤
   - **Four panes** ▦

4 Keep one pane as the original image. In one or more of the other panes, choose from the following list boxes below the preview window:
   - **File type**
   - **Web preset**

✍ If no objects are selected, all of the active page's content is exported.

You can also

Edit preset settings for a single preview area	Click **Advanced**. In the **Export** dialog box, customize the preset options. If you select GIF or PNG8 file formats, you can modify the color palette and settings in the **Convert to paletted** dialog box.
Save the current configuration of settings for a preview area	Click the **Save settings** button 🖫 for each area where you want to save the settings.
Save a custom preset	Click **Add** ⊞.
Delete a preset	Click **Delete** ⊟.
Display file information below each preview window	Click **Preview**.

You can also

Pan to another section of the image	Drag in the preview window of the original image.
Zoom in the preview window	Choose a magnification from the **Zoom level** list box.

✍ Some browsers require a plug-in to display JPEG 2000 files.

🔍 You can compare file types with the original image by choosing **Original** from the **File type** list box in one of the panes.

Creating rollovers

Rollovers are interactive objects that change in appearance when you click or point to them. You can create rollovers using objects.

To create a rollover, you add the following rollover states:
- **Normal** — the default state of a button when no mouse activity is associated with the button
- **Over** — the state of a button when the pointer passes over it
- **Down** — the state of a clicked button

To edit the rollover states, you can view the rollover states and their properties.
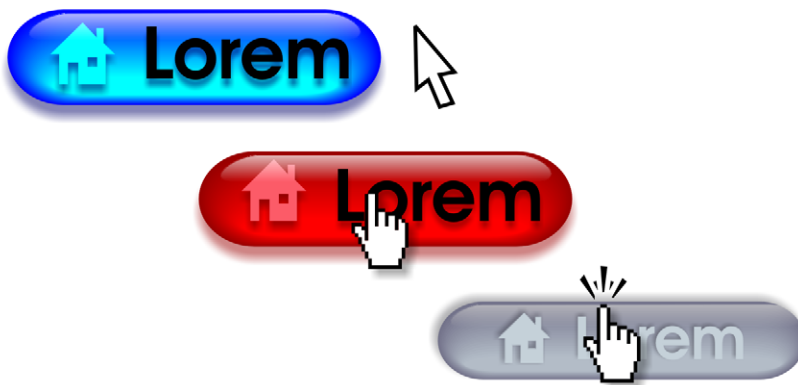
Rollovers showing Normal (left), Over (center), and Down (right) states

To publish a rollover to the Internet, you must save the rollover to a Web-compatible file format by publishing to HTML or to the Macromedia Flash™ (SWF) format. For information on publishing to the Web, see "Publishing to the Web" on page 263. For more information about creating and editing objects such as rollovers, see "Working with objects" on page 75.

To create a rollover object

1   Select an object.

2   Click **Effects ▶ Rollover ▶ Create rollover**.

You cannot create a rollover from a clone.

To edit a rollover object

1   Select an object.

2   Click **Effects ▶ Rollover ▶ Edit rollover**.

3   Specify the attributes of each state.

4   Click **Effects ▶ Rollover ▶ Finish editing rollover**.

You cannot close a drawing in which you are editing a rollover. You must finish editing first.

You can also edit a rollover object by clicking the **Edit rollover** button on the Internet toolbar.

To view the rollover states

1   Click **Window ▶ Toolbars ▶ Internet**.

If the **Internet** command is not available, click **Tools ▶ Options**, click **Command bars** in the **Workspace**, **Customization** list of categories, and ensure the **Internet** check box is enabled.

2   On the **Internet** toolbar, choose between the **Normal**, **Over**, and **Down** states from the **Active rollover state** list box.

You can preview a rollover object's states in the drawing page by clicking **View ▶ Enable rollover**. To quit previewing the rollover so that you can edit it, click **View ▶ Enable rollover**. You cannot undo while previewing a rollover.

To view rollover properties

1   Click **Window ▶ Dockers ▶ Object manager**.

2   Click the page and layer where the rollover resides.

3   Click the rollover name, and expand the **Normal**, **Over**, and **Down** states.

Creating Web-compatible text

When you convert paragraph text to Web-compatible text, you can edit the text of the published document in an HTML editor. If you are publishing a drawing to the Web as HTML, you can change text font characteristics, including the font type, size, and style. The Web-compatible text sizes, numbered 1 through 7, correspond to particular point sizes between the 10-point and 48-point range. For more information about formatting text, see "Formatting paragraph text" on page 226.

The default Web font style is used automatically, unless you override it with another font. If you choose to override it, the default font is used when visitors to your Web site don't have the same font installed on their computers. The bold, italic, and underline text styles are also available. You can apply uniform fills, but not outlines, to Web-compatible text.

Any non-Web-compatible text in your drawing is converted to bitmaps when you publish your drawing to the World Wide Web as HTML.

To make text Web-compatible

To	Do the following
Change paragraph text to Web-compatible text	Select the paragraph text. Click **Text ▶ Make text Web compatible**.

To	Do the following
Make new text Web-compatible	Click **Tools ▶ Options**. In the list of categories, double-click **Workspace**, **Text**, and click **Paragraph**. Enable the **Make all new paragraph text frames Web compatible** check box.

Ensure that the Web-compatible text does not intersect or overlap other objects or extend beyond the boundaries of the drawing page; otherwise the text will be converted to a bitmap, and it will lose its Internet properties.

Artistic text cannot be converted to Web-compatible text and is always treated as a bitmap. However, you can convert it to paragraph text and then make it Web compatible. For information on converting text, see "Finding, editing, and converting text" on page 217.

Working with bookmarks and hyperlinks

CorelDRAW lets you create bookmarks and hyperlinks in your Web document. You can apply these to rollovers, bitmaps, and other objects.

Bookmarks

To create an internal link in an HTML file, you can assign a bookmark to text or to an object. You can then assign a Uniform Resource Locator (URL) to an object that links to the bookmark. The object containing a URL has a hotspot, an area that activates a hyperlink when clicked in a browser.

Hyperlinks

Within a document, hyperlinks connect to any object that has been assigned a bookmark, or the hyperlink can connect to any document on the World Wide Web by using that document's URL. You can also set a hotspot that follows the outline of the object, or fills the object's bounding box.

CorelDRAW applies a crosshatch pattern to an object containing a hyperlink. You can change the color of the crosshatch pattern as well as its background fill.

After you create hyperlinks, you can display and verify them.

To assign a bookmark

1 Right-click an object, and click **Properties.**

2 Click the **Internet** tab 🔆.

3 Choose **Bookmark** from the **Behavior** list box.

4 Type the name of the bookmark.

To assign a hyperlink to a bookmark or external Web site

1 Right-click an object, and click **Properties.**

2 Click the **Internet** tab 🔆.

3 Choose **URL** from the **Behavior** list box.

4 Type a URL address.

You can also

Specify what frame will display when the rollover is clicked	Choose a target frame from the **Target** ◎ list box.
Add a description of the object for text-only browsers	Type the text in the **Alt comments** text box.
Define the hotspot area	Choose **Object shape** or **Object's bounding box** from the **Define hotspot using** list box.

🖐 URLs to external Web sites must contain the **http://** prefix. Other supported protocols include **mailto:**, **ftp:**, and **file:**.

💡 You can rename a bookmark and create a hyperlinked bookmarked object from a document object by using the **Internet bookmark manager** docker.

To assign crosshatch and background hotspot colors

1 Click **Window ▶ Dockers ▶ Properties**.

2 Click the **Internet** tab 🔆.

3 Open the **Cross-hatch** color picker, and click a color.

4 Open the **Background** color picker, and click a color.

If you choose a hyperlinked object first and then change the crosshatch and background hotspot colors, the change applies to the selected object only. If you change the hotspot colors with no object selected, the default colors are changed for this drawing and for future sessions of CorelDRAW.

To display hyperlinked objects

1   Click **Window ▶ Toolbars ▶ Internet**.

   If the **Internet** command is not available, click **Tools ▶ Options**, click **Command bars** in the **Workspace**, **Customization** list of categories, and ensure the **Internet** check box is enabled.

2   On the **Internet** toolbar, enable the **Show hotspots** button.

   All objects to which you've assigned URLs display in the crosshatch and background hotspot colors.

To verify links in a Web document

1   Click **Window ▶ Dockers ▶ Link manager**.

2   In the list, verify that all URL links display a green check mark.

3   Click the **Refresh** button to verify any broken links.

   You can also verify a single link in the **Link manager** by right-clicking it and clicking **Verify link**.

   If you want to test a link by opening a URL in a Web browser, right-click the object, and click **Jump to hyperlink in browser**.

Publishing to the Web

You can ensure that your CorelDRAW files and objects publish to HTML successfully by setting document elements to be Web-compatible, selecting the settings you want, and checking Preflight issues. You can then publish to HTML. The resulting HTML code and images can be used in HTML authoring software for creating a Web site or page.

In this section, you'll learn about
- preparing files and objects for Web publishing
- publishing to HTML

Preparing files and objects for Web publishing

You can prepare your files and objects for the Web by setting preferences and verifying the objects before you export them.

The CorelDRAW application provides options for publishing your document to the World Wide Web. You can determine layout options, set link colors, and select HTML text preferences. Among the text export options, you can export Web-compatible text as plain text so that users can copy and reuse the text, or you can export all text as images so that the text will always display as you designed it.

You can export your graphics to preset JPEG, GIF, or PNG formats. You can also publish your document as a single image, from which the application creates an image map. An image map is a hypergraphic whose hotspots link to different URLs — including pages, locations, and images — when you view the HTML document with a browser. Note that large image maps might cause slow downloads for those with a slow Internet connection.

You can check the download times of your Web page objects through a browser preview.

To change text export preferences
1   Click **Tools ▶ Options**.

2   In the list of categories, double-click **Document**, **Publish to Web**, and click **Text**.

3   Enable one of the following options:
    • **Export HTML compatible text as text** — exports the Web-compatible text as text
    • **Export all text as images** — exports the text as images and ensures compatibility for all browsers
    • **Export HTML compatible text as text using TrueDoc font technology** — exports the text using TrueDoc

✍️
    Exporting all text as images can increase download times because of the larger file sizes.

To change link export preferences

1   Click **Tools ▶ Options**.

2   In the list of categories, double-click **Document**, **Publish to the Web**, and click **Links**.

3   Enable the **Underline** check box.

4   Enable the following check boxes, and select a color for each:
    • **Normal link**
    • **Active link**
    • **Visited link**

✍️
    The link colors set in the **Options** dialog box are exported with the file, eliminating any conflict between link color and your document's page background color.

To change image export preferences

1   Click **Tools ▶ Options**.

2   In the list of categories, double-click **Document**, **Publish to the Web**, and click **Image**.

3   In the **Export image using** area, enable one of the following image format options:
    • **JPEG**
    • **GIF**
    • **PNG**

4   Set any bitmap options.

You can also

Apply anti-aliasing	Enable the **Anti-alias** check box.
Create a Client-side image map	Enable the **Client** check box.
Create a Server-side image map	Enable the **Server** check box, and choose a format.

To change HTML layout export preferences

1   Click **Tools ▸ Options**.

2   In the list of categories, double-click **Document**, and click **Publish to the Web**.

3   Type values in the following boxes:
   - **Position tolerance** — lets you specify the number of pixels text can be automatically nudged to avoid introducing rows or columns that are only a few pixels in size
   - **Image white space** — lets you specify the number of pixels that can occur in an empty cell before it's merged with an adjacent cell. This lets you avoid splitting a single graphic that spans adjacent cells. Cells or tables are used to position Internet objects in your Web document when you choose the HTML Tables layout method
   - **Position white space** — lets you specify the amount of white space allowed in an image

To preview a Web page

1   Click **File ▸ Publish to the Web ▸ HTML**.

2   Click the **General** tab.

3   Click **Browser preview**.

To set Web preflight options

1   Click **File ▸ Publish to the Web ▸ HTML**.

2   Click the **Issues** tab.

3   Click **Settings**.

4   In the **Issues to check for** list, expand the **Publishing to Web** tree.

5   Deselect the issues you do not want to check.

Publishing to HTML

When publishing a document or selection to the World Wide Web, you can choose several options, such as image format, HTML layout, export range, and file transfer protocol (FTP) site parameters.

To publish to the Web

1   Click **File ▶ Publish to the Web ▶ HTML**.

2   Set the following options in the **Publish to the Web** dialog box:
    • **General** — contains options for HTML layout, folders for HTML file and images, and FTP site and export range. You can also select, add, and remove presets.
    • **Details** — contains details of HTML files produced, and allows you to change the page name and file name
    • **Images** — lists all images for the current HTML export. You can set individual objects to JPEG, GIF, and PNG formats. Click **Options** to select presets for each image type.
    • **Advanced** — provides options for generating JavaScript® for rollovers and cascading style sheets, maintaining links to external files, and embedding fonts
    • **Summary** — shows statistics for files according to various download speeds
    • **Issues** — displays a list of potential issues, including explanations, suggestions, and tips

CorelDRAW assigns the extension **.htm** to documents you publish in the HTML format. By default, HTML files share the same name as the CorelDRAW (CDR) source file and are saved in the last folder you used to store exported Web documents.

From here

For more information about	In the Help index, see...
File formats	file formats
Creating rollovers	rollovers, creating

Managing projects

The Object Data Manager is an advanced feature that is particularly useful as a project management tool when you create or supervise a large project. Using the Object Data Manager is like having a small spreadsheet program, like Quattro Pro® or Microsoft® Excel, within your graphics program. It lets you track expenses, deadlines, assignments, progress, or anything else you need to organize. You can enter many types of project data about individual objects or groups of objects.

In this section, you'll learn about

- setting up the project database
- assigning and copying object data
- viewing an object data summary

Setting up the project database

Before you assign project data to objects in a drawing, you need to know what information you want to display. By default, CorelDRAW creates four data fields: **Name**, **Cost**, **Comments**, and **CDRStaticID**. The first three fields can be edited or deleted as required. The **CDRStaticID** field is hidden; it is used by CorelDRAW to identify objects, and it can't be edited or deleted.

You can create and assign as many data fields as you want, as long as they use permitted format variables. For more information about assigning data fields, see "Assigning and copying object data" on page 269.

At any time, you can change the setting, such as the name or format, of a data field. If you require custom fields, you can define their formats using four basic field formats: **General**, **Date/time**, **Linear/angular**, and **Numeric**. Each of these formats provides a series of common settings. If the preset formats in CorelDRAW don't provide the information you want in your data summary, you can create your own custom formats using the variables available for the format type you're using. The field format you select is used for all objects in the active drawing.

You can reorder fields to display them in a logical order on the data summary. You can also delete any data field except **CDRStaticID**. When you delete a field, you also delete all data entered for that field in the active document.

To add a data field

1   Click **Tools ▶ Object Data Manager**.

2   In the **Object data** docker, click the **Open Field Editor** button ▣.

3   In the **Object data field editor** dialog box, click **Create new field**.

4   To change the name of the field you created, double-click the field, type a new name, and press **Enter**.

5   In the **Add field to** area, enable one or both of the following check boxes:
    • **Application defaults** — stores the new field in the application
    • **Document defaults** — stores the new field in the current document

✎
        You can also use this procedure to change the settings of an existing data field.

You can also

Change the format of a data field	Select the data field, and click **Change** in the **Format** area. In the **Format definition** dialog box, enable the option beside the format type you want to use, and choose a format from the **Format type** list.
Create a custom format for a data field	Select the data field, and click **Change** in the **Format** area. In the **Format definition** dialog box, enable the option beside the format type you want to create. Type the format in the **Create** box, and press **Enter**.
Delete a data field	Choose the name of the data field from the list. To choose multiple fields, hold down **Ctrl**, and click the names in the list. Click **Delete field(s)**.

Assigning and copying object data

After creating all the data fields you want for a drawing, you can create a database. The **Object data** docker and the Object Data Manager provide all the commands and features you need to add and edit object information.

The **Object data** docker is best for entering data for single objects. It lets you add, edit, and delete object data.The Object Data Manager, in contrast, is best for entering and editing data for multiple objects. It provides many of the editing features available in popular spreadsheet applications.

You can use one object's data entries to update another object's data entries. This function does not replace an object's data entries; rather, it appends fields and data where appropriate.

To add or edit data for an object

1   Select the object using the **Pick** tool ▯.
2   Click **Tools ▸ Object Data Manager**.
3   Select a data field. Type text in the **Value** column for the field, and press **Enter**.
4   Repeat step 3 to add data to other fields.

You can also

Clear one field	Click the **Clear field** button ▯.
Clear all fields	Click the **Clear all fields** button ▯.

To add or edit data for multiple objects

1   Select the objects using the **Pick** tool ▯.
2   Click **Tools ▸ Object Data Manager**.
3   In the **Object data** docker, click the **Open spreadsheet** button ▯.
4   In the **Object Data Manager** window, click a cell, and type the appropriate data. Press **Enter** to assign the entry to the cell, the fields, and the objects.

To copy data from one object to another

1   Using the **Pick** tool ▯, select the object to which you want to copy data.
2   Click **Tools ▸ Object Data Manager**.

3   In the **Object data** docker, click the **Copy data from** button ⇥.

4   Click the object from which you want to copy data.

Viewing an object data summary

The Object Data Manager provides the commands and functions you need to view your object data summary. It summarizes the information you've assigned to the objects in a drawing. While the Object Data Manager can be used to view and edit data associated with a single object, its main purpose is to help you view and manage large amounts of data associated with multiple objects contained in various groups in a drawing.

You can change how object data displays:

• You can display individual group subtotals for fields shared by multiple groups. Use this command when more than one group of objects is displayed in a datasheet. This command applies only to fields with numeric formats.

• To create a visible distinction between groups in a column, you can place a two-space indent before data relating to objects in groups.

• You can have the Object Data Manager automatically total the values in the selected column. The total is displayed at the bottom of the column.

To view an object data summary

1   Select the object or objects using the **Pick** tool �'⃗.

If you want to view an object data summary for the entire document, click **Edit ▶ Select all ▶ Objects**.

2   Click **Tools ▶ Object Data Manager**.

3   In the **Object data** docker, click the **Open spreadsheet** button ☐.

From here

For more information about	In the Help index, see...
customizing and printing object data summaries	object data summaries, viewing

Printing

CorelDRAW provides extensive options for printing your work.

In this section, you'll learn about

- printing your work
- laying out print jobs
- previewing print jobs

Printing your work

In the CorelDRAW application, you can print one or more copies of the same drawing. You can specify what to print, as well as which parts of a drawing to print; for example, you can print selected vectors, bitmaps, text, or layers.

Before printing a drawing, you can specify printer properties, including paper size and device options.

To set printer properties

1 Click **File ▶ Print**.
2 Click the **General** tab.
3 Click **Properties**.
4 Set any properties in the dialog box.

To print your work

1 Click **File ▶ Print**.
2 Click the **General** tab.
3 Choose a printer from the **Name** list box.
4 Type a value in the **Number of copies** box.

   If you want the copies collated, enable the **Collate** check box.

5   Enable one of the following options:
    • **Current document** — prints the active drawing
    • **Current page** — prints the active page
    • **Pages** — prints the pages that you specify
    • **Documents** — prints the documents that you specify
    • **Selection** — prints the objects that you have selected

You must select objects before printing a selection.

The **Collate** check box is available only for documents with more than one page.

To print selected vectors, bitmaps, or text

1   Click **File ▶ Print**.

2   Click the **Misc** tab.

3   In the **Proofing options** area, enable any of the following check boxes:
    • **Print vectors**
    • **Print bitmaps**
    • **Print text**

You can print graphics in full color, monochrome, or grayscale, by enabling the corresponding check boxes in the **Bitmap downsampling** area.

You can print all text in black by enabling the **Print all text in black** check box.

To print selected layers

1   Click **Tools ▶ Object manager**.

2   Click the printer icon that corresponds to a layer.

    If the icon appears grayed, the layer will not print.

3   Click **File ▶ Print**.

Laying out print jobs

You can lay out a print job by specifying the size, position, and scale. Tiling a print job prints portions of each page on separate sheets of paper that you can assemble into one sheet. You would, for example, tile a print job that is larger than your printer paper.

If the orientation of a print job differs from the orientation specified in the printer properties, a message prompts you to adjust the paper orientation of the printing device. You can disable this prompt, so that the printer adjusts paper orientation automatically.

To specify the size and position of a print job

1   Click **File ▶ Print**.
2   Click the **Layout** tab.
3   Enable one of the following options:
    • **As in document** — maintains the image size, as it is in the document
    • **Fit to page** — sizes and positions the print job to fit to a printed page
    • **Reposition images to** — lets you reposition the print job by choosing a position from the list box

Enabling the **Reposition images to** option lets you specify size, position, and scale in the corresponding boxes.

To tile a print job

1   Click **File ▶ Print**.
2   Click the **Layout** tab.
3   Enable the **Print tiled pages** check box.
4   Type values in the following boxes:
    • **Tile overlap** — lets you specify the number of inches by which to overlap tiles
    • **% of page width** — lets you specify the percentage of the page width the tiles will occupy

Enable the **Tiling marks** check box to include tiling alignment marks.

To change the page orientation prompt

1   Click **Tools ▶ Options**.

2   In the list of categories, double-click **Global**, and click **Printing**.

3   Choose **Page orientation prompt** from the **Option** list.

4   Choose one of the following from the **Setting** list box:
    • **Off — always match orientation**
    • **On — ask if orientations differ**
    • **Off — don't change orientation**

Previewing print jobs

You can preview your work to show how the position and size of the print job will appear on paper. For a detailed view, you can zoom in on an area. You can view how the individual color separations will appear when printed. You can also increase the speed of a print preview by hiding the graphics.

Before printing your work, you can view a summary of issues for a print job to find potential printing problems. For example, you can check the current print job for print errors, possible print problems, and suggestions for resolving issues.

To preview a print job

•   Click **File ▶ Print preview**.

You can quickly preview a print job in the **Print** dialog box by clicking **File ▶ Print**, and clicking the **Mini preview** button ⟩.

To magnify the preview page

1   Click **File ▶ Print preview**.

2   Click **View ▶ Zoom**.

3   Enable the **Percent** option, and type a value in the box.

You can also magnify the preview page by choosing a preset zoom level.

You can also zoom in on a portion of the print preview by clicking the **Zoom** tool ⌕ in the toolbox and marquee selecting an area.

To preview color separations

1   Click **File ▸ Print preview**.

2   On the property bar, click the **Enable color separations** button 🗐.

🔎
> You can preview the composite by clicking **View ▸ Preview separations ▸ Composite**.
>
> You can view individual color separations by clicking the tabs at the bottom of the application window.

To hide or display graphics

1   Click **File ▸ Print preview**.

2   Click **View ▸ Show image**.

A check mark beside the menu command name indicates that graphics are displayed.

☝
> When the **Show image** menu command is disabled, the print job is represented by a bounding box that you can use to position and size the job.

To view a summary of issues for a print job

1   Click **File ▸ Print**.

2   Click the **Issues** tab.

If you don't want Preflight to check for certain issues, click **Settings**, double-click **Printing**, and disable any check boxes that correspond to issues you want overlooked.

🔎
> You can save settings by clicking the **Add preflight settings** button ⊞ and typing a name in the **Save preflight style** box.

From here

For more information about	In the Help index, see...
Applying print styles	print styles
Fine-tuning print jobs	printing, fine-tuning
Printing colors accurately	printing, colors accurately
Printing to a PostScript printer	printing, PostScript

Commercial printing

With CorelDRAW, you can prepare a print job for commercial printing.

In this section, you'll learn about
- preparing a print job for a service bureau
- working with imposition layouts
- printing printer's marks
- maintaining OPI links
- printing color separations
- working with color trapping
- specifying In-RIP trapping settings
- printing to film

Preparing a print job for a service bureau

You can use the Prepare for service bureau wizard to guide you through the process of sending a file to a service bureau. The wizard simplifies processes such as creating PostScript and PDF files; gathering different pieces required for outputting an image; and copying the original image, embedded image files, and fonts to a user-defined location.

You can print a drawing to a file, which lets the service bureau send the file directly to an output device. If you are unsure about which settings to choose, consult the service bureau.

You can include a job information sheet with all the pre-press settings that you have specified.

For more information about commercial printing, see "Understanding commercial printing" in the Help.

To use the Prepare for Service Bureau wizard

1 Click **File ▶ Prepare for service bureau**.

2 Enable one of the following options:
   • **Gather all files associated with this document**
   • **Choose a profile provided by your service bureau**

✍ The PDF file settings for the service bureau and the **PDF for prepress** settings are identical. For information about the **PDF for prepress** style settings, see "Saving documents as PDF files" on page 291.

To create a service bureau profile, you need the Service Bureau Profiler utility, which you can custom install with CorelDRAW.

To print to a file

1 Click **File ▶ Print**.

2 Click the **General** tab.

3 Enable the **Print to file** check box.

4 Click the flyout arrow, and click one of the following commands:
   • **For Mac®** — saves the drawing to be readable on a Macintosh computer
   • **Single file** — prints pages to a single file
   • **Pages to separate files** — prints pages to separate files
   • **Plates to separate files** — prints plates to separate files

5 Click **Print**.

6 Choose one of the following from the **Save as type** list box:
   • **Print file** — saves the file as a PRN file
   • **PostScript file** — saves the file as a PS file

7 Choose the folder where you want to save the file.

8 Type a filename in the **File name** box.

✍ If you prefer not to prepare PostScript files, service bureaus equipped with the application in which you created your work can take the original files (for example, CorelDRAW files) and apply the required prepress settings.

To include a job information sheet with the print job

1   Click **File ▶ Print**.

2   Click the **Misc** tab.

3   Enable the **Print job information sheet** check box.

4   Click **Info settings**.

5   In the **Information** area, disable any of the options.

6   In the **Destination** area, enable one of the following:
    • **Send to text file**
    • **Send to printer**

Working with imposition layouts

Working with imposition layouts lets you print more than one page of a document on each sheet of paper. You can choose a preset imposition layout to create documents such as magazines and books to print on a commercial printing press; produce documents that involve cutting or folding, such as mailing labels, business cards, pamphlets, or greeting cards; or print multiple thumbnails of a document on one page. You can also edit a preset imposition layout to create your own layout.

You can select a binding method by choosing from three preset binding methods, or you can customize a binding method. When you choose a preset binding method, all but the first signature are automatically arranged.

You can arrange pages on a signature manually or automatically. When you arrange the pages automatically, you can choose the angle of the image. If you have more than one page across or down, you can specify the size of gutters between pages; for example, you can choose the automatic gutter spacing option, which sizes gutters so that the document's pages fill the entire available space in the layout.

When printing on a desktop printer, you can adjust the margins to accommodate the non-printable area of a page. If the margin is smaller than the non-printable area, the edges of some pages or some printer's marks may be clipped by your printer.

To choose a preset imposition layout

1   Click **File ▶ Print**.

2   Click the **Layout** tab.

3   Choose an imposition layout from the **Imposition layout** list box.

The layout you choose does not affect the original document, only the way it is printed.

To edit an imposition layout

1 Click **File ▶ Print**.

2 Click the **Layout** tab.

3 Choose an imposition layout from the **Imposition layout** list box.

4 Click **Edit**.

5 Edit any imposition layout settings.

6 Click **Save layout** on the property bar.

7 Type a name for the imposition layout in the **Save as** box.

When editing an imposition layout, you should save it with a new name; otherwise the settings for a preset imposition layout will be overwritten.

To select a binding method

1 Click **File ▶ Print preview**.

2 Click the **Imposition layout** tool ▯.

3 Choose **Edit basic settings** from the **What to edit** list box on the property bar.

4 Type values in the **Pages across/down** boxes.

   If you want the page to be double-sided, click the **Single/double sided** button ▯.

5 Choose one of the following binding methods from the **Binding mode** list box:
   • **Perfect binding**
   • **Saddle stitch**
   • **Collate and cut**
   • **Custom binding**

   If you choose either **Perfect binding** or **Custom binding**, type a value in the corresponding box.

When you click the **Single/double sided** button for double-sided printing, and you are printing on a non-duplex printing device, a wizard automatically

provides instructions on how to insert the paper into the printer, so that you can print on both sides of the page.

To arrange pages

1   Click **File ▶ Print preview**.

2   Click the **Imposition layout** tool 🔳.

3   Choose **Edit page placements** from the **What to edit** list box on the property bar.

4   Click one of the following buttons:
    - **Intelligent auto-ordering** 🔳
    - **Sequential auto-ordering** 🔳
    - **Cloned auto-ordering** 🔳

    If you want to arrange the page numbering manually, click on the page and specify the page number in the **Page sequence number** box.

5   Choose an angle from the **Page rotation** list box.

To edit gutters

1   Click **File ▶ Print preview**.

2   Click the **Imposition layout** tool 🔳.

3   Choose **Edit gutters and finishing** from the **What to edit** list box on the property bar.

4   Click one of the following buttons:
    - **Auto gutter spacing** 🔳
    - **Equal gutters** 🔳

5   Click one of the following buttons:
    - **Cut location** ✂
    - **Fold location** 🔳

✍

If you click the **Equal gutters** button, you must specify a value in the **Gutter size** box.

You can edit the gutters only if you've selected an imposition layout with two or more pages across and down.

To adjust margins

1   Click **File ▶ Print preview**.

2   Click the **Imposition layout** tool 🗐.

3   Choose **Edit margins** from the **What to edit** list box on the property bar.

4   Click one of the following buttons:
    - **Auto margins** 📊
    - **Equal margins** 📊

✍

If you click the **Equal margins** button, you must specify values in the **Top/left margin** boxes.

When preparing a job for a commercial press, the service bureau may request minimum margin sizes, such as for page grippers and printer's marks.

Printing printer's marks

Printing printer's marks lets you display information on a page about how a work should be printed. You can specify the position of the printer's marks on the page.

The available printer's marks are as follows:

- **Crop/fold marks** — represent the size of the paper and print at the corners of the page. You can print crop/fold marks to use as guides to trim the paper. If you print multiple pages per sheet (for example, two rows by two columns), you can choose to print the crop/fold marks on the outside edge of the page so that all crop/fold marks are removed after the cropping process, or you can choose to add crop marks around each row and column. Crop/fold marks ensure that marks appear on each plate of a separated CMYK file.
- **Bleed limit** — determines how far an image can extend beyond the crop marks. When you use a bleed to extend the print job to the edge of the page, you must set a bleed limit. A bleed requires that the paper you are printing on is larger than the size of paper you ultimately want, and the print job must extend beyond the edge of the final paper size.
- **Registration marks** — are required to line up film for proofing or printing plates on a color press. They print on each sheet of a color separation.
- **Color calibration bars** — are color scales that print on each sheet of a color separation and ensure accurate color reproduction. To see calibration bars, the page size of the print job must be larger than the page size of the work you are printing.

- **Densitometer scale** — is a series of gray boxes ranging from light to dark. These boxes are required to test the density of halftone images. You can position the densitometer scale anywhere on the page. You can also customize the levels of gray that appear in each of the seven squares on the densitometer scale.
- **Page numbers** — helps you collate pages of an image that do not include any page numbers or do not contain page numbers that correspond to the actual number of pages.
- **File information** — prints file information, such as, the color profile; halftone settings; name, date, and time the image was created; plate number; and job name.

To print crop and fold marks

1 Click **File ▶ Print**.
2 Click the **Prepress** tab.
3 Enable the **Crop/fold marks** check box.

   If you want to print only the exterior crop/fold marks, enable the **Exterior only** check box.

To print crop and fold marks, the paper on which you print must be 0.5 inches larger on all sides than the page size of the image that you are printing.

To set crop and fold marks, see "To edit gutters" on page 281.

To print composite crop/fold marks

1 Click **Tools ▶ Options**.
2 In the list of categories, double-click **Global**, and click **Printing**.
3 Choose **Composite crop marks** from the **Option** list.
4 Choose **Output in CMYK** from the **Setting** list box.

To set a bleed limit

1 Click **File ▶ Print**.
2 Click the **Layout** tab.
3 Enable the **Bleed limit** check box.
4 Type a value in the **Bleed limit** box.

Usually, a bleed limit of .125 to .25 inches is sufficient. Any object extending beyond that uses memory needlessly and may cause problems when you print multiple pages with bleeds on a single sheet of paper.

To print registration marks

1 Click **File ▶ Print**.

2 Click the **Prepress** tab.

3 Enable the **Print registration marks** check box.

4 Choose a registration mark style from the **Style** list box.

To print registration marks, the paper on which you print must be 0.5 inches larger on all sides than the page size of the image that you are printing.

To print color calibration bars and densitometer scales

1 Click **File ▶ Print**.

2 Click the **Prepress** tab.

3 In the **Calibration bars** area, enable any of the following check boxes:
   • **Color calibration bar**
   • **Densitometer scales**

If you want to customize the levels of gray in one of the densitometer scale squares, choose a number from the **Densities** list (lower values represent lighter squares) and type a new density for that square.

To print page numbers

1 Click **File ▶ Print**.

2 Click the **Prepress** tab.

3 Enable the **Print page numbers** check box.

If you want to position the page number inside the page, enable the **Position within page** check box.

To print file information

1 Click **File ▶ Print**.

2   Click the **Prepress** tab.

3   Enable the **Print file information** check box.

4   Type a job name in the **Job name/slug line** box.

    If you want to position the file information inside the page, enable the **Position within page** check box.

To position printer's marks

1   Click **File ▶ Print preview**.

2   Click the **Marks placement** tool 🖈.

3   Click the **Auto-position marks rectangle** button on the property bar.

4   Type values in the **Marks alignment rectangle** boxes.

⚡   You can also change the position of printer's marks by clicking on a printer's mark icon in the print preview window and dragging the bounding box.

     If you want to affix printer's marks to the object's bounding box instead of to the page bounding box, click the **Prepress** tab in the **Print** dialog box, and enable the **Marks to objects** check box.

Printing color separations

When you send color work to a service bureau or printing shop, either you or the service bureau must create color separations. Color separations are necessary because a typical printing press applies only one color of ink at a time to a sheet of paper. You can specify the color separations to print, including the order in which they print.

Printing presses produce color using either process color or spot color, or both. You can convert the spot colors to process colors at printing time. For more information on spot and process colors, see "Choosing colors" on page 153.

Corel also supports PANTONE® Hexachrome®, a type of printing process that increases the range of printable colors. Talk to the service bureau about whether you should use PANTONE Hexachrome color.

When setting halftone screens to print color separations, we recommend that you use default settings; otherwise, screens can be improperly set and result in undesirable moiré patterns and poor color reproduction. However, if you are using an imagesetter, the screen technology should be set to match the type of imagesetter the service bureau

uses. Before customizing a halftone screen, consult the service bureau to determine the correct setting.

To print color separations

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3 Enable the **Print separations** check box.

If you want to print specific color separations, enable the corresponding check box in the list of color separations.

Although not recommended, you can print separations in color by enabling the **Print separations in color** check box in the **Options** area.

You can change the order in which color separations print, by enabling the **Use advanced settings** check box, clicking **Advanced**, and choosing an order from the **Order** list box.

To convert spot colors to process colors

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3 Enable the **Print separations** check box.

4 Enable the **Convert spot colors to process** check box in the **Options** area.

Changing the spot colors to process colors when you print does not affect the document, only the way it is printed.

To use PANTONE Hexachrome process color

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3 Enable the **Print separations** check box.

4 Enable the **Hexachrome plates** check box in the **Options** area.

To customize a halftone screen

1   Click **File ▶ Print**.

2   Click the **Separations** tab.

3   Enable the **Print separations** check box.

4   Enable the **Use advanced settings** check box.

5   Click **Advanced**.

6   Change any of the following settings:
    • **Screening technology**
    • **Resolution**
    • **Basic screen**
    • **Halftone type**

You can set the screen frequency, screen angle, and overprint options for spot colors as well as process colors. For example, if you have a fountain fill made up of two spot colors, you can set one to print at 45 degrees and the other at 90 degrees.

Specifying In-RIP trapping settings

In-RIP trapping allows you to specify advanced trapping settings. Before selecting In-RIP trapping, ensure that your PostScript 3 printer supports In-RIP trapping options.

You can select a trap width — the amount that one color spreads into another. You can also specify image trap placement, which determines where the trap occurs. You can, for example, specify whether the trap is a choke or a spread, depending upon the neutral densities of adjacent colors. Neutral density indicates the lightness or darkness of a color and helps determine how adjacent colors spread into one another.

You can specify a threshold at which a trap will be created by specifying a step trap limit. If trap colors are of similar neutral densities, the trap placement will be adjusted accordingly. The step trap limit specifies a threshold at which a trap will adjust.

Before trapping, you can set the inks; for example, you can set an ink to opaque, as in the case of a metallic ink, so that nothing shows through it. To reduce the visibility of a trap, you can decrease the amount of ink color in a trap. This is especially helpful in the case of pastel colors, contrasting colors, and colors with similar neutral densities.

To select a trap width

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3 Enable the **In-RIP trapping** check box.

4 Click **Settings**.

5 Type a value in the **Trap width** box.

If you are trapping to black, type a value in the **Black trap width** box.

✍ To select In-RIP trapping options, you must have selected PostScript 3 from the Compatibility list box under the PostScript tab of the Print dialog box.

To specify image trap placement

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3 Enable the **In-RIP trapping** check box.

4 Click **Settings**.

5 From the **Image trap placement** list box, choose one of the following placements:
   • **Neutral density** — used to determine the lighter object and thus, the direction and placement of the trap
   • **Choke** — used to trap a dark foreground object to a light background image
   • **Spread** — used to trap a light foreground object to a dark background image
   • **Centerline** — used when adjacent images and objects have similar neutral densities or when image density changes along an object's edge

If you want to trap an object to an image, enable the **Trap objects to images** option.

✍ To select **In-RIP trapping** options, you must have selected **PostScript 3** from the **Compatibility** list box under the **PostScript** tab of the **Print** dialog box.

To specify a threshold

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3 Enable the **In-RIP trapping** check box.

4 Click **Settings**.

5 Type a value in one or any of the following boxes:
  • **Step limit** — specifies a threshold between color variations. The lower the threshold value, the more likely it is that a trap will be created.
  • **Black limit** — specifies the threshold at which process black is considered pure black
  • **Black density limit** — specifies a neutral density value for the black ink
  • **Sliding trap limit** — specifies the difference between the neutral densities of adjacent colors at which a trap adjusts (slides) from the darker side of a color edge toward the centerline. The lower the sliding trap limit, the more gradual the transition.

To select **In-RIP trapping** options, you must have selected **PostScript 3** from the **Compatibility** list box under the **PostScript** tab in the **Print** dialog box.

To set inks for trapping

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3 Enable the **In-RIP trapping** check box.

4 Click **Settings**.

5 Click **Type**, and for each color separation, select one of the following:
  • **Transparent** — the selected ink doesn't get trapped, but anything beneath it does
  • **Neutral density** — the neutral density of the selected ink determines how it is treated
  • **Opaque** — the selected ink is treated as opaque
  • **Opaque ignore** — the selected ink doesn't get trapped nor does anything beneath it

To select **In-RIP trapping** options, you must have selected **PostScript 3** from the **Compatibility** list box under the **PostScript** tab in the **Print** dialog box.

To select a trap color reduction

1 Click **File ▶ Print**.

2 Click the **Separations** tab.

3   Enable the **In-RIP trapping** check box.

4   Click **Settings**.

5   Type a value in the **Trap color reduction** box.

A reduction value of 100% indicates no reduction, while a lower value reduces the neutral density.

To select **In-RIP trapping** options, you must have selected **PostScript 3** from the **Compatibility** list box under the **PostScript** tab in the **Print** dialog box.

Printing to film

You can set up a print job to produce negative images. An image-setter produces images on film that may need to be produced as negatives depending on which printing device you are using. Consult the service bureau or printing shop to determine whether you can produce images on film.

You can specify to print with the emulsion down. Printing with the emulsion down produces a backward image on desktop printers.

To print a negative

1   Click **File ▶ Print**.

2   Click the **Prepress** tab.

3   Enable the **Invert** check box.

Do not choose negative film if you are printing to a desktop printer.

From here

For more information about	In the Help index, see...
Working with color trapping	color trapping
Printing with the emulsion down	printing, to film
Understanding commercial printing	commercial printing

Publishing to PDF

PDF is a file format designed to preserve fonts, images, graphics, and formatting of an original application file.

In this section, you'll learn about

- saving documents as PDF files
- reducing PDF file size
- preparing PDF files for a service bureau
- optimizing PDF files

Saving documents as PDF files

You can save a document as a PDF file. A PDF file can be viewed, shared, and printed on any platform provided that users have Adobe® Acrobat®, Adobe® Acrobat® Reader®, or a PDF-compatible reader installed on their computers. A PDF file can also be uploaded to an intranet or the World Wide Web. You can also export an individual selection or an entire document to a PDF file.

When you save a document as a PDF file, you can choose from several preset PDF styles, which apply settings that are specific to that particular PDF style. For example, with the PDF for the Web style, the resolution of the images in the PDF file will be optimized for the World Wide Web. You can also create a new PDF style or edit any preset style.

If you have used symbols in a document, they will be supported in the PDF file. For more information on symbols, see "Working with symbols" on page 133.

To save a document as a PDF file

1   Click **File ▶ Publish to PDF**.

2   From the **PDF style** list box, choose one of the following:

- **PDF for document distribution** — enables JPEG bitmap image compression, and is best used for general document delivery. These documents can include bookmarks and hyperlinks and can be printed on a laser or desktop printer.
- **PDF for prepress** — enables ZIP bitmap image compression, embeds fonts, and preserves spot color options best designed for high-end quality printing. Consult the service bureau for their preferred settings.
- **PDF for the Web** — enables JPEG bitmap image compression, compresses text, and includes hyperlinks for publishing the document to the World Wide Web.
- **PDF for editing** — enables LZW compression, embeds fonts, and includes hyperlinks, bookmarks, and thumbnails. It displays the PDF file with all the fonts, with all of the images at full resolution, and with hyperlinks, so that you can edit the file at a later date.
- **PDF/X-1**— enables ZIP bitmap image compression, converts all objects to CMYK, and preserves spot color options. This style contains the basic settings for prepress and is the standard format used for ad distribution.
- **PDF/X-1a —** This style is a subset of PDF/X-1. It enables ZIP bitmap compression and converts objects to CMYK, but does not allow encryption or use of OPI references.
- **PDF/X-3** — This style is a superset of PDF/X-1a. It allows both CMYK and non-CMYK data (such as Lab or Grayscale) in the PDF file.

3   Locate the folder where you want to save the file.

4   Type a filename in the **File name** box.

To save multiple documents as a single PDF file

1   Click **File ▶ Publish to PDF**.

2   Click **Settings**.

3   Click the **General** tab.

4   Enable the **Documents** option.

5   Enable the check box for each document you want to save.

To create a PDF style

1   Click **File ▶ Publish to PDF**.

2   Click **Settings**.

3   In the **Publish to PDF** dialog box, specify any settings.

4   Click the **General** tab.

5   Click the **Add PDF style** button ⊞ beside the **PDF style** list box.

6   Type a name for the style in the **Save PDF style as** list box.

📝
If you want to delete a PDF style, select the style and click the **Delete PDF style** button ⊟ beside the **PDF style** list box.

To edit a PDF style

1   Click **File ▸ Publish to PDF**.

2   Click **Settings**.

3   In the **Publish to PDF** dialog box, specify any settings.

4   Click the **General** tab.

5   Click the **Add PDF style** button ⊞ beside the **PDF style** list box.

6   Choose a style from the **Save PDF style as** list box.

✍
If you save changes you make to preset style settings, the original settings will be overwritten. To avoid this, save any changes to preset style settings with a new name.

Reducing PDF file size

You can compress bitmap images, text, and line art to reduce the size of a PDF file. Bitmap image compression options include JPEG, LZW, or ZIP. Bitmap images using JPEG compression have a quality scale ranging from 2 (high) to 255 (low). The higher the image quality, the larger the file size.

You can also reduce the size of a PDF file by downsampling color, grayscale, or monochrome bitmap images or converting complex fills to bitmaps.

To set the bitmap compression in a PDF file

1   Click **File ▸ Publish to PDF**.

2   Click **Settings**.

3   Click the **Objects** tab.

4   Choose one of the following from the **Compression type** list box:
    • **None**

- LZW
- JPEG
- ZIP

To compress text and line art in a PDF file

1 Click **File ▶ Publish to PDF**.

2 Click **Settings**.

3 Click the **Objects** tab.

4 Enable the **Compress text and line art** check box.

To downsample bitmap images in a PDF file

1 Click **File ▶ Publish to PDF**.

2 Click **Settings**.

3 Click the **Objects** tab.

4 Enable any of the following check boxes, and type a value in the corresponding box:
   - **Color**
   - **Grayscale**
   - **Monochrome**

Downsampling color, grayscale, or monochrome bitmap images is effective only when the resolution of the bitmap image is higher than the resolution specified in the **Bitmap downsampling** area.

To render complex fills as bitmaps

1 Click **File ▶ Publish to PDF**.

2 Click **Settings**.

3 Click the **Advanced** tab.

4 Enable the **Render complex fills as bitmaps** check box.

Preparing PDF files for a service bureau

Open Prepress Interface (OPI) lets you use low-resolution images as placeholders for the high-resolution images that appear in your final work. When a service bureau receives your file, the OPI server substitutes the low-resolution images for the high-resolution images.

Document settings can be preserved to maintain how a PDF file looks. You can preserve document overprints, halftone screen information, and spot colors.

Printer's marks provide information to the service bureau about how the work should be printed. You can specify which printer's marks to include on the page. The available printer's marks are as follows:

- **Crop marks**—represent the size of the paper and appear at the corners of the page. You can add crop marks to use as guides to trim the paper. If you output multiple pages per sheet (for example, two rows by two columns), you can add the crop marks on the outside edge of the page so that all crop marks are removed after the cropping process, or you can choose to add crop marks around each row and column. A bleed determines how far an image can extend beyond the crop marks. A bleed requires that the paper you are printing on is larger than the size of paper you ultimately want, and the image area must extend beyond the edge of the final paper size.
- **Registration marks** — are required to line up the film, analog proofs, or print plates on a color press. Registration marks print on each sheet of a color separation.
- **Densitometer scale** — is a series of gray boxes ranging from light to dark. These boxes are required to test the density of halftone images. You can position the densitometer scale anywhere on the page. You can also customize the levels of gray that appear in each of the seven squares on the densitometer scale.
- **File information** — can be printed, including the color profile; name, date, and time the image was created; and page number.

To preserve document settings in a PDF file

1 Choose **File ▶ Publish to PDF**.
2 Click **Settings**.
3 Click the **Advanced** tab.
4 Enable any of the following check boxes:
   - **Preserve document overprints** — retains the overprint settings of objects in a document

- **Preserve halftone screen information**—useful for color separation screening
- **Preserve spot colors**—instead of converting to RGB, CMYK, or grayscale

To include printer's marks in a PDF file

1 Click **File ▶ Publish to PDF**.

2 Click **Settings**.

3 Click the **Prepress** tab.

4 Enable any of the following check boxes:
   - **Crop marks**
   - **File information**
   - **Registration marks**
   - **Densitometer scales**

   If you want to include a bleed, enable the **Include bleed** check box, and type a bleed amount in the corresponding box.

The bleed option is only available for Acrobat 4.0, Acrobat 5.0, PDF/X-1, PDF/X-1a, and PDF/X-3. A third party plug-in is required to view printer's marks in Adobe Acrobat.

Usually, a bleed amount of .125 to .25 inches is sufficient. Any object extending beyond that uses memory needlessly and may cause problems when you print multiple pages with bleeds on a single sheet of paper.

Optimizing PDF files

You can optimize PDF files for different versions of Adobe Acrobat or Acrobat Reader. You can select a compatibility depending upon what kind of viewer the recipients have. In CorelDRAW, you can select one of six compatibilities: Acrobat 3.0, Acrobat 4.0, Acrobat 5.0, PDF/X-1, PDF/X-1a, or PDF/X-3. Different compatibilities have different options; for example, the bleed option is not available for Acrobat 3.0.

To select a compatibility

1 Click **File ▶ Publish to PDF**.

2 Click **Settings**.

3 Click the **General** tab.

4 From the **Compatibility** list box, choose one of the following:
- **Acrobat 3.0**
- **Acrobat 4.0**
- **Acrobat 5.0**
- **PDF/X-1**
- **PDF/X-1a**
- **PDF/X-3**

From here

For more information about	In the Help index, see
Including hyperlinks in PDF files	PDF, hyperlinks
Including bookmarks in PDF files	PDF, bookmarks
Including thumbnails in PDF files	PDF, thumbnails
Working with fonts in PDF files	PDF, fonts
Specifying the encoding format for PDF files	PDF, encoding format
Setting the number of fountain steps in PDF files	fountain steps, PDF
Choosing an EPS file format	PDF, choosing EPS file format
Viewing Preflight summaries for PDF files	PDF, preflight

Importing and exporting files

Your application provides filters that convert files from one format to another when you import or export files.

In this section, you will learn about

- importing files
- exporting files

Importing files

Your application lets you import files created in other applications. For example, you can import a Portable Document Format (PDF), JPEG, or Adobe® Illustrator® (AI) file. You can import a file and place it in the active application window as an object. You can also resize and center a file as you import it. The imported file becomes part of the active file. While importing a bitmap, you can resample it to reduce the file size or crop it to eliminate unused areas of the photo. You can also crop a bitmap to select only the exact area and size of the image you want to import.

To import a file into an active drawing

1 Click **File ▶ Import**.

2 Choose the folder where the file is stored.

3 Choose a file format from the **Files of type** list box.

4 Click the filename.

   If the file contains text in a language different from the language of your operating system, choose the corresponding option from the **Code page** list box to ensure all text displays correctly.

5 Click **Options**, and enable any of the following active check boxes:
   - **Combine multi-layer bitmap** — automatically merges the layers within a bitmap

- **Extract embedded ICC profile** — lets you save the embedded International Color Consortium (ICC) profile to the color folder where the application is installed
- **Check for watermark** — lets you check the image for a watermark and any information it contains, such as copyright
- **Do not show filter dialog** — lets you use the filter's default settings without opening its dialog box
- **Maintain layers and pages** — lets you maintain layers and pages when importing files; if you disable the check box, all layers are combined in a single layer

6 Click **Import**, and do one of the following:
- Click the drawing page — maintains original file and positions top-left corner where you click
- Click and drag on the drawing page — resizes the file. The import cursor displays the dimensions of the resized file as you drag on the drawing page.
- Press **Enter** — centers the file on the drawing page

Active snapping options are applied to the imported file.

Not all importing options are available for all file formats.

Multi-layered bitmaps can be imported by default.

You can import multiple files. Hold down **Shift** + click to select consecutive files in a list. Hold down **Ctrl** + click to select non-consecutive files.

To resample a bitmap while importing

1 Click **File ▶ Import**.

2 Choose the folder where the image is stored.

3 Choose a file format from the **Files of type** list box.

4 Click the filename.

5 Click **Options**, and enable any of the following check boxes:
- **Link bitmap externally** — lets you link a bitmap externally instead of embedding it in a file
- **Combine multi-layer bitmap** — automatically merges the layers within a bitmap

- **Extract embedded ICC profile** — lets you save the embedded International Color Consortium (ICC) profile to the color folder where the application is installed
- **Check for watermark** — lets you check the image for a watermark and any information it contains such as copyright
- **Do not show filter dialog** — lets you use the filter's default settings without opening its dialog box
- **Maintain layers and pages** — lets you maintain layers and pages when importing files; if you disable the check box, all layers are combined in a single layer

6 Choose **Resample** from the list box, and click **Import**.

7 In the **Resample image** dialog box, type values in any of the following boxes:
- **Width** — specifies the width of the graphic in a chosen unit of measurement or as a percentage of its original width
- **Height** — specifies the height of the graphic in a chosen unit of measurement or as a percentage of its original height

8 In the **Resolution** area, type values in the following boxes:
- **Horizontal** — lets you specify the horizontal resolution of the graphic in pixels or dots per inch (dpi)
- **Vertical** — lets you specify the vertical resolution of the graphic in pixels or dots per inch (dpi)

9 Click the drawing page.

You can also	Do the following
Maintain the width-to-height ratio of the image	Enable the **Maintain aspect ratio** check box.
Change the units of measurement	Choose a unit type from the **Units** list box.
Maintain equal horizontal and vertical resolution values automatically	Enable the **Identical values** check box.

If a dialog box for the import format opens, specify the options you want. For detailed information about file formats, see "File formats" in the CorelDRAW Help.

Not all importing options are available for all file formats.

To crop a bitmap while importing

1 Click **File ▶ Import**.

2 Choose the folder where the image is stored.

3 Choose a file format from the **Files of type** list box.

4 Click the filename.

5 Click **Options**, and enable any of the following active check boxes:
   • **Link bitmap externally** — lets you link a bitmap externally instead of embedding it in a file
   • **Combine multi-layer bitmap** — automatically merges the layers within a bitmap
   • **Extract embedded ICC profile** — lets you save the embedded International Color Consortium (ICC) profile to the color folder where the application is installed
   • **Check for watermark** — lets you check the image for a watermark and any information it contains such as copyright
   • **Do not show filter dialog** — lets you use the filter's default settings without opening its dialog box
   • **Maintain layers and pages** — lets you maintain layers and pages when importing files; if you disable the check box, all layers are combined in a single layer

6 Choose **Crop** from the list box, and click **Import**.

7 In the **Crop image** dialog box, type values in any of the following boxes:
   • **Top** — specifies the area to remove from the top of the graphic
   • **Left** — specifies the area to remove from the left edge of the graphic
   • **Width** — specifies the width of the graphic you want to keep
   • **Height** — specifies the height of the graphic you want to keep

8 Click the drawing page.

   You can also resize a graphic by dragging the selection handles in the preview window.

Exporting files

You can export and save images to a variety of file formats that can be used in other applications. For example, you can export a file to the Adobe Illustrator (AI) or GIF

format. You can also export a file so that it is optimized for use with a suite of office productivity applications, such as Microsoft Word.

You can export a file to a selected file format. You can also export a file by saving the open file under a different name or to a different file format while leaving the open file in its existing format.

To export a file

1   Click **File ▶ Export**.

2   Choose the folder where you want to save the file.

3   Choose a file format from the **Save as type** list box.

4   Type a filename in the **File name** list box.

5   Click **Options**, and enable any of the following active check boxes:
    • **Selected only** — saves only the objects selected in the active drawing
    • **Web_safe_filenames** — replaces the white space in a filename with an underscore. Special characters are replaced by characters suitable for Web-based filenames.
    • **Do not show filter dialog** — suppresses dialog boxes that provide other options when exporting

6   Click **Export**.

If a dialog box for the export format opens, specify the options you want. For detailed information about file formats, see "File formats" in the CorelDRAW Help.

You can also	Do the following
Compress a file on export	Choose a compression type from the **Compression type** list box.
Specify information about a file	Type any comments you want in the **Notes** box.

To export to Microsoft Office or WordPerfect Office

1   Click **File ▶ Export for Office**.

2   From the **Export to** list box, choose one of the following:

- **Microsoft Office**
- **Corel WordPerfect Office**

3 From the **Graphic should be best suited for** list box, choose one of the following:
   - **Compatibility**
   - **Editing**

4 From the **Optimized for** list box, choose one of the following options:
   - **Presentation**
   - **Desktop printing**
   - **Commercial printing**

5 Click **OK**.

6 Locate the folder where you want to save the file.

7 Type a filename in the **Filename** list box.

8 From the **Save as type** list box, choose one of the following file formats:
   - **PNG - Portable Network Graphics**
   - **BMP - Windows bitmap**

Drawings are exported at 96 DPI with color management settings unchanged.

Layers in a drawing are flattened when exported to Microsoft Office or Corel WordPerfect Office.

To save a file to a different format

1 Click **File ▶ Save as**.

2 Choose the folder where you want to save the file.

3 Choose a file format from the **Save as type** list box.

4 Type a filename in the **File name** list box.

5 Click **Options**, and enable any of the following active check boxes:
   - **Selected only** — saves only the objects selected in the active drawing
   - **Web_safe_filenames** — replaces the white space in a filename with an underscore. Special characters are replaced by characters suitable for Web-based filenames.
   - **Embed fonts using TrueDoc** — lets you save fonts to the file using TrueDoc
   - **Save with embedded VBA project** — lets you save, with the file, macros you have created in the VBA editor

6 Click **Save**.

Not all of the options or the compression types in the **Save drawing** dialog box are available for all file formats.

Working with graphic, text, and color styles

The CorelDRAW application has three types of styles you can create and apply in drawings: graphic, text, and color. After you create a style, you can edit it and apply it to any number of graphic and text objects. When you edit a style, all the unlocked objects using that style are automatically updated, letting you make design changes to many objects in one step.

You can save all styles in the active drawing and use them for all new drawings you create. For more information, see "Saving defaults" in the Help.

In this section, you'll learn about
- creating, applying, and editing graphic or text styles
- customizing the Graphic and text styles docker
- creating and applying color styles
- editing and sorting color styles
- moving and copying color styles

Creating, applying, and editing graphic or text styles

A style is a set of formatting attributes. When you apply a style to an object, all the attributes of the style are applied to that object in one step. Styles can save you considerable time if you must apply the same formatting to several objects.

There are graphic styles and text styles. A graphic style consists of fill and outline settings that you can apply to graphic objects such as rectangles, ellipses, and curves. For example, if you have a group of objects in a drawing that use one graphic style, you can simultaneously change their fill by editing the graphic style. For more information on applying fills, see "Filling objects" on page 141. For more information about changing the appearance of outlines, see "Formatting lines and outlines" on page 52.

A text style is a set of text settings such as font type and size. Text styles can also include fill and outline attributes. For example, you can create a style that applies a 72 point AvantGarde font with a texture fill. There are two types of text styles: artistic and

paragraph. You can also change the properties of default artistic and paragraph text. For example, you can change the properties of default artistic text, so that every artistic text object you create has the same formatting. For information about default text, see "Changing the appearance of text" on page 215.

You can create a graphic or text style from the properties of an existing object or from scratch, at which time the style is saved. When you apply a style to an object, CorelDRAW overrides the existing text or graphic properties with the properties of the current style. To use the style in another drawing, you can copy the style to the new drawing or save the style in a template. For more information about templates, see "Working with templates" on page 33. If you copy or import a style with the same name as an existing style, CorelDRAW renames the style by adding a number to the style name. At any point, you can rename a style, unless it is a default style. You can also change the properties of an object back to its previous style if you made a mistake or decide that the previous style was better suited to that object.

After you create a style, you can edit its properties and find any object using a given style. For example, you can find all objects that use the default graphic style. Finding objects assigned a specific style makes editing that style even more efficient.

To create a graphic or text style from an object

1 Right-click an object whose style properties you want to save.

2 Click **Styles ▶ Save style properties**.

3 Enable one or more of the following check boxes:
   • **Text**
   • **Fill**
   • **Outline**

4 Type a name for the style in the **Name** box.

When you create a style from an existing object, CorelDRAW does not automatically apply the style to an object. If you want an object to use the style, you must apply the style. For information about applying a style, see "To apply a graphic or text style" on page 309.

You can also create a graphic or text style from an object by dragging the object to the **Graphic and text styles** docker.

To create or edit a graphic or text style

1   Click **Tools ▶ Graphic and text styles**.

2   In the **Graphic and text styles** docker, click the flyout button ⊡.

3   Click **New**, and click one of the following style types:
    • **Graphic style**
    • **Artistic text style**
    • **Paragraph text style**

4   Choose a style from the list.

5   Click the flyout button, and click **Properties**.

6   Click **Edit** beside a property.

7   Modify any text, fill, or outline properties.

You can also

Copy object properties	Choose a style, click the flyout button ⊡, click **Copy properties from**, and click the object.
Delete a style	Right-click a style, and click **Delete**.
Rename a style	Right-click a style, click **Rename**, type a new name, and press **Enter**.
Revert to an object's style	Right-click an object using the **Pick** tool ⊾, and click **Styles ▶ Revert to style**.

To apply a graphic or text style

1   Select an object.

2   Click **Tools ▶ Graphic and text styles**.

3   In the **Graphic and text styles** docker, double-click a style.

Creating and applying color styles

A color style is a color you save and apply to objects in a drawing. Since an infinite number of colors are available in CorelDRAW, color styles can make it easier to apply the exact color you want.

When you create a color style, the new style is saved to the active drawing. After you create a color style, you can apply it to objects in the drawing. You can also delete color styles if you no longer require them.

One powerful feature of color styles is that you can create a shade or series of shades based on a color style. The original color style is referred to as the "parent" color, and the shades are referred to as "child" colors. For most of the available color models and palettes, child colors share the same hue as the parent color but have different saturation and brightness levels. With the PANTONE MATCHING SYSTEM®, PANTONE Hexachrome, and Custom spot color palettes, child and parents are linked to one another but have different tint levels.

CorelDRAW has an Auto-create feature for creating color styles from selected objects. For example, you can import a drawing and Auto-create color styles from an object in the drawing. When you create color styles from an object, the color style is automatically applied to that object so that if you decide to change a color style, the object's related color will also be updated. For more information on importing files, see "Importing files" on page 299.

When you use the Auto-create feature, you can choose to create few or many parent color styles. After you have converted all colors to color styles, you can, for example, use one parent color to control all red objects, or many parents, one for each shade of red in the drawing.

When creating child colors, colors added from a color-matching system are converted to the parent color's color model so that they can be grouped into appropriate parent-child groups automatically.

To create a color style

1   Click **Tools ▶ Color styles**.
2   In the **Color styles** docker, click the **New color style** button 🗒.
3   Select a color from the **New color style** dialog box.

You can also

Apply a color style	Select an object, and double-click the name of the style you want to apply in the **Color styles** docker.
Delete a color style	Right-click the color style in the **Color styles** docker, and click **Delete**.

You can also create a color style from an object or the color palette by dragging a color to the **Color styles** docker.

You can also apply a color style to an object by dragging a color from the **Color styles** docker.

From here

For more information about	In the Help index, see
Finding objects assigned a specific graphic or text style	styles, finding objects with
Customizing the Graphic and text styles docker/palette	styles, displaying
Creating a child color	child colors, creating
Creating a series of child colors	child colors, creating
Creating parent colors from an object	parent colors, creating from objects
Creating child colors from an object	child colors, creating from objects
Editing color styles	color styles, editing
Sorting color styles	color styles, sorting
Moving color styles	color styles, moving
Copying color styles	color styles, copying

From Adobe Illustrator to CorelDRAW

Adobe Illustrator and CorelDRAW have many similarities, which makes it easy to move from one graphics application to the other. Although they share the most basic drawing and design capabilities, Adobe Illustrator and CorelDRAW are distinguished by some differences in both terminology and tools. Understanding these differences lets you make a quick transition to CorelDRAW.

In this section you'll learn about

- comparing terminology
- comparing tools

Comparing terminology

The terms and concepts in Adobe Illustrator and CorelDRAW differ for some features. Many terms have similar meanings but are referred to by different names. Adobe Illustrator terms are listed below with their CorelDRAW equivalents.

Adobe Illustrator term	CorelDRAW term
Anchor points	Nodes
Artwork	Drawing
Compound object	Curve object
Gradient fill	Fountain fill
Mask	PowerClip
Outline view	Wireframe view
Path	Curve
Placing images	Inserting images
Rasterizing	Converting to a bitmap

Adobe Illustrator term	CorelDRAW term
Stroke	Outline
Swatches palette	Color palette
Unite	Weld

Comparing tools

The following table lists Adobe Illustrator tools and the corresponding CorelDRAW tools. Many of the tools create the same result but operate slightly differently.

Adobe Illustrator tool	CorelDRAW tool
Add anchor point tool	**Shape** tool, see "To add or remove a node" on page 104.
Area type tool	**Text** tool, see "To add paragraph text" on page 213.
Blend tool	**Interactive blend** tool, see "To blend objects" on page 127.
Convert anchor point tool	**Shape** tool, see "To make a curve cusp, smooth, or symmetrical" on page 105.
Delete anchor point tool	**Shape** tool, see "To add or remove a node" on page 104.
Direct selection tool	**Shape** tool, see "To select a node" on page 103.
Drop shadow tool	**Interactive drop shadow** tool, see "To add a drop shadow" on page 181.
Gradient tool	**Interactive fill** tool, see "Applying fountain fills" on page 142.
Line segment tool	**Freehand** tool, see "To draw a straight line" on page 48 or **Polyline** tool, see "Drawing lines" on page 45.

Adobe Illustrator tool	CorelDRAW tool
Measure tool	**Dimension** tool, see "Drawing flow and dimension lines" on page 59.
Mesh tool	**Interactive mesh fill** tool, see "To apply a mesh fill to an object" on page 148.
Paint bucket tool	**Interactive fill** tool, see "To apply a uniform fill" on page 141.
Paintbrush tool	**Artistic media** tool, see "To draw a calligraphic line" on page 51 or **Brush** tool, see "Applying brush strokes" on page 55.
Path type tool	**Text** tool, see "To fit text to a path" on page 225.
Pencil tool	**Freehand** tool, see "To draw a curved line" on page 49.
Pucker tool	**Interactive envelope** tool, see "To apply an envelope" on page 115.
Rectangular grid tool	**Graph paper** tool, see "To draw a grid" on page 69.
Reflect tool	Mirror buttons, see "To mirror an object" on page 96.
Reshape tool	**Shape** tool, see "To stretch, scale, rotate, or skew nodes" on page 106.
Rotate tool	**Pick** tool, see "To rotate an object" on page 95.
Rounded rectangle tool	**Rectangle** tool, see "To round the corners of a rectangle or a square" on page 64.
Scissors tool	**Knife** tool, see "To split an object" on page 118.
Selection tool	**Pick** tool, see "To select objects" on page 76.

Adobe Illustrator tool	CorelDRAW tool
Size tool	**Pick** tool , see "To size an object" on page 93.
Skew tool	**Pick** tool , see "Skewing and stretching objects" on page 106.
Star tool	**Polygon** tool , see "To reshape a polygon or a star" on page 67 or **Star** shapes , see "To draw a predefined shape" on page 70.
Symbol sprayer tool	**Sprayer** tool , see "To spray a line" on page 58.
Twirl tool	**Interactive twister distortion** tool , see "To distort an object" on page 113.
Twist tool	**Interactive twister distortion** tool , see "To distort an object" on page 113.
Type tool	**Text** tool , see "To add paragraph text" on page 213.
Warp tool	**Smudge brush** tool , see "To smudge an object" on page 109 or **Envelope** tool, see "Shaping objects using envelopes" on page 115.
Wrinkle tool	**Roughen brush** tool , see "To roughen an object" on page 111.

Corel **R.A.V.E.**™ 3

Workspace tour

Becoming familiar with the terminology and workspace of Corel R.A.V.E. will help you easily follow this user guide's concepts and procedures.

In this section, you'll learn about

- Corel R.A.V.E. terminology and concepts
- Corel R.A.V.E. application window
- Corel R.A.V.E. toolbox

Corel R.A.V.E. terminology and concepts

Before you get started with Corel R.A.V.E., you should be familiar with the following terms.

Term	Description
object	An element in a drawing such as an image, shape, line, curve, symbol, text, or layer
movie	An animation project you create in Corel R.A.V.E. A movie consists of a succession of frames.
frame	One image in a series of images that make up a movie. A movie frame can contain one or more objects.
stage	The area in which you add objects to a movie, compose the contents of individual frames, and preview animation
docker	A window containing available commands and settings relevant to a specific tool or task
flyout	A button that opens a group of related tools

Term	Description
thumbnail	A small, low-resolution representation of an image
artistic text	A type of text to which you can apply special effects, such as shadows
paragraph text	A type of text to which you can apply formatting options, and which can be edited in large blocks

Corel R.A.V.E. application window

When you launch Corel R.A.V.E., the application window opens containing a drawing window. The rectangle in the center of the drawing window is the stage where you create your movie. Although more than one drawing window can be opened, you can apply commands to the active drawing window only.

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The application window contains the following main parts:

Part	Description
Menu bar	The area containing pull-down menu options
Property bar	A detachable bar that changes depending on the tool or task. For example, when the text tool is active, the property bar displays commands that create and edit text.
Toolbar	A detachable bar that contains shortcuts to menu and other commands
Title bar	The area displaying the title of the currently open movie
Rulers	Horizontal and vertical borders that are used to determine the size and position of objects in a movie
Toolbox	A dockable bar with tools for creating, filling, and modifying objects in the movie
Drawing window	The area outside the stage bordered by the scroll bars and application controls
Stage	The rectangular area inside the drawing window in which you add objects to a movie, compose the contents of individual frames, and preview animation
Color palette	A dockable bar that contains color swatches
Docker	A window containing available commands and settings relevant to a specific tool or task
Status bar	An area at the bottom of the application window that contains information about object properties such as type, size, color, fill, and resolution. The status bar also shows the current mouse position.

Part	Description
Navigator	The small, square button at the bottom-right corner that opens a smaller display to help you move around in the drawing window
Movie playback controls	The area at the bottom left of the drawing window that contains controls for playing movies
Timeline docker	The window displaying the timeline of all objects in a movie. This is where you animate, organize, and coordinate objects in a movie.

By default, the rulers are not displayed. To toggle between displaying and hiding the rulers, see "To display or hide the rulers" on page 1.

By default, the status bar is not displayed. To toggle between displaying and hiding the status bar, click **Window ▶ Toolbars ▶ Status bar**.

Corel R.A.V.E. toolbox
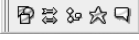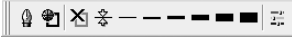
Many application commands are accessible through the toolbox. You can also access application commands from the menu bar, toolbars, property bar, and dockers. The toolbox can be opened, closed, and moved around your screen at any time. For information about the menu bar, toolbars, property bar, and dockers, see "Corel R.A.V.E. workspace tools" in the Help.

You can customize many of these workspace tools to suit your needs. For more information, see "Customizing your application" in the Help.

Flyouts open to display a set of related Corel R.A.V.E. tools. A small arrow in the bottom right corner of a toolbox button indicates a flyout: for example, the **Shape edit** flyout . Clicking a flyout arrow opens a set of related tools. Clicking the grab handles at the left end of the flyout and dragging the flyout away from the toolbox sets the flyout in its expanded form.

The following table provides descriptions of the flyouts and tools in the Corel R.A.V.E. toolbox.

Flyouts

Flyout	Description
Zoom	Lets you access the **Zoom** and **Hand** tools
Curve	Lets you access the **Freehand**, **Bézier**, **Artistic media**, **3-point curve**, **Polyline**, and **Pen** tools
Rectangle	Lets you access the **Rectangle** and **3-point rectangle** tools
Ellipse	Lets you access the **Ellipse** and **3-point ellipse** tools
Shape edit	Lets you access the **Shape**, **Knife**, **Eraser**, **Smudge brush**, **Roughen brush**, and **Virtual segment delete** tools
Object	Lets you access the **Polygon**, **Spiral**, and **Graph paper** tools
Perfect Shapes	Lets you access the **Basic shapes, Arrow shapes, Flowchart shapes, Star shapes**, and **Callout shapes** tools
Interactive tools	Lets you access the **Interactive blend, Interactive contour, Interactive distortion, Interactive envelope, Interactive extrude, Interactive drop shadow**, and **Interactive transparency** tools
Interactive fill	Lets you access the **Interactive fill** and **Interactive mesh fill** tools
Eyedropper	Lets you access the **Eyedropper** and **Paintbucket** tools
Outline	Lets you access the **Outline pen** and the **Outline color** dialog boxes, the **Color** docker, and a selection of outlines of various widths
Fill	Lets you access the **Color** docker, the **Fill color, Fountain fill, Pattern fill**, and **Texture fill** dialog boxes, and the **No fill** button.

An example is the **Object properties** docker. When it is open, you can click an object and view formatting, dimensions, and other properties of the object.

From here

For more information about	In the Help index, see...
Movie playback controls	workspace, movie playback controls
Property bar	workspace, property bar
Status bar	workspace, status bar
Timeline docker	workspace, Timeline docker
Toolbars	workspace, toolbars
Tools	workspace, tools

Getting started in Corel R.A.V.E.

In this section, you'll learn about

- how Corel R.A.V.E. works
- setting the properties of movies

How Corel R.A.V.E. works

The Corel R.A.V.E. application lets you create movies by following these steps:

1 **Start a movie project** — See "Starting Corel R.A.V.E. and opening movies" in the Help for information about starting a movie project, either from scratch or by opening a graphic. See "Setting the properties of movies" on page 326 for information about setting movie properties such as stage size, frame rate, and background.

2 **Create the movie contents** — Use the drawing and effects tools to create and modify lines, shapes, and text, or to import artwork created in other applications. For information about drawing lines and shapes, shaping and working with objects, filling and coloring objects, adding special effects, and working with bitmaps, see the Help. For information about working with text, see "Adding and formatting text" in the Help.

3 **Animate, preview, and edit the movie contents** — Use a timeline to extend the life of objects in a movie and change them over time. You can preview the movie, coordinate animated objects, and modify the way they change over time. For information about animating, see "Animating objects" on page 329 and "Animating text" on page 345. For information about editing and previewing movies, see "Editing and previewing animation" on page 339.

4 **Add sound and repetition** — Add sound to further enliven a movie, or repeat an animated object or group of objects for the duration of a movie. For information about working with sound, see "Using sound in movies" in the Help. For information about repeating an animation within a movie, see "Repeating animated objects" on page 338.

5 **Add interactivity** — Add interactive objects, or rollovers, that move or change when pointed to or clicked. Use behaviors to create more complex, interactive movies. For information about creating interactive movie elements, see "Creating interactive objects' in the Help. For information about using behaviors in movies, see "Using behaviors" in the Help.

6 **Export a movie** — When you complete a movie, prepare to share it with the world by exporting it to a standard animation format. For information about exporting movies, see "Exporting and publishing movies" in the Help.

Setting the properties of movies

When you create a movie, you should begin by setting the stage size and frame rate and choosing a background. In Corel R.A.V.E., the length of a movie is determined by the life span of objects within the movie. You cannot set the length of a Corel R.A.V.E. movie in advance, because it changes as you extend the life of objects within it. For more information about setting the life span of objects, see "Working with timelines" in the Help.

Setting the stage size and frame rate of a movie

A movie consists of a succession of frames that are displayed on the stage (500 x 500 pixels by default). You can customize the stage size of a movie by specifying its width and height.

The frame rate of a movie refers to the number of frames that are played per second. The frame rate affects the smoothness of the animation and the file size of a movie. Usually, higher frame rates result in smoother animation and larger files, while lower frame rates result in choppier animation and smaller files. The default frame rate in Corel R.A.V.E. is 12 frames per second, the optimal rate for the Web. The typical frame rate of motion pictures is 24 frames per second.

Choosing a background

By default, all movies have a solid white background. You can choose another color, or you can use a bitmap, such as a textured design or photograph, to create a more intricate or dynamic background. You can also remove a background.

When you choose a bitmap as the background, it is embedded in the Corel R.A.V.E. movie by default. This is the recommended option. However, you can also link the bitmap to the movie so that if you later edit the source image, the change is

automatically reflected in the movie. If you send a movie containing a linked image to someone else, you must also send the linked image.

If the bitmap is larger than the stage, it is cropped. If the bitmap is smaller than the stage, it is tiled across the stage. You can change the size of the background bitmap to create smaller or larger tiles.
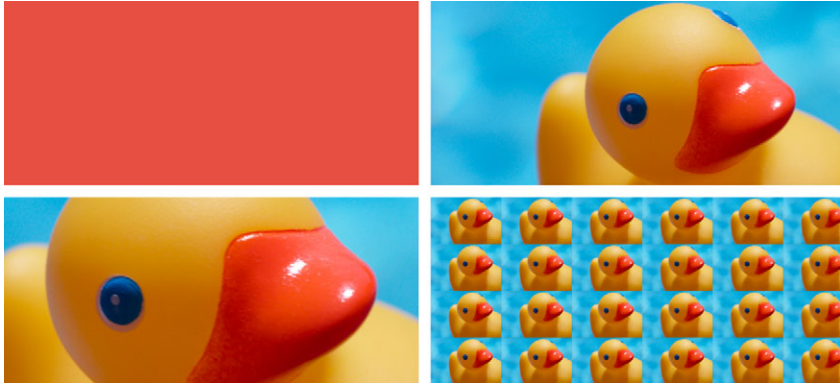
You can enhance a movie by adding a background. Clockwise from top-left: solid color background, bitmap background, tiled bitmap background, cropped bitmap background.

To set the stage size and frame rate of a movie

1   Click **Movie ▶ Movie setup**.

2   Choose a unit of measurement from the list box.

3   Type values in the following boxes:
    • **Width**
    • **Height**
    • **Frame rate**

From here

For more information about	In the Help index, see...
Resampling bitmaps while importing	resampling bitmaps
Cropping bitmaps while importing	cropping bitmaps
Customizing undo settings	undoing commands, specifying levels

For more information about	In the Help index, see...
Starting Corel R.A.V.E. and opening movies	movies, opening
Importing files	files, importing
Saving movies	movies, saving

Animating objects

The Corel R.A.V.E. application lets you create animation by extending the life of objects in a movie and changing them over time.

In this section, you'll learn about

- understanding animation methods and terms
- increasing the life span of objects
- tweening objects

Understanding animation methods and terms

Corel R.A.V.E. lets you animate vector objects and bitmaps by editing object properties and interactive effects applied to objects over time. For example, you can make an object roll across the stage, fade out, or change size, color, and shape.

Animation methods

Corel R.A.V.E. offers three animation methods: tweening objects, creating animation sequences from existing objects, and animating objects frame-by-frame.

Tweening lets you define changes in an object at specific frames during its life span, and then automatically applies the changes between these frames.

You can create an animation sequence from a blend, a group, or text. For information about creating animation sequences from blends, see "Animating blends" in the Help. For information about creating animation sequences from groups, see "Creating animation sequences from groups" in the Help. For information about creating animation sequences from text, see "To create a typing effect" on page 348.

Animating objects frame-by-frame lets you edit an object in each frame of its life span, giving you complete control over the way it changes over time.

Animation terms

Before you start animating objects in a movie, you should be familiar with the following animation terms.

Term	Description
Frame	One image in a series of images that make up a movie. A movie frame can contain one or more objects.
Current frame	The frame that is displayed on the stage
Keyframe	A frame in which you define change in an object. When tweening, Corel R.A.V.E. fills in the frames between keyframes so that objects change gradually over time.
Object's life span	The frames in which an object exists in a movie
Object's timeline	A graphical representation of an object's life span in a movie
Static object	An object that does not change during its life span in a movie
Animated object	An object in a movie that changes over time
Symbol	An object or group of objects that is defined once and can be referenced many times in a movie
Sprite	An animated symbol

Increasing the life span of objects

When you add an object to the stage, it has a life span of one frame and therefore its timeline consists of a single black dot. Before you can animate an object, you must increase its life span. You can increase the life span of a single object or a group of objects. For information about increasing the life span of a group of objects, see "To increase the life span of a new group of objects" in the Help.

Increasing the life span of a new object does not animate the object. It only produces a static object that exists in a number of successive frames. To animate a static object, you must tween it or animate it frame-by-frame. For more information about animating frame-by-frame, see "Animating objects frame-by-frame" in the Help.

To increase the life span of a new object

1   Select a new object.
2   In the **Timeline** docker, drag the black dot associated with the object to the frame you want.

Tweening objects

Tweening lets you animate objects in a movie. You change their position and appearance at specific frames in their life spans, and Corel R.A.V.E. creates the frames in between.

Before you can tween an object, you must increase its life span so that it exists for more than one frame. For more information, see "Increasing the life span of objects" on page 330.

How tweening works

To tween a static object, you can turn the end frame of the object's timeline into a keyframe. The start frame of the object's timeline automatically becomes another keyframe that stores information about the object's original state. Modifying the object at the end keyframe produces an animated object that changes gradually from its original state to its modified state. The rate of change is determined by the number of intermediate frames, and by the frame rate of the movie. For more information about frame rate, see "Setting the properties of movies" on page 326.

You can also tween a static object by turning any intermediate frame in its timeline into a keyframe, and then modifying the object at that keyframe. The start and end frames automatically become keyframes with the object in its original state. This produces an animated object that changes from its original state to its modified state and then back to its original state.
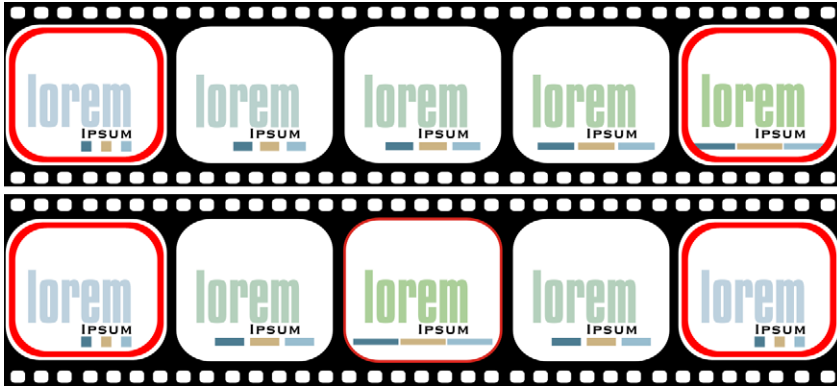
Frames with an interior border indicate keyframes. Turning the end frame in an object's timeline into a keyframe and modifying the object at that keyframe produces an animated object that changes over time (top). Turning an intermediate frame in an object's timeline into a keyframe and modifying the object at that keyframe produces an animated object that changes over time and returns to its original state (bottom).

What can be tweened

Corel R.A.V.E. lets you tween object properties such as size, position, rotation angle, and outline, as well as interactive effects you've applied, such as contour, transparency, fill, envelope, distortion, and drop shadow. You can tween several object properties and effects at the same time.
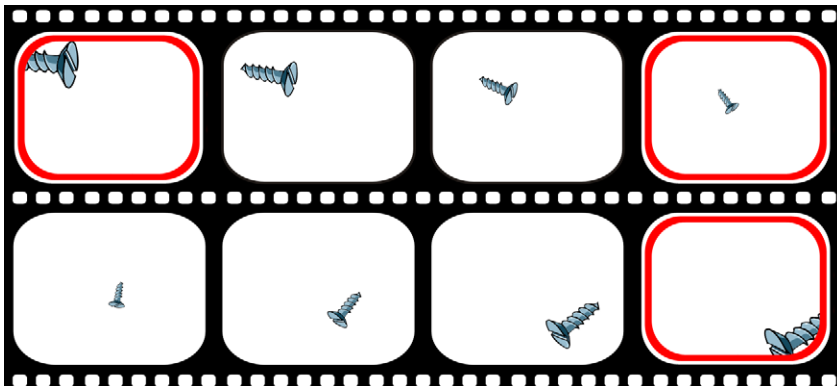
You can tween the size, position, and rotation angle of an object simultaneously to make it roll across the stage as it recedes. Frames with an interior border indicate keyframes.

Changing the fill of a silhouette and its background at an end keyframe produces an image that gradually changes color. In this movie, the sun is also tweened to move along a path.

Tweening a distortion effect applied to an object produces an animated object that changes its shape. Frames with an interior border indicate keyframes.
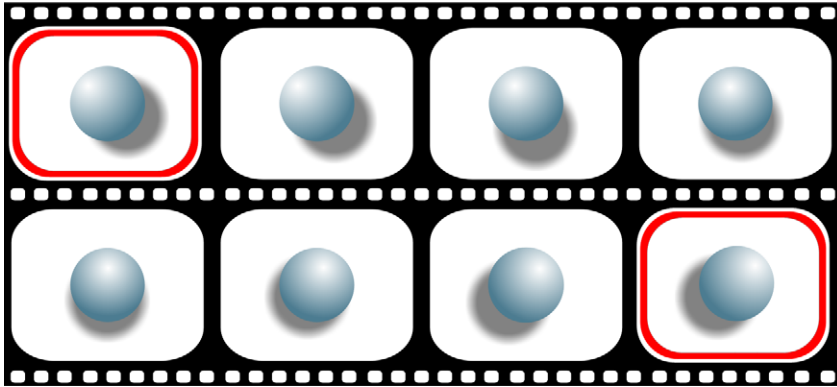
Tweening the drop shadow of this object produces the effect of a light moving over it. Frames with an interior border indicate keyframes.

Not all attributes of object properties and interactive effects can be tweened. For more information, see, "Tweening limitations" in the Help.

Creating motion

Corel R.A.V.E. lets you create interesting motion effects by tweening the position, size, skew, and rotation angle of an object.

Tweening the position of an object makes an object move across the stage. You can make an object move in a straight line or make it follow a path. For information about creating paths, see "Drawing lines" in the Help.

When you tween the size, or scale, of an object, the object appears to be moving closer or receding. When you tween the skew of an object, you add depth to the object over time, and the object appears to rotate. You can rotate an object or an extruded object over time by tweening the rotation angle. Tweening the rotation angle of an object makes the object move around its center of rotation. When you tween the rotation angle of an extruded object, you can rotate the object around its x, y, or z axis. For both objects and extruded objects, you can set the rotation direction and number of rotations.

For information about changing these object properties, see "Working with objects" in the Help.

To tween an object

1   Select an object.

If the object appears in one frame only, drag the black dot associated with the object to increase its life span.

2   In the **Timeline** docker, click the end frame or an intermediate frame in the object's timeline.

3   Click **Movie ▶ Insert keyframe**.

4   Modify the object on the stage by editing any of its properties or by applying interactive effects.

To	Tween the
Fade an object in and out	Transparency
Change an object's color and pattern	Color and fill
Change an object's shape	Envelope effects, distortion effects, and extrusion
Move a light over an object	Drop shadow, transparency, and extrusion lighting
Make an object glow	Fill and drop shadow
Add a third dimension to an object	Extrusion

You can only tween objects that have a life span greater than one frame. For information about increasing the life span of objects, see "Increasing the life span of objects" on page 330.

You can also change a frame to a keyframe by double-clicking it.

You can modify how quickly or slowly a tweened object changes by adjusting object and color acceleration. For more information, see "To adjust object and color acceleration" on page 341.

To move an object in a straight line

1   Select an object.

2   In the **Timeline** docker, click a frame other than the start frame in the object's timeline.

3   Click **Movie ▶ Insert keyframe**.

4 Drag the object to a new position on the stage.

You can move an object in a perfectly horizontal or vertical line by holding down **Ctrl** and dragging the object.

To move an object along a path

1 Select an object.

2 In the **Timeline** docker, click a frame other than the start frame in the object's timeline.

3 Click **Movie ▶ Insert keyframe**.

4 Drag the object to a new position on the stage.

5 Draw a path.

6 In the **Timeline** docker, drag the black dot associated with the path to the start frame of the object's timeline.

7 Click the **Pick** tool, and select the object on the stage.

8 Click **Movie ▶ Tween ▶ Attach to path**.

The pointer changes to a curved arrow.

9 Click the path.

You can also attach an object to a path by clicking the **Attach to path** button on the property bar.

You can attach more than one object to the same path.

You can also

Have an object move along the entire path	Click an intermediate frame in the object's timeline to display tween controls on the property bar, and click the **Sets the tween to occur along full path** button.
Have an object rotate along a path	Click an intermediate frame in the object's timeline to display tween controls on the property bar, and click the **Rotate all objects relative to the path** button.
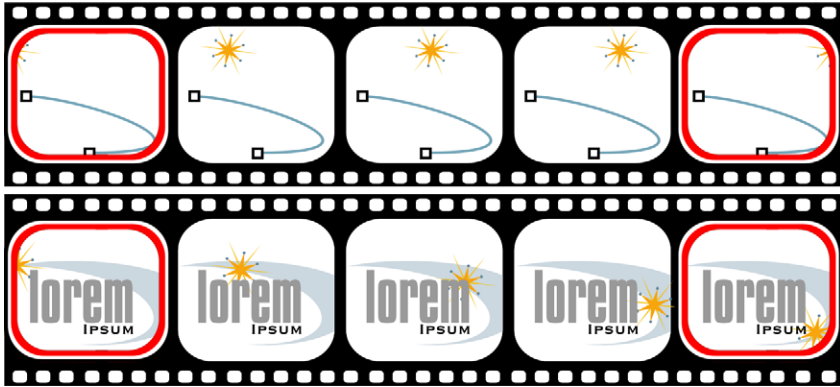
Tweening the object's position (top) and attaching the object to a path produces an animated object that moves along a specified path (bottom). Frames with an interior border indicate keyframes.

To scale an object over time

1 Select an object.

2 In the **Timeline** docker, click a frame other than the start frame in the object's timeline.

3 Click **Movie ▸ Insert keyframe**.

4 Type values in the **Scale factor** boxes on the property bar.

You can also scale an object by dragging any corner selection handle.

From here

For more information about	In the Help index, see...
Repeating animated objects	animation, repeating
Animating blends	blends, animating
Creating animation sequences from groups	animation, creating from groups

Editing and previewing animation

The Corel R.A.V.E. application lets you make changes to movies and preview them.

In this section, you'll learn about
- working with timelines
- working with tweens
- previewing animation

Working with timelines

You can modify the way an animated object changes over time by making changes to its timeline. You can insert and delete frames. You can also add, delete, and move keyframes. Adding keyframes gives you more control over the way an object changes between its start and end frames; deleting keyframes lets you remove unwanted changes to the object over time; and moving keyframes lets you control how quickly changes take place.

You can also edit an animated object by changing its life span or shifting its timeline. You change an object's life span by moving the start frame, end frame, or both. Shifting an object's timeline lets you move the object to a different series of frames without affecting its life span. For example, you can shift the timeline of an object that appears in frames 5 to 20 so that it appears in frames 10 to 25. For more information about shifting an object's timeline, see "To shift an object's timeline" in the Help.

To insert a frame

1   In the **Timeline** docker, click a frame.

2   Click the **Insert frame** button 🖮.

3   In the **Insert frame** dialog box, type a value in the **Number of frames** box.

4   Enable one of the following options:
      • **After current frame**
      • **Before current frame**

If the current frame is not part of at least one object's timeline, inserting frames has no effect.

To delete a frame

1 In the **Timeline** docker, click a frame.

2 Click the **Delete frame** button 🔲.

3 In the **Delete frame** dialog box, type a value in the **Number of frames** box.

4 Enable one of the following options:
   • **After current frame**
   • **Before current frame**

If the current frame is not part of at least one object's timeline, deleting frames has no effect.

To add, delete, and move keyframes

To	Do the following
Add a keyframe	Click a frame in an object's timeline, and click **Movie ▶ Insert keyframe**.
Delete a keyframe	Click a keyframe in an object's timeline, and click **Movie ▶ Delete keyframe**.
Move a keyframe	Click a keyframe in an object's timeline, and drag it to another frame.

You cannot move a keyframe beyond another keyframe in an object's timeline.

You can also add a keyframe by double-clicking a frame in the object's timeline.

You can also delete a keyframe by double-clicking it.

To change the life span of an object

1 Select an object.

2   In the **Timeline** docker, drag from the start frame in the object's timeline to the frame you want.

3   Drag from the end frame in the object's timeline to the frame you want.

For a compound tween, changing the life span affects only the first or last timeline section.

You can change the life span of a group of objects by holding down **Ctrl** and dragging the start and end frames.

Working with tweens

A tween is the animation created by tweening. For more information about tweening, see "Tweening objects" on page 331.

You can modify how quickly or slowly a tweened object changes by adjusting object and color acceleration. For example, you can make a ball rolling down a hill speed up as it approaches the bottom of the hill.

Corel R.A.V.E. lets you copy tween properties from one tween to another. Tween properties include object and color acceleration, rotation controls, color controls, and if applicable, path properties. You can also reverse a tween. For example, a tweened object that moves from left to right while changing from red to blue can be reversed so that it moves from right to left while changing from blue to red. When you reverse a tween, you reverse the entire timeline.

You can also remove a tween. When you do, Corel R.A.V.E. deletes all keyframes, and the object maintains the properties it had at the first keyframe.

To adjust object and color acceleration

1   In the **Timeline** docker, click an intermediate frame in the timeline of a tween.

2   On the property bar, click the **Object and color acceleration** button.

If you want to set different acceleration rates for color and object properties, click the **Lock** button.

3   Move the **Object** and **Color** sliders.

Moving the **Object** slider to the left accelerates object changes at the end of the tween, while moving the **Object** slider to the right accelerates object changes at the beginning of the tween. Moving the **Color** slider to the left accelerates color change at the beginning of the tween, while moving the **Color** slider to the right accelerates color change at the end of the tween.

You can adjust a section of a compound tween by holding down **Ctrl**, and clicking an intermediate frame in the timeline section.

To copy tween properties

1   In the **Timeline** docker, click an intermediate frame in the timeline of the tween to which you want to copy properties.

2   Click **Effects ▶ Copy effect ▶ Tween from**.

The pointer changes to a thick, black arrow.

3   Click an intermediate frame in the timeline of the tween whose properties you want to copy.

Copying tween properties does not attach a tween to a path; however, if both tweens are attached to a path, the path properties are copied.

To reverse a tween

1   In the **Timeline** docker, click an intermediate frame in the timeline of a tween.

2   Click **Movie ▶ Tween ▶ Reverse tween**.

You can also reverse a tween by right-clicking a frame, and clicking **Reverse tween**.

To remove a tween

1   In the **Timeline** docker, click an intermediate frame in the timeline of a tween.

2   Click **Movie ▶ Tween ▶ Remove tween**.

You can also remove a tween by right-clicking a frame, and clicking **Remove tween**.

Previewing animation

You can preview animation in Corel R.A.V.E., or you can use the Macromedia Flash preview to view movies in your Web browser. If a movie contains **Stop**, **Play**, or **Go to** behaviors applied to frames, these will affect the flow of the movie when previewed in Corel R.A.V.E. For movies containing other behaviors, you must use the Macromedia Flash preview. For more information about behaviors, see "Using behaviors" in the Help. Complex animations, such as tweened sprites, should also be viewed with the Macromedia Flash preview.

When you play a movie in Corel R.A.V.E., it plays in a continuous loop, automatically restarting from the first frame after reaching the last frame, unless a **Stop** behavior has been applied to a frame. You can stop a movie at any time and view specific frames. When you scrub through a movie, you can control the speed and stop at any frame.

To preview animation

To	Do the following
Play a movie	Click **Movie ▶ Control ▶ Play movie**.
Stop a movie	Click **Movie ▶ Control ▶ Stop movie**.
Rewind to the beginning of a movie	Click **Movie ▶ Control ▶ Rewind to beginning**.
Fast forward to the end of a movie	Click **Movie ▶ Control ▶ Fast forward to end**.
Move to the previous frame	Click **Movie ▶ Control ▶ Step back one frame**.
Move to the next frame	Click **Movie ▶ Control ▶ Step forward one frame**.
Scrub through a movie	In the **Timeline** docker, drag the playhead back and forth along the timeline.

You can also control the playback of a movie using the playback controls located in the bottom left corner of the drawing window. For more information, see "Movie playback controls" in the Help.

You can also use keyboard shortcuts to preview a movie. In **Num lock** mode, on the number pad, press 4 to rewind, press 6 to fast forward, press 1 to step back one frame, and press 3 to step forward one frame. Press **Enter** to play or stop a movie.

To preview a movie in Macromedia Flash

* Click **File ▶ Flash preview in browser**.

You must have the Macromedia Flash Player plug-in installed in your default Web browser.

Animating text

The Corel R.A.V.E. application lets you animate text in a movie by changing its position and appearance at specific frames in its life span.

In this section, you'll learn about

- tweening text
- creating animated text effects

Tweening text

Corel R.A.V.E. lets you animate text by tweening it along a path. You can also tween the text's properties, such as vertical placement and distance from a path.

You can only tween text that has a life span greater than one frame. For information about increasing the life span of objects, see "To increase the life span of a new object" on page 331.
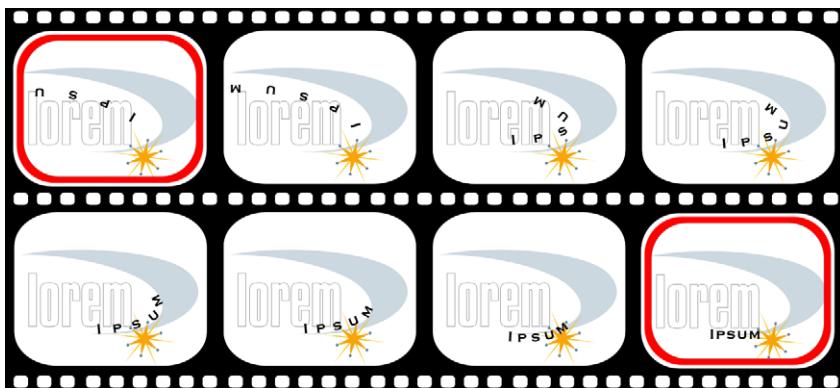
When you move text along a path, you can tween the text's properties.

Corel R.A.V.E. also lets you animate text without tweening it to a path, by treating the text as an object. For information about tweening objects, see "Tweening objects" on page 331.

To move text along a path

1 Draw a path.

2 Click the **Text** tool Ⓐ, and move the pointer over the path. When the pointer changes to a **Fit to path** pointer Ⓐ, click the object and type.

3 In the **Timeline** docker, drag the black dot associated with the path to increase the life span of the path.

4 Click the end frame in the text's timeline.

5 Click **Movie ▶ Insert keyframe**.

6 Drag the glyph to change the position of the text on the path.

You can also

Have text move along the entire path	Click the text's name in the **Timeline** docker, and click the **Sets the tween to occur along full path** button ⤣ on the property bar.
Have text rotate along a path	Click the text's name in the **Timeline** docker, and click the **Rotate all objects relative to the path** button ⤬ on the property bar.

You can also change a frame to a keyframe by double-clicking the frame.

Creating animated text effects

Corel R.A.V.E. lets you create a typing effect and animated text effects.

You can blend artistic text, and then create an animated sequence from the blend.
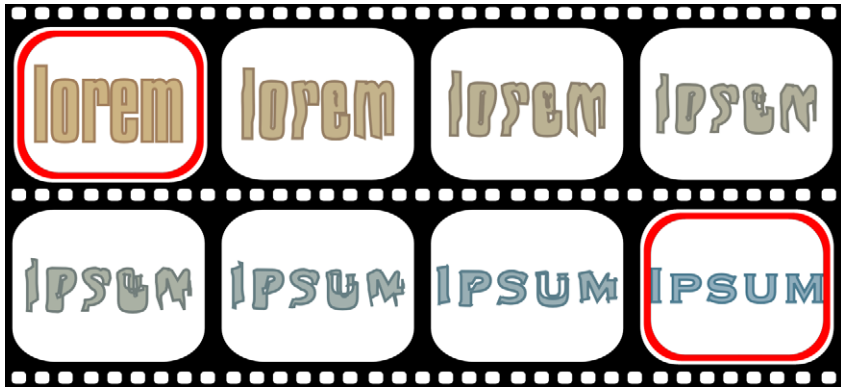
You can blend two instances of text along a path.

To blend artistic text

To	Do the following
Blend text along a straight line	Open the **Interactive tools** flyout , and click the **Interactive blend** tool . Select the first text instance, and drag over the second text instance. If you want to reset the blend, press **Esc** as you drag.
Blend text along a freehand path	Open the **Interactive tools** flyout, and click the **Interactive blend** tool. Select the first text instance. Hold down **Alt**, and drag to draw a line to the second text instance.
Fit a blend to a path	Open the **Interactive tools** flyout, and click the **Interactive blend** tool. Click the blend. Click the **Path properties** button on the property bar. Click **New path**. Using the curved arrow, click the path to which you want to fit the blend.

To	Do the following
Stretch the blend over an entire path	Select a blend that is already fitted on a path. Click the **Miscellaneous blend options** button 🔳 on the property bar, and enable the **Blend along full path** check box.
Create a compound blend	Using the **Interactive blend** tool, drag from an object to the start or end text instance of another blend.
Create a sequence from a blend	Select a blend, and click **Movie ▶ Create sequence from blend**.

You can also blend text with an object. For more information about blending objects, see "Blending objects" in the Help.

To create a typing effect

1 Type the text in the frame where you want the animation to begin.

2 Select the text, and click **Movie ▶ Create sequence from text**.

3 Select the group of objects, and click **Edit ▶ Copy**.

4 In the **Timeline** docker, expand the group of objects, and drag the timeline dot for each character to the end of the group's timeline.

5 In the **Timeline** docker, click the third frame in the group's timeline, and click **Edit ▶ Paste**.

6 Select the group of objects with the earlier timeline, and choose the **Interactive transparency** tool 🔳 from the **Interactive tools** flyout 🔳.

7 Select **Uniform** from the **Transparency type** list box in the property bar, and type **50** in the **Starting transparency** box.

8 Click the **Play** button ▶ on the **Control** panel to play the movie.

9 Click the **Stop** button ⬛ to stop the movie and make adjustments.
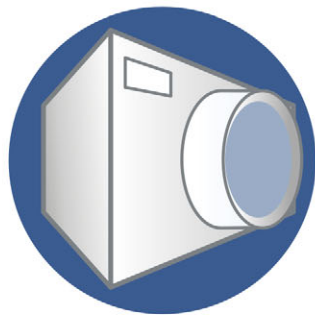
Corel **PHOTO-PAINT®12**

Corel PHOTO-PAINT workspace tour

Becoming familiar with the terminology and workspace of Corel PHOTO-PAINT helps you follow the concepts and procedures found in the user guide and in the Help that is available through the application window.

In this section, you'll learn about

- Corel PHOTO-PAINT terms
- application window
- toolbars
- toolbox
- property bar
- dockers
- status bar

Corel PHOTO-PAINT terms

Before you get started in Corel PHOTO-PAINT, you should be familiar with the following terms.

Term	Description
Channel	An 8-bit grayscale image that stores color or mask information for an image.
Editable area	An editable area of a mask allows paint and effects to be applied to a selected area of an image.
Image	A file you open or create in Corel PHOTO-PAINT.

Term	Description
Lens	An object layer that protects part or all of an image when you perform color and tonal corrections.
Mask	A mask can be applied to an image during image editing to define protected areas and editable areas.
Object	An independent bitmap that is layered above the background image.
Path	A series of line and curve segments connected by adjustable endpoints called nodes.
Thumbnails	A miniature, low-resolution version of an image.

For more terms and definitions, see the glossary in the Help.

Exploring the application window

The Corel PHOTO-PAINT application window contains elements that help you access the tools and commands you need to view and edit images. Application commands are accessible through the menu bar, toolbox, property bar, toolbars, or dockers.

You can customize many of the elements in the application window to suit your workflow. For information about customizing Corel PHOTO-PAINT, see "Customizing your application" in the Help.

The application window contains the following main parts:

Part	Description
Menu bar	The area containing drop-down menus with commands grouped by category
Property bar	A detachable bar containing commands that change according to the active tool

Property bar   Toolbar   Menu bar

Toolbox

Title bar

Image
window

Status bar   Navigator   Docker
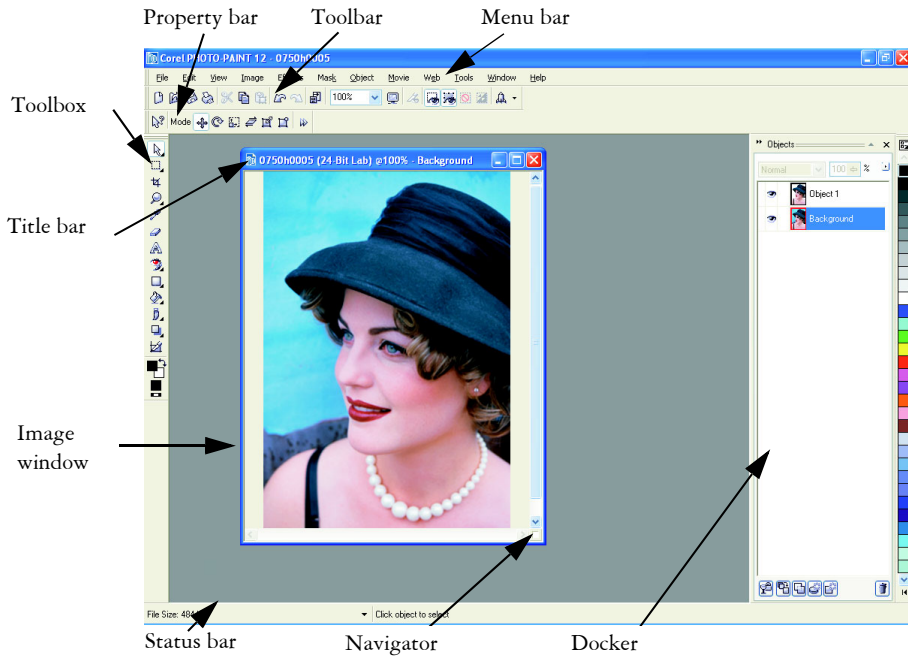
Part	Description
Toolbar (standard)	A bar that contains shortcuts to some menus and other basic commands, such as opening, saving, and printing
Toolbox	A bar that contains tools for editing, creating, and viewing images. The toolbox also contains the color control area which lets you select colors and fills.
Image window	The area in which the image displays. Although more than one image window can be open at the same time, you can apply commands to the active image window only.
Title bar	The area on the image window displaying the title of the image
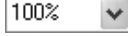
Part	Description
Navigator	A button that lets you view a thumbnail of the entire image so you can focus the image window on a specific area. The Navigator is only available if you have areas that exceed the image window.
Docker	A window that provides access to additional commands and image information. Some dockers provide a visual display area. The **Object** docker is displayed by default.
Status bar	An area that displays image information, system information, and tips

Toolbars

Toolbars consist of buttons that are shortcuts to menu commands. The standard toolbar consists of commonly used commands. The table below outlines the buttons on the standard toolbar.

Press this button	To
	Start a new image
	Open an image
	Save an image
	Print an image
	Cut selected objects to the Clipboard
	Copy selected objects to the Clipboard

Press this button	To
	Paste the Clipboard contents into an image
	Undo the last action
	Redo the last action
	Import an image
100%	Change the zoom level
	Display a full-screen preview
	Show or hide the image slicing grid
	Show or hide the mask marquee
	Show or hide the object marquee
	Clear a mask
	Invert a mask

In addition to the standard toolbar, Corel PHOTO-PAINT has toolbars for specific kinds of tasks. For example, if you frequently work with masks, you can display the **Mask/object** toolbar. Unlike the property bar, the contents of a toolbar remain the same.

For information about moving and re-sizing toolbars, and changing which toolbars display by default, see "To customize toolbar position and display" in the Help. You can also create a custom toolbar to include the tools and commands you use most often. For information about creating custom toolbars, see "Customizing toolbars" in the Help.

To hide or display a toolbar

- Click **Window ▶ Toolbars**, and click a toolbar.

  A check mark next to a toolbar name indicates that the toolbar is displayed in the image window.

Toolbox

The toolbox contains tools for editing, creating, and viewing images. Some of the tools are visible by default, while others are grouped in flyouts. Flyouts open to display a set of related tools. A small arrow in the bottom-right corner of a toolbox button indicates a flyout. The last tool used in a flyout displays in the toolbox. For example, in the **Brush** flyout, the **Paint** tool displays by default, but if you use another tool in the flyout, such as the **Image Sprayer** tool, the **Image Sprayer** tool displays in the toolbox with the flyout arrow. Flyouts function like toolbars when you drag them away from the toolbox. This lets you view all the related tools while you work.

In addition to the tools, the color control area displays in the toolbox. The color control area lets you choose colors and fills.

The following tables provide descriptions of the flyouts, tools, and the color control area in the Corel PHOTO-PAINT toolbox:

Flyout	Description
Pick flyout	Lets you access the **Object pick** tool and the **Mask transform** tool
Mask flyout	Lets you access the **Rectangular mask** tool, the **Ellipse mask** tool, the **Freehand mask** tool, the **Lasso mask** tool, the **Magnetic mask** tool, the **Magic wand mask** tool, and the **Brush mask** tool
Zoom flyout	Lets you access the **Zoom** tool and the **Pan** tool
Touch-up flyout	Lets you access the **Red-eye removal** tool, the **Clone** tool, and the **Touch-up brush** tool

Flyout	Description
Shape flyout	Lets you access the **Rectangle** tool, the **Ellipse** tool, the **Polygon** tool, the **Line** tool, and the **Path** tool
Fill flyout	Lets you access the **Fill** tool and the **Interactive fill** tool
Brush flyout	Lets you access the **Paint** tool, the **Effect** tool, the **Image sprayer** tool, the **Undo brush** tool, and the **Replace color brush** tool
Interactive/Transparency flyout	Lets you access the **Interactive dropshadow** tool, the **Interactive object transparency** tool, the **Color transparency** tool, and the **Object transparency brush** tool

Tool	Description
Object pick	Lets you select an object
Mask transform	Lets you change the appearance of editable areas
Rectangle mask	Lets you define rectangular editable areas
Ellipse mask	Lets you define elliptical editable areas
Freehand mask	Lets you define irregularly shaped or polygonal editable areas
Lasso mask	Lets you define editable areas that are irregular in shape and surrounded by pixels of similar colors

Tool	Description
Magnetic mask	Lets you detect edges of elements in your image, that is, the outline of areas that are in contrasting color to their surroundings, and place the mask marquee along that edge
Magic wand mask	Lets you define irregularly shaped editable areas that include all adjacent pixels that are similar in color to the pixel you first select
Brush mask	Lets you define an editable area by brushing an area as if you were painting
Crop	Lets you remove unwanted areas and straighten crooked images
Zoom	Lets you change the magnification level in the image window
Pan	Lets you drag areas of an image into view when the image is larger than its window
Eyedropper	Lets you choose colors from an image
Eraser	Lets you erase image areas or object areas to reveal the object or background underneath
Text	Lets you add text to your image and edit existing text
Red-eye removal	Lets you remove the red-eye effect from the eyes of subjects in photos.
Clone	Lets you duplicate part of an image and apply it to another part of the same image or to another image
Touch-up	Lets you remove imperfections, such as tears, scratch marks, and wrinkles, from an image by blending its textures and colors.
Rectangle	Lets you draw square or rectangular shapes

Tool	Description
⬭ Ellipse	Lets you draw circular or elliptical shapes
⬠ Polygon	Lets you draw polygons
⚡ Line	Lets you draw single or joined straight line segments using the foreground color
⅄ Path	Lets you create and edit paths
🪣 Fill	Lets you fill areas with one of four fill types: uniform, fountain, bitmap, and texture
Interactive fill	Lets you apply a gradient fill to the entire image, object, or selection
Paint	Lets you paint on an image using the foreground color
Effect	Lets you perform local color and tonal corrections on the image
Image sprayer	Lets you load one or more images and paint them on your image
Undo brush	Lets you restore image areas to how they looked before your last brush stroke
Replace color brush	Lets you replace the foreground color in your image with the background color
Interactive dropshadow	Lets you add shadows to objects
Interactive object transparency	Lets you make the colors of an object fade gradually towards the image background color
Color transparency	Lets you make pixels with a specific color value in an object transparent
Object transparency brush	Lets you brush areas on an object to make them more transparent

Tool	Description
Image slicing	Lets you cut a large image into smaller sections that can be modified for the Web

Color control area

	Lets you choose colors and fills. Consists of three swatches: a **Foreground color** swatch, a **Background color** swatch, and a **Fill color** swatch. The arrow lets you swap the foreground color and background color, and the **Reset color** icon lets you return to the default colors.

Property bar

The property bar displays commonly used commands that are relevant to the active tool. Unlike toolbars, the contents of the property bar change depending on which tool is active. For example, when you use the **Text** tool, the contents of the property bar change to display text-related settings such as font type, font size, and alignment.

More advanced options for the active tool can be accessed on the extended property bar. A button with a double arrow at the end of the property bar lets you open or close the extended property bar.
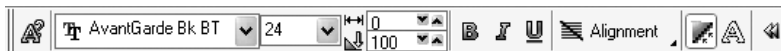
To open or close the extended property bar

To	Do the following
Open the extended property bar	Click the **Open advanced options** button .
Close the extended property bar	Click the **Close advanced options** button .

Dockers

Dockers display controls, such as command buttons, options, and list boxes. Some dockers also include additional visual information about the tools or image elements. You can keep dockers open while you work on an image.

You can attach, or dock, dockers to either side of the application window, or you can float, or undock, them so you can move them as you work in the application window. You can also minimize dockers to save valuable screen space. If you open more than one docker at a time, the windows stack on top of each other and tabs display so you can quickly access the docker you want.

An example of a docker is the **Objects** docker. The **Objects** docker displays thumbnails of the image background and each object layer, as well as command buttons and options related to objects.

To open a docker

• Click **Window ▶ Dockers**, and click a docker.

To move a docker

• Drag the title bar of the docker to a new location.

Dragging a docker away from the side undocks it, whereas dragging a floating docker toward the side docks it.

✍ As you drag, an outline of the docker displays. The outline changes shape as you drag to the side of the application window to indicate that the docker is docked.

To minimize a docker

To minimize	Do the following
A floating docker	Click the roll-down arrow on the title bar of the docker.
A docked docker	Click the double-arrow on the title bar of the docker. A tab displays along the right side of the application window.

Status bar

The status bar displays information about the image, system memory, and the active tool. You can change the type of information that displays to help you with your current task. For example, if you are working with images that have different dimensions, you can display the dimension of the current image.

You can also customize the status bar by adding command buttons. For information about customizing the status bar, see "Customizing the status bar" in the Help.

To change the type of information displayed on the status bar

- Click the arrow ⬚▸ on the status bar, and click one of the following:
  - **File size**
  - **Current tool**
  - **Document dimension**
  - **Color mode**
  - **Memory**

Viewing images and obtaining image information
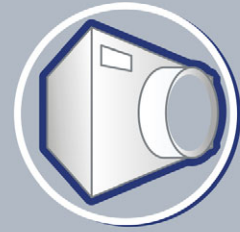
You can change the appearance of windows and the magnification level of an image. Changing the magnification level allows you to view specific image areas and makes image editing easier.

In this section, you'll learn about

- viewing images
- zooming
- obtaining image information

Viewing images

Images can be viewed in a number of different ways. You can hide windows, the toolbox and the toolbars, leaving only the menu bar and the image windows visible. You can view a large representation of an image in a full-screen preview.

You can view image areas that fall outside the image window. For example, when you are working at a high magnification level or with large images, you can pan or jump to a different image area without having to adjust the magnification level.

You can select the image area to be displayed in the image window using the Navigator pop-up.

To hide windows, the toolbox, and toolbars

- Click **Window** ▶ **Hide windows**.

  If you want to return to normal view, right-click in the workspace, and click **Show windows**.

To view a full-screen preview of an image

- Click **View** ▶ **Full-screen preview**.

  If you want to return to normal view, press any key or click the screen.

To view an image area that falls outside the image window

To	Do the following
Pan to another area of the image	Open the **Zoom** flyout , and click the **Pan** tool . Drag the image until the area you want to view displays in the image window.
Jump to another area of the image	Click the **Navigator** pop-up at the lower-right corner of the image window. Drag the rectangle to the area of the image you want to view.
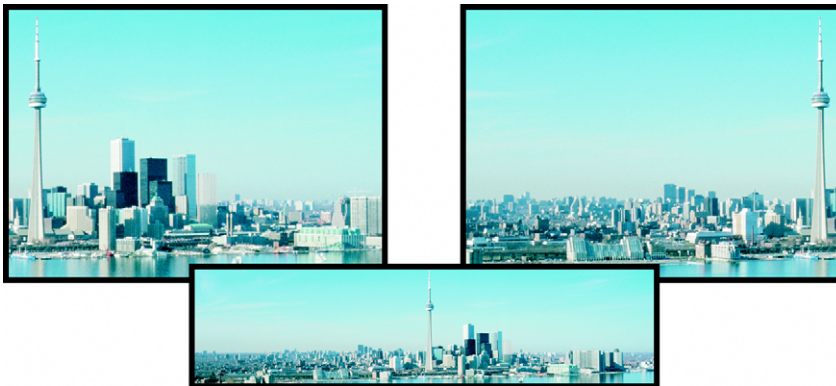
Image areas that fall outside the image window can be dragged into view using the Pan tool. This photo has been dragged from its original position in the first image toward the right in the second image. The inset below shows the entire image.

Zooming

By default, images are displayed at 100% magnification; however, you can zoom in to get a closer look at image detail or zoom out to view a larger portion of the image. You can also specify the magnification level at which images open.

To zoom

- Open the **Zoom** flyout ‖ 🔍 ✋ ‖, and click the **Zoom** tool 🔍.

To	Do the following
Zoom in	Click the image where you want to magnify it.
Zoom in to a specific area	Drag across the area you want to magnify.
Zoom out	Right-click in the image window.
Switch between the current and previous zoom levels	Click the **Zoom to previous** button 🔍 on the extended property bar ⏩.
Zoom in or out by a preset level	Choose a magnification level from the **Zoom level** list box on the property bar.

Obtaining image information

You can view image properties, such as name, file format, and file size.

You can view information about image areas, such as pointer coordinates, as you work. You can view the changes in the x-coordinate (X) or the y-coordinate (Y) as you move the pointer in the image window. You can also make note of the angle (A) and distance (D) that the pointer moves in the image window as you draw a shape or define an editable area. In addition, you can obtain statistics related to the x- and y-coordinates of the center position (C) and the radius (R) when you create or select a circular editable area or shape.

You can also view color information for an image area that corresponds to the pointer position. By default, the RGB, Hex, and CMYK values are displayed. You can choose to display color information in two color models at once. For example, you can view both the grayscale and RGB values of a particular image area.

To view image information

- Click **File** ▶ **Document properties**.

To view information about image areas

- Click **Window** ▶ **Dockers** ▶ **Info.**

You can also

Choose a new color model	Click the top flyout arrow ⬚, choose a color level, and click a color model.
Change the units of measure used to display image information	Click the bottom flyout arrow, and click a unit of measure.

By default, the **Image info** palette lists the RGB, Hex, and CMYK values from top to bottom.

You can also view color mode information by clicking the **Eyedropper** tool 🖉, and pointing to an image area.

From here

For more information about	In the Help index, see...
Setting the magnification level at which images are opened	magnification level, customizing
Zooming to display image areas at different magnification levels	zooming, changing magnification level
Maximizing or restoring the work area	viewing, maximizing or restoring work area
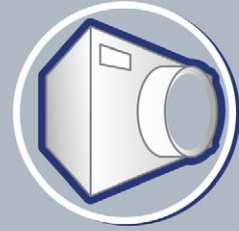
Working with color

Your application lets you choose and create colors using a wide variety of industry-standard palettes, color mixers, and color models. You can create and edit custom color palettes to store frequently used colors for future use.

In this section, you'll learn about

- choosing colors
- creating custom color palettes

Choosing colors

You can choose background, foreground, and fill colors using the color control area, color palettes, sampling, color viewers, color harmonies, or color blends.

Choosing a color using the color control area

In the color control area, you can view the selected foreground, background, and fill colors, and you can choose new colors.

Choosing a color using the default color palette

A color palette is a collection of color swatches. You can choose foreground, background, and fill colors using the default color palette, which contains 99 colors from the RGB color model.

Choosing a color using fixed or custom color palettes

Fixed color palettes are provided by third-party manufacturers. Some examples of these are HKS Colors, Focoltone, PANTONE, and TRUMATCH. It may be useful to have on hand a manufacturer's swatch book, which is a collection of color samples that shows exactly what each color looks like when printed.

Custom color palettes can include colors from any color model or fixed color palette. You can save a custom color palette for future use. For more information about working

with custom color palettes, see "Creating custom color palettes" on page 371 and "Opening and editing custom color palettes" in the Help.

Sampling colors

When you want to use a color that already exists in an object or image, you can sample the color to achieve an exact match. By default, you sample a single pixel from the image window.

When you sample a color from a photo, what looks to be a solid-colored area may actually be subtly shaded or dithered. In this case, it is useful to average the colors of pixels in a larger sample area. You can set the sample area to 3 x 3 pixels, or to 5 x 5 pixels for high-resolution images. You can also sample pixels in a selected area.

Choosing a color using color viewers

Color viewers give a representation of a range of colors using either one-dimensional or three-dimensional shapes. The default color viewer is based on the HSB color model, but you can use this viewer to choose CMY or RGB colors. For information about color models, see "Understanding color models" in the Help.

Choosing a color using color harmonies

Color harmonies work by superimposing a shape, such as a rectangle or a triangle, over a color wheel. Each vertical row in the color grid begins with the color located at one of the points on the superimposed shape.

The colors at each corner of the shape are always complementary, contrasting, or harmonious, depending on the shape you choose.

Choosing a color using color blends

When you choose a color using color blends, you combine base colors to get the color you want. The color blender displays a grid of colors that it creates from the four base colors you choose.

To choose a color using the color control area

1   In the color control area of the toolbox, double-click one of the following:
    • **Foreground** color swatch ▇
    • **Background** color swatch ▇

2   Move the color slider to set the range of colors displayed in the color selection area.

3   Click in the color selection area to choose a color.

To choose a color using the default color palette

To	Do the following
Choose a foreground color	Click a color swatch.
Choose a background color	Hold down **Ctrl**, and click a color swatch.
Choose a fill color	Right-click a color swatch.

To choose a color using a fixed or custom color palette

1 In the color control area of the toolbox, double-click one of the following:
   • **Foreground** color swatch
   • **Background** color swatch

2 Click the **Palettes** tab.

3 Choose a fixed or custom palette from the **Palette** list box.

4 Move the color slider to set the range of colors displayed in the color selection area.

5 Click a color in the color selection area.

You should use the same color model for all colors in an image; the colors will be consistent, and you will be able to predict the colors of the final output more accurately. It is preferable to use the same color model that you are using for the final output.

To sample a color

1 Click the **Eyedropper** tool.

2 Click the image to choose a foreground color.
   The default sample size is 1 pixel.

You can also

Increase the sample size	Click the **Eyedropper 3 x 3** button on the extended property bar.
Increase the sample size for a high-resolution image	Click the **Eyedropper 5 x 5** button on the extended property bar.

Sample from a selected area	Click the **Eyedropper selection** button ✐ on the extended property bar.

To choose a color using a color viewer

1 In the color control area of the toolbox, double-click one of the following:
  - **Foreground** color swatch ▪
  - **Background** color swatch ▫

2 Click the **Models** tab.

3 Choose a color model from the **Model** list box.

4 Click **Options** ▶ **Color viewers**, and click a color viewer.

5 Move the color slider.

6 Click a color in the color selection area.

You can also

Choose a fill color	Double-click the **Fill color** swatch ■ in the color control area, click the **Uniform** fill button ▨ in the **Select fill** dialog box, and click **Edit**.
Swap colors	Click **Options** ▶ **Swap colors**. This swaps the **Old** color (the current foreground or background color) and the **New** color (which has been chosen in the color selection area).

✍ If you choose a color that is out of the printer's gamut, Corel PHOTO-PAINT displays the closest in-gamut color. This color is displayed in the **Reference** area, in the small swatch beside the **New** color. You can either choose this closest in-gamut color or you can correct the out-of-gamut color.

To choose a color using color harmonies

1 In the color control area of the toolbox, double-click one of the following:
  - **Foreground** color swatch ▪
  - **Background** color swatch ▫

2   Click the **Mixers** tab.

3   Click **Options ▸ Mixers ▸ Color harmonies**.

4   Choose a shape from the **Hues** list box.

5   Choose an option from the **Variation** list box.

6   Drag the black dot on the color wheel.

7   Click a color swatch on the color palette below the color wheel.

If you choose a color that is out of the printer's gamut, Corel PHOTO-PAINT displays the closest in-gamut color. This color is displayed in the **Reference** area, in the small swatch beside the **New** color. You can either choose this closest in-gamut color or you can correct the out-of-gamut color.

To choose a color using color blends

1   In the color control area of the toolbox, double-click one of the following:
    • **Foreground** color swatch
    • **Background** color swatch

2   Click the **Mixers** tab.

3   Click **Options ▸ Mixers ▸ Color blend**.

4   Open each color picker, and click a color.

5   Click a color in the color selection area.

You can only blend colors that are in the default color palette. If you want to blend other colors, change the default color palette. For information, see "To open a custom color palette" in the Help.

Creating custom color palettes

Custom color palettes are collections of colors that you save. A number of preset custom color palettes are available; however, you can create color palettes from scratch. Custom color palettes are useful when you frequently choose the same colors, or when you want to work with a set of colors that look good together.

You can create a custom color palette by choosing each color manually, or by using colors in an object, an editable area, or an entire document.

To create a custom color palette

1   Click **Window** ▶ **Color palettes** ▶ **Palette editor.**

2   Click **New palette** 🗋.

3   Type a filename.

4   Click **Save**.

To create a color palette from an object

1   Select an object.

2   Click **Window** ▶ **Color palettes** ▶ **Create palette from selection**.

3   Type a filename.

4   Click **Save**.

To create a color palette from an editable area

1   Define an editable area.

2   Click **Window** ▶ **Color palettes** ▶ **Create palette from visible**.

3   Click **Save palette as** 🖫.

4   Type a filename.

5   Click **Save.**

✍

> For information about defining editable areas, see "Defining editable areas" on page 414.

To create a color palette from an image

1   Click **Window** ▶ **Color palettes** ▶ **Create palette from document**.

2   Type a filename.

3   Click **Save**.
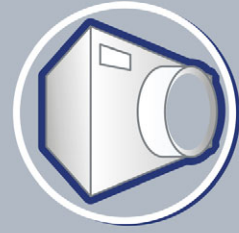
Changing color modes

Changing an image to another color mode, such as RGB, CMYK, or grayscale, changes the image's color structure and size and can affect how the image displays and prints.

In this section, you'll learn about

- changing the color mode of images
- changing images to the paletted color mode

Changing the color mode of images

In Corel PHOTO-PAINT, the colors of images are defined by color modes. Computer monitors display images in the RGB color mode; by default, images in Corel PHOTO-PAINT are created in the RGB color mode.

Color modes are described by their component colors and bit depth. For example, the RGB (24-bit) color mode is composed of red, green, and blue channels and has a bit depth of 24 bits. Similarly, the CMYK (32-bit) color mode is composed of cyan, magenta, yellow, and black channels and has a bit depth of 32 bits. Each channel has a bit depth of 8 bits.

Although on the screen you may not be able to see the difference between an image in the CMYK color mode and an image in the RGB color mode, the images are quite different. Colors from the RGB color space can cover a greater range of the visual spectrum (they have a larger gamut) than those from the CMYK color space. For the same image dimensions, a CMYK image has a larger file size than an RGB image, but it contains the channels necessary to print standard inks.

Each time you convert an image, you may lose color information. For this reason, you should finish editing and then save an image before you convert it to a new color mode.

Corel PHOTO-PAINT supports the following color modes:

- Black-and-white (1-bit)
- Grayscale (8-bit)

- Duotone (8-bit)
- RGB color (24-bit)
- CMYK color (32-bit)
- Grayscale (16-bit)
- NTSC RGB (video)

- Paletted (8-bit)
- Lab color (24-bit)
- Multichannel
- RGB color (48-bit)
- PAL RGB (video)

To change the color mode of an image

- Click **Image ▶ Color mode**, and click one of the following:
  - **Grayscale (8-bit)**
  - **RGB color (24-bit)**
  - **Lab color (24-bit)**
  - **CMYK color (32-bit)**
  - **Multichannel**
  - **Grayscale (16-bit)**
  - **RGB color (48-bit)**
  - **NTSC RGB**
  - **PAL RGB**

Changing images to the paletted color mode

The paletted color mode, also called indexed color mode, is frequently used for GIF images on the World Wide Web. When you convert a complex image to the paletted color mode, a fixed color value is assigned to each pixel. These values are stored in a compact color table, or palette. As a result, the paletted image contains less data than the original, and it has a smaller file size. Paletted color mode is an 8-bit mode that stores and displays images using up to 256 colors.

Choosing, editing, and saving a color palette

When you change an image to the paletted color mode, you use a predefined or a custom color palette and then edit the palette by replacing individual colors. If you choose the Optimized color palette, you can also edit the palette by specifying a range sensitivity color. The color palette you use to convert the image is called the processed color palette, and it can be saved for use with other images.

Dithering

Paletted images can only contain up to 256 different colors. If the original image contains many colors, you can use dithering to create the illusion of seeing more than 256 colors. Dithering creates additional colors and shades from an existing palette by interspersing pixels of different colors. The relationship of one colored pixel to another creates an optical mix, so you perceive additional colors.

Dithering can be done by distributing colors either regularly or randomly. Ordered dithering approximates color blends using regular dot patterns; as a result, solid colors are emphasized and edges appear harder. Error diffusion scatters pixels randomly, making edges and colors softer. Jarvis, Stucki and Floyd-Steinberg are methods of error diffusion.

If your image contains only a few colors and simple shapes, you do not need to use dithering.

To change an image to the paletted color mode

1   Click **Image** ▶ **Color mode** ▶ **Paletted (8-bit)**.

2   Click the **Options** tab.

3   Choose one of the following color palette types from the **Palette** list box:
    • **Uniform** — provides a range of 256 colors with equal parts of red, green, and blue
    • **Standard VGA** — provides the Standard VGA 16-color palette
    • **Adaptive** — provides colors original to the image, and preserves the individual colors (the entire color spectrum) in the image
    • **Optimized** — creates a color palette based on the highest percentage of colors in the image. You can also select a range sensitivity color for the color palette.
    • **Black Body** — contains colors that are based on temperature. For example, black may represent cold temperatures, while red, orange, yellow, and white may represent hot temperatures.
    • **Grayscale** — provides 256 shades of gray, ranging from black (0) to white (255)
    • **System** — provides a palette of Websafe and grayscale colors
    • **Websafe** — provides a palette of 216 colors that are common to Web browsers

4   Choose a dithering option from the **Dithering** list box.

5   Move the **Dither intensity** slider to adjust the amount of dithering.

You can also

Save the conversion options as a preset	Click **Add preset** ⊕, and type a name in the **Save preset** box.
Edit the processed color palette	Click the **Processed palette** tab, and click **Edit**. In the **Color table** dialog box, edit the color palette.
Save the processed color palette	Click the **Processed palette** tab, and click **Save**. Choose the folder where you want to save the processed color palette, and type a filename.

The **Ordered dithering** option applies more quickly than do the error diffusion options **Jarvis**, **Stucki**, and **Floyd-Steinberg**; however, it is less accurate.

You can choose a custom color palette by clicking the **Options** tab, clicking **Open**, locating the color palette file you want, and double-clicking the filename.

From here

For more information about	In the Help index, see...
Changing images to the black-and-white color mode	black-and-white color mode
Changing images to the duotone color mode	duotone
Setting the color range for a custom color palette	color palette, color range
Changing multiple files to the paletted color mode	paletted color mode, converting files to

Bringing images into Corel PHOTO-PAINT

You can bring images into Corel PHOTO-PAINT in a variety of ways.

In this section, you'll learn about

- opening images
- importing files
- loading photos from a digital camera
- working with vector graphics

Opening images

You can open most bitmaps in Corel PHOTO-PAINT. Each image you open displays in its own image window.

To open an image

1 Click **File ▸ Open**.

2 Choose the folder where the file is stored.

3 Double-click the filename.

Importing files

Corel PHOTO-PAINT provides filters that convert files from one format to another when you import them. You can import a file and place it in the active application window as an object. The imported file becomes part of the active image.

To import a file into an active image

1 Click **File ▸ Import**.

2 Choose the folder where the file is stored.

3   Choose a file format from the **Files of type** list box.

4   Click the filename.

5   Enable any of the following active check boxes:
    • **Do not show filter dialog** — lets you use the filter's default settings without
      opening the dialog box
    • **Check for watermark** — lets you check the image for a watermark and any
      information it contains such as copyright
    • **Extract embedded ICC profile** — lets you save the embedded International
      Color Consortium (ICC) profile to the color folder where the application is
      installed

6   Click **Import**.

7   Click the image window.

Loading photos from a digital camera

You can load photos from a digital camera into Corel PHOTO-PAINT. Corel PHOTO-
PAINT supports digital cameras that use Microsoft Windows Image Acquisition
(WIA), which provides a standard interface for loading photos. The WIA interface is
available only for the Windows Me and Windows XP operating systems.

If your digital camera does not support WIA, you can use the digital camera's software
and TWAIN driver for loading photos. The software interfaces and options for loading
photos vary. For information about using your digital camera's software, see the
manufacturer's documentation.

To load photos from a digital camera

1   Connect a digital camera to your computer.

2   Click **File** ▶ **Acquire image** ▶ **Select source**.

3   Choose a digital camera from the **Sources** box.

4   Click **File** ▶ **Acquire image** ▶ **Acquire**.

5   In the **Get pictures** dialog box, choose the images you want to copy.

    If your digital camera does not support WIA, you are presented with the digital
    camera's interface for loading photos. Options will vary.

6   Click **Get pictures**.

To open digital camera photos automatically in Corel PHOTO-PAINT

1 Connect a digital camera to your computer.

2 In the dialog box, choose **Corel PHOTO-PAINT** in the **Select the program to launch for this action** area.

3 Enable the **Always use this program for this action** check box.

Double-clicking a thumbnail in the digital camera directory will bring the image into Corel PHOTO-PAINT.

Working with vector graphics

Vector graphics are made up of lines, curves, objects, and fills that are all calculated mathematically. Although you cannot work with vector graphics in Corel PHOTO-PAINT, you can convert vector graphics to bitmaps as you open or import them. This conversion process is called rasterization. You can also copy vector graphics from CorelDRAW and paste them into Corel PHOTO-PAINT.
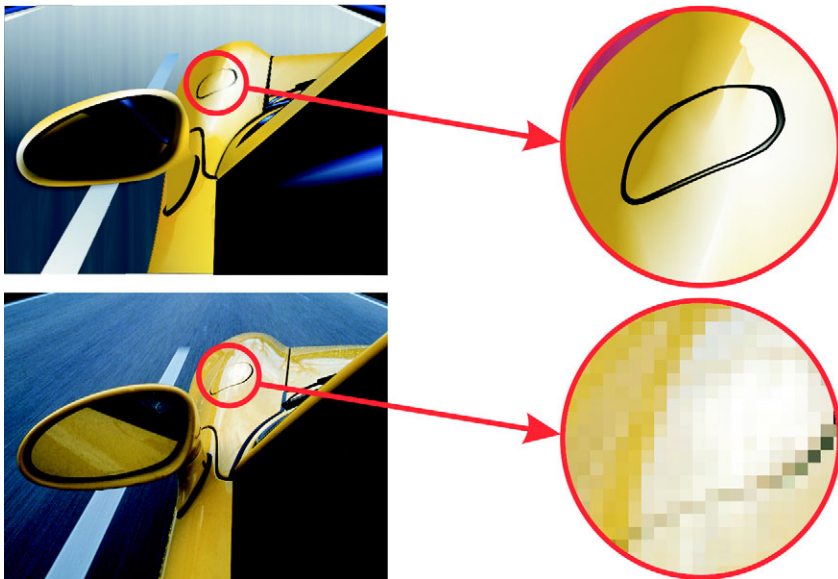
The top illustration is a vector graphic consisting of lines, objects and fills. The bottom version is a bitmap made up of pixels.

To open a vector graphic

1   Click **File ▶ Open**.

2   Choose the folder where the file is stored.

3   From the **Files of type** list box, choose the vector file format of the file you want to import.

4   Click the filename.

5   Click **Open**.

6   In the **Convert to bitmap** dialog box, specify the settings you want.

To import a vector graphic

1   Click **File ▶ Import**.

2   Choose the folder where the file is stored.

3   From the **Files of type** list box, choose the vector file format of the file you want to import.

4   Click the filename.

5   Click **Open**.

6   Click in the image window.

7   In the **Convert to bitmap** dialog box, specify the settings you want.

From here

For more information about	In the Help index, see...
Resampling a graphic while importing	importing, resampling
Cropping a graphic while importing	importing, cropping
Browsing for clipart, photos, and sound files	clipart, finding
Inserting files into active images	inserting, files
Viewing EXIF information for digital camera photos	photos, EXIF data
Importing files	files, importing

Cropping and changing orientation
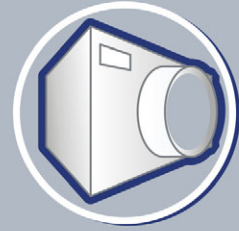
You can crop an image to remove unwanted areas or combine multiple images to create a single, large image. You can also change the orientation of an image by flipping it or rotating it.

In this section, you'll learn about
- cropping images
- stitching images together
- changing image orientation

Cropping images

You can crop an image to remove unwanted areas and improve its composition. Cropping allows you to select a rectangular area that you want to keep and discard the rest. As a result, you reduce the file size of an image without affecting its resolution.

Cropping lets you remove unwanted image areas.

You can also easily crop a single-color border surrounding an image, such as a white edge surrounding an old photograph.

Corel PHOTO-PAINT also lets you crop around the editable area of a mask; however, the resulting image is always rectangular. For information about masks, see "Masking" on page 413.

To crop an image

1   Click the **Crop** tool 🔳 .

2   Drag to select an area on the image.

3   Double-click inside the cropping area.

You can also

Enlarge or reduce the cropping area	Drag the cropping handles.
Move the cropping area	Click and drag inside the cropping area to reposition it.
Rotate the cropping area to straighten it	Click inside the cropping area to display the rotation handles 🔁. Drag the rotation handles to align the cropping area with the image area you want to crop.
Expand the cropping area outside the original image	Click **Image ▶ Crop ▶ Expand**, and drag a cropping handle outside the image.

You can hide the crop overlay to view the image you are cropping more clearly. Click **Image ▶ Crop ▶ Crop overlay**.

You can also crop an image area by clicking the **Crop** tool and typing values in the **Size** and **Position** boxes on the property bar.

To crop a border color from an image

1   Click **Image ▶ Crop ▶ Crop border color**.

2   Enable one of the following options:
   • **Background** — crops the color specified in the **Background** color swatch 🔳 in the color control area of the toolbox
   • **Foreground** — crops the color specified in the **Foreground** color swatch 🔳 in the color control area of the toolbox
   • **Other** — crops the color you choose using the color picker or the **Eyedropper** tool 🔳

3   In the **Tolerance** area, enable one of the following options:
    - **Normal** — determines the color tolerance based on the similarity of hue values between adjacent pixels
    - **HSB mode** — determines the color tolerance based on the similarity of hue, saturation, and brightness levels between adjacent pixels

4   Move the **Tolerance** slider to set the tolerance for the color that you want to crop.

    You may need to experiment with different **Tolerance** slider positions to successfully remove the border color.

To crop to an editable area of a mask

1   Define an editable area on an image.
2   Click **Image ▶ Crop ▶ Crop to mask**.

Stitching images together

Image stitching allows you to seamlessly join 2D images. For instance, you can scan a large image in smaller, overlapping pieces and reassemble them.

You can stitch images together to create a single, large image. This image has been scanned in four sections and stitched.

To stitch images together

1   Open the images you want to stitch together.
2   Click **Image ▶ Stitch**.
3   Choose a filename from the **Source files** list, and click **Add**.

If you want to select all open images, click **Add all**.

4   To change the position of an image in the **Selected files** list, click a filename, and click one of the following buttons:
   • **Up** button ⩘
   • **Down** button ⩙

5   Click **OK**.

6   In the **Image stitch** dialog box, click the **Selection** tool ⧵.

7   In the image stitch window, drag an image to align it with another image.

Repeat to align all images.

8   Type a value in the **Blend images** list box to define the number of overlapping pixels used to blend images together.

9   Enable one of the following options:
   • **Combine to background** — creates a single, flattened image
   • **Create objects from images** — creates a stitched image in which each source image becomes a separate object. You can later adjust the brightness and contrast of each object so they match.

You can also

View image alignment	Click the **Difference** tool ▦. Overlapping image areas are highlighted; correctly aligned image edges display as black.
Rotate one or more selected images	Click the **Rotate** tool ⟳, and drag an image. If you want to rotate an image by a precise angle, type a value in the **Rotate image** box.
Zoom in to inspect an area where images join	Click the **Zoom in** tool ⊕, and click where you want a close-up view.
Zoom out	Click the **Zoom out** tool ⊖, and click the image.
View areas outside the image stitch window	Click the **Pan** tool ✋, and drag an image.

Stitched images that are flattened have a smaller file size than stitched images containing separate objects.

Use the **Arrow** keys with the **Selection** tool, the **Rotate** tool, and the **Pan** tool to move, rotate and view images precisely in the image stitch window.

Changing image orientation

You can change the orientation of an image by flipping or rotating it in the image window. You can flip an image horizontally or vertically to reposition a scanned image or to create unique effects.

You can mirror an image by flipping it.

When you rotate an image, you can specify the angle and direction of rotation, as well as the paper color that is visible after the image is rotated.

To flip an image

- Click **Image ▸ Flip**, and click one of the following:
  - **Flip horizontally**
  - **Flip vertically**

To rotate an image

1   Click **Image ▸ Rotate ▸ Rotate custom**.

2   Type a value in the **Angle** box.

3   Enable one of the following options:
  - **Clockwise**

- **Counterclockwise**

4 Enable any of the following check boxes:
   - **Maintain original image size** — maintains the size of the original image
   - **Anti-aliasing** — smooths the edges in the image

5 Open the **Background** color picker, and click a color.

You can rotate an image by clicking **Image ▶ Rotate**, and clicking 90°
Clockwise, 90° **Counterclockwise**, or 180°.

You can rotate an image to change its orientation.

From here

For more information about	In the Help index, see...
Cropping editable areas	cropping, editable areas
Defining editable areas	editable areas, defining
Working with masks	masks
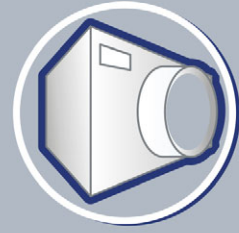
Adjusting color and tone

You can improve the quality of images by adjusting the color and tone to correct color casts and exposure problems or to alter specific colors.

In this section, you'll learn about

- adjusting image color and tone
- working with color channels

Adjusting image color and tone

Corel PHOTO-PAINT provides you with filters and tools to make adjustments to the color and tone of images. When you adjust the color and tone, you adjust elements such as hue, saturation, brightness, contrast, or intensity. If you want to adjust the color and tone of the entire image, you can apply an adjustment filter directly to the image or apply a lens which exists on a separate object layer and can be edited without changing the original image. For information about lenses, see "Working with lenses" on page 409.

You can adjust part of an image by editing the size and shape of a lens or by creating an editable area before applying an adjustment filter. For information about editable areas, see "Masking" on page 413.

Choosing color and tone filters

Some filters adjust the image automatically, while others give you varying degrees of control. For example, the **Auto equalize** filter adjusts the tonal range automatically, while the **Tone curve** filter lets you pinpoint and adjust tone, or color, using separate color channels. More advanced filters, such as the **Tone curve** filter and the **Contrast enhancement** filter, are precise and can correct a variety of problems, but require practice. If you are new to color and tone correction, consider the following options:

- Automatic adjustments: apply the **Auto equalize** filter. This filter improves the tone of most images instantly. If the filter doesn't correct the problem, you can undo the change and try another filter.

- Quick tone adjustments: apply the **Color tone** filter to brighten or darken an image, or improve contrast using thumbnail buttons. You can also try the **Brightness/Contrast/Intensity** filter. After you adjust the brightness, you must adjust the contrast and intensity to retain image detail.
- Quick color adjustments: apply the **Color hue** filter to adjust the color using thumbnail buttons, or apply the **Color balance filter** which lets you increase or decrease specific color values. For example, if an image has a green cast, you can remove some green or add a contrasting color (magenta) to neutralize the green cast.

Adjusting tone interactively

You can view the tonal range of an image using a histogram to evaluate and adjust the color and tone of an image. For example, a histogram can help you determine if there is hidden detail in an underexposed photo. A histogram has a horizontal bar chart that plots the brightness values of the pixels in your image on a scale from 0 (dark) to 255 (light). The left part of the histogram represents the shadows of an image, the middle part represents the midtones, and the right part represents the highlights. The height of the spikes indicates how many pixels are at each brightness level. For example, a large number of pixels in the shadows (the left side of the histogram) indicates the presence of image detail in the dark areas of the image.

A histogram is available with the following filters:
- Contrast enhancement
- Histogram equalization
- Sample/Target balance

Adjusting the color and tone using brush strokes

You can adjust the brightness, contrast, hue or saturation in part of an image by applying brush strokes. You can use preset brushes or create a custom brush. For more information, see "Creating custom brushes" in the Help.

To adjust image color and tone

1 Click **Image ▸ Adjust**, and click an adjustment filter.
2 In the filter's dialog box, specify the settings you want.

To adjust image tone interactively

1 Click **Image ▸ Adjust ▸ Contrast enhancement**.

2   Move the **Input value clipping** arrows ▽ to adjust shadows and highlights.

The arrow on the left lets you darken shadow areas. Drag the arrow until it points to the area where the histogram starts to spike.

The arrow on the right lets you lighten highlight areas. Drag the arrow until it points to the area where the histogram stops spiking.

3   Move the **Gamma slider** to adjust the midtones.

4   Move the **Output range compression** arrows △ to fine-tune the contrast:

The arrow on the left lets you lighten darker areas as you drag the arrow to the right.

The arrow on the right lets you darken light areas as you drag the arrow to the left.

You can also

Automatically redistribute pixels across the tonal range	Enable the **Auto-adjust** check box.
Set input and output values by sampling pixels in the image	Enable the **Set input values** or **Set output values** option from the **Eyedropper sampling** area. Click the **Shadow eyedropper** button 🎨 to sample shadow areas, or click the **Highlight eyedropper** button 🎨 to sample highlight areas.

To adjust image color and tone using brush strokes

1   Select an object or the background image.

2   Open the **Brush** flyout ⎮ 🖌 ✏ 🐾 ✐ ✎ ⎮, and click the **Effect** tool ✏.

3   On the property bar, open the **Effect tool** picker, and click one of the following:
   - **Brightness** tool 💡 — brightens or darkens the image
   - **Contrast** tool ◗ — increases or decreases the contrast
   - **Hue** tool 🎨 — shifts all hues along the color wheel by the number of degrees that you specify in the **Amount** box
   - **Hue replacer** tool 🎨 — retains the brightness and saturation of the original colors, but replaces all hues with the current paint color
   - **Sponge** tool 🧽 — saturates or desaturates the colors
   - **Dodge/Burn** tool ✏ — brightens (overexposes) or darkens (underexposes) the image
   - **Tint** tool 👓 — tints the image using the current paint color

4   Choose a preset brush from the **Brush type** list box on the property bar.

     If you want to customize the brush, specify the settings you want on the property bar.

5   Drag in the image window.

You can also

Increase the effect of the brush across an area without clicking over the area multiple times	Click the **Cumulative button** 🎨 on the **Stroke attributes** bar that displays in the **Brush settings** docker. This option is available only for some of the **Effect** tools. If the **Brush settings** docker is not open, click **Window ▸ Dockers ▸ Brush settings**.
Apply the effect to an object and the background simultaneously	Click the **Merge source** button 🖌 on the **Dab attributes** bar that displays in the **Brush settings** docker. This option is only available when the **Cumulative** button is disabled.

Working with color channels

You can adjust the color and tone of an image by making changes directly to the image's color channels. The number of color channels in an image depends on the number of components in the color mode associated with the image. For example, black-and-white, grayscale, duotone, and paletted images have only one color channel; RGB and Lab images have three channels; and CMYK images have four color channels. For more information about these color models, see "Understanding color models" in the Help.

Displaying, mixing and editing color channels

Although color channels represent the colored components of an image, they are displayed by default as grayscale images in the image window. However, you can display these channels in their respective colors so that the red channel is tinted red, the blue channel is tinted blue, and so on.

You can mix color channels to balance the colors of an image. For example, if an image has too much red, you can adjust the red channel in an RGB image to improve image quality.

You can edit color channels the same way that you edit other grayscale images. For example, you can select areas, apply paints and fills, add special effects or filters, and cut and paste objects in the image channel.

Splitting and combining images using color channels

You can split an image into a series of 8-bit grayscale image files — one for each color channel of the color mode. Splitting an image into separate channel files lets you edit one channel without affecting the others, save channel information before you convert the image to another mode, or associate channels from one mode with another mode for editing purposes. For example, if you have an oversaturated RGB image, you can reduce the saturation by splitting the image into the HSB mode and reducing the saturation (S) channel. When you finish editing the images, you can combine them into one image. The images are combined automatically using equal values.

You can split an image into the following color channels.

Splitting mode	Color channels created
RGB	Red (R), green (G), blue (B)
CMYK	Cyan (C), magenta (M), yellow (Y), black (K)
HSB	Hue (H), saturation (S), brightness (B)
HLS	Hue (H), lightness (L), saturation (S)
YIQ	Luminance (Y), two chromaticity values (I, Q)
Lab	Luminosity (L), green/magenta (a), blue/yellow (b)

To display color channels

• Click **Window** ▶ **Dockers** ▶ **Channels**.

You can display color channels using their respective colors by clicking **Tools** ▶ **Customization**. In the **Workspace** list of categories, click **Display**, and enable the **Tint screen color channels** check box.

To mix color channels

1 Click **Image ▶ Adjust ▶ Channel mixer**.

2 Choose a color mode from the **Color model** list box.

3 Choose an output channel from the **Output channel** list box.

4 Move the sliders in the **Input channels** area.

To edit a color channel

1 In the **Channels** docker, click the channel that you want to edit.

   If the **Channels** docker is not open, click **Window ▶ Dockers ▶ Channels**.

2 Edit the image.

To split an image using color channels

• Click **Image ▶ Split channels to**, and click a color mode.

Images in the CMYK and Lab color modes must be split into their original component channels.

To combine images using color channels

1 Click **Image ▶ Combine channels**.

2 In the **Mode** area, choose a color mode option.

3 In the **Channel** area, choose a channel option and click a filename from the **Images** list to associate the channel with a file.

4 Repeat step 3 until all the channels in the **Channel** area have been associated with an image from the **Images** list.

From here

For more information about	In the Help index, see...
Adjustment filters	adjustment filters
Working with color channels	color channels

Changing image dimensions, resolution, and paper size
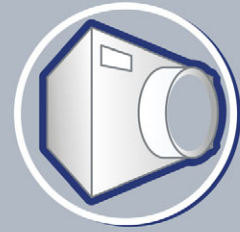
You can change the dimensions and resolution of an image. You can also change the size of the paper border that surrounds an image.

In this section, you'll learn about

- changing image dimensions
- changing image resolution
- changing the paper size

Changing image dimensions

You can change the physical dimensions of images by increasing or decreasing their height and width. When you increase image dimensions, the application inserts new pixels between existing pixels, and their colors are based on the colors of adjacent pixels. If you increase image dimensions significantly, images may appear stretched and pixelated.

You can change the height and width of an image without changing the resolution. The center image is the original, the first image has smaller dimensions, and the third image has larger dimensions. Notice the pixelation of the larger image.

To change the dimensions of an image

1 Click **Image ▶ Resample**.

2 Enable any of the following check boxes:
   - **Anti-alias** — smooths the edges in the image
   - **Maintain aspect ratio** — avoids distortion by maintaining the width-to-height ratio of the image

3 In the **Image size** area, type values in one of the following pairs of boxes:
   - **Width** and **Height** — let you specify the image dimensions
   - **Width** % and **Height** % — let you resize the image to a percentage of its original size

When you change the dimensions of an image, you produce better results using width and height values that are factors of the original values. For example, reducing an image by 50 per cent produces a better-looking image than by reducing the size by 77 per cent. When reducing an image by 50 per cent, the application removes every other pixel; to reduce an image by 77 per cent, the application must remove pixels irregularly.

Changing image resolution

You can change the resolution of an image increase or decrease its file size. Resolution is measured by the number of dots per inch (dpi) when the image is printed. The resolution you choose depends on how the image is output. Typically, images created only for display on computer monitors are 96 or 72 dpi and images created for the World Wide Web are 72 dpi. Images created for printing on desktop printers are generally 150 dpi, while professionally printed images are usually 300 dpi, or higher.

Increasing resolution

Higher resolution images contain smaller and more densely packed pixels than lower resolution images. Upsampling increases the resolution of an image by adding more pixels per unit of measure. Image quality may be reduced because the new pixels are interpolated based on the colors of neighboring pixels; the original pixel information is simply spread out. You cannot use upsampling to create detail and subtle color gradations where none existed in the original image. When you increase image resolution, the image size increases on your screen; by default the image maintains its original size when printed.

Decreasing resolution

Downsampling decreases the resolution of an image by removing a specific number of pixels per unit of measure. This produces better results than upsampling. Best results are usually achieved when downsampling is done after correcting an image's color and tone but before sharpening. For more information about correcting and sharpening images, see "Adjusting color and tone" on page 387 and "Retouching" on page 397.

You can change the resolution and size of an image at the same time. The center image is the original, the first image is downsampled, and the third image is upsampled.

To change the resolution of an image

1 Click **Image ▶ Resample**.

2 Enable any of the following check boxes:
   - **Identical values** — sets the same value in the **Horizontal** and **Vertical** boxes
   - **Anti-alias** — smooths the edges in the image
   - **Maintain original size** — maintains the size of the file on your hard disk when you change the resolution of the image

3 In the **Resolution** area, type values in the following boxes:
   - **Horizontal**
   - **Vertical**

Changing the paper size

Changing the paper size lets you modify the dimensions of the printable area, which contains both the image and the paper. When you resize the paper, you increase or

decrease the paper-colored border, but not the dimensions of the original image. However, if you reduce the paper size so that its height and width are smaller than the dimensions of the original image, the original image will be cropped.

You can change the paper size surrounding the original image.

To change the paper size

1   Click **Image ▸ Paper size**.

2   Choose a unit of measure from the list box beside the **Width** box.

3   Type values in the following boxes:
    • **Width**
    • **Height**

    If you want to lock the paper size ratio, click **Lock** 🔒.

From here

For more information about	In the Help index, see...
Resampling images	resampling, images
Changing the size of an image by cropping	cropping, images
Cropping the editable area of a mask	cropping, editable areas
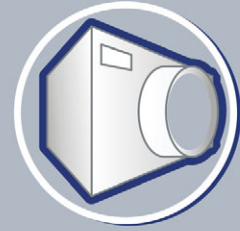
Retouching

Corel PHOTO-PAINT lets you retouch images to improve their quality or modify their contents.

In this section, you'll learn about

- improving scanned images
- removing red-eye
- removing dust and scratch marks
- cloning image areas
- sharpening images
- erasing image areas
- smearing, smudging, and blending colors

Improving scanned images

You can remove lines from scanned or interlaced video images. These lines can be filled with copies of adjacent lines of pixels, or with colors derived from surrounding pixels. You can also remove moiré or noise. Moiré is the wave pattern produced when halftone screens of two different frequencies are superimposed on the same image. Noise is the speckled effect produced by scanning or video-capturing.

You can remove lines from a scanned image using the Deinterlace filter.

To improve scanned images

To	Do the following
Remove moiré	Click **Effects ▶ Noise ▶ Remove moiré**, and specify the settings you want.
Remove noise	Click **Effects ▶ Noise ▶ Remove noise**, and specify the settings you want.
Remove lines	Click **Image ▶ Transform ▶ Deinterlace**.

Removing red-eye

You can remove the red-eye effect from the eyes of subjects in photos. Red-eye occurs when light from a flash reflects off the back of a person's eye.

To remove red-eye

1 Open the **Touch-up** flyout ![flyout icon], and click the **Red-eye removal** tool ![icon].

2 Type a value in the **Size** box to match the brush size to the eye.

3 Click the eye to remove the red pixels.

Removing dust and scratch marks

Corel PHOTO-PAINT provides several different ways to improve the appearance of an image that has small dust and scratch marks. You can apply a filter to the entire image, or if an image has one or more scratches in a specific area, you can create a mask around the scratches and apply the filter to the editable areas.

The filter works by eliminating the contrast between pixels that exceed the contrast threshold you set. You can set a radius to determine how many pixels are affected by the changes. The settings you choose depend on the size of the blemish and the area surrounding it. For example, if you have a white scratch that is 1 or 2 pixels wide on a dark background, you can set a radius of 2 or 3 pixels and set the contrast threshold higher than if the same scratch was on a light background.

You can also remove imperfections, such as tears, scratch marks, and wrinkles, from an image by blending its textures and colors. Similar to using a filter, you choose the range of pixels necessary to retouch the image, depending on the size of the correction and the area surrounding it.

If the scratch or blemish is fairly large or in an area of the image that has a varied color and texture, such as leaves on a tree, you can achieve better results by cloning image areas. For information about cloning, see "Cloning image areas" on page 402.

To remove small dust and scratch marks throughout an image

1   Click **Image ▸ Correction ▸ Dust and scratch**.
2   Move the following sliders:
  • **Radius** — lets you set the range of pixels used to produce the effect. Set the radius as low as possible to retain image detail.
  • **Threshold** — lets you set the amount of noise reduction. Set the threshold as high as possible to retain image detail.

You can remove small dust and scratch marks from an image by applying the Dust and scratch filter.

To remove scratch marks from part of an image

1   Define an editable area that includes the scratch marks.

2   Click **Image ▶ Correction ▶ Dust and scratch.**

3   Move the following sliders:
    • **Radius** — lets you set the range of pixels used to produce the effect. Set the radius as low as possible to retain image detail.
    • **Threshold** — lets you set the amount of noise reduction. Set the threshold as high as possible to retain image detail.
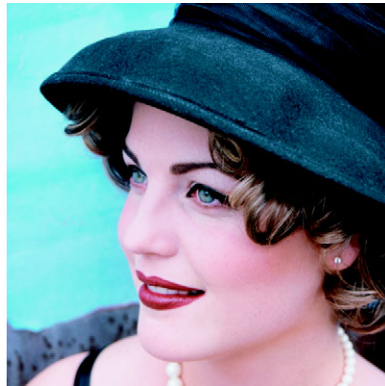
You can remove scratches from specific areas by creating a mask around the scratches before applying the Dust and scratch filter. A dashed line or red-tinted overlay indicates the presence of a mask.

You can use the **Brush mask** tool ▨ to define an editable area that includes the scratch mark. Choose a nib size that is wider than the scratch mark so you can brush over the scratch easily. For information about the **Brush mask** tool, see "To define an editable area by freehand" on page 415.

To remove imperfections from an image by blending textures and colors

1 Open the **Touch-up** flyout ▐ ⟋ ⣫ ⟋ ▐, and click the **Touch-up brush** tool ▨.

2 Choose a nib from the **Shape** picker.

3 Type a value in the **Size** box to specify the nib size.

4 Choose a value from the **Strength** box to set the intensity of the effect.

5 Dab the brush in the image window to apply the effect.

You can remove imperfections from an image by blending textures and colors using the Touch-up brush tool.

You can also

Apply the effect to the object and the background simultaneously	Click the **Enable or disable merged source** button.
Change the brush size	Hold down **Shift** while dragging in the image window. Release the key when the nib is the size you want.

You can use the **Touch-up brush** tool on images in the grayscale, duotone, Lab, RGB, and CMYK color modes.

Cloning image areas

You can copy pixels from one image area to another in order to cover damaged or unwanted elements in an image. For example, you can fix a tear or remove a person from an image by applying cloned pixels over the area you want to remove. You can also clone image elements you like and apply them to another image area or a second image. If you clone an object, the newly cloned areas are added to the active object. You can also create abstract images, based on pixels sampled from the original image.

When you clone, two brushes display in the image window: a source point brush and a clone brush that applies the copied pixels from the source point. A cross-hair displays in the source point brush to distinguish it from the clone brush. The source point brush moves relative to the clone brush as you drag across the image.

The Clone tool was used to remove the woman's necklace.

To clone an image area or object

1 Open the **Touch-up** flyout , and click the **Clone** tool .

2 On the property bar, open the **Clone** picker, and click **Clone**.

3 Choose a brush from the **Brush type** list box.

4 Click the image to set a source point for the clone.

If you want to reset the source point, right-click the area you want to clone.

5 Drag the clone brush in the image window to apply the pixels from the source point.

You can also

Create abstract image areas based on pixels sampled from the source point	Click **Impressionism clone** 🖌 or **Pointillism clone** 🖌 on the **Clone** picker before dragging in the image window.
Create multiple clones of an object	Click the **Cumulative** button 🔲 on the **Stroke attributes** bar that displays in the **Brush settings** docker. This option is available only for some of the **Effect** tools and the **Clone** tool. If the **Brush settings** docker is not open, click **Window** ▶ **Dockers** ▶ **Brush settings**.
Clone an object and the background simultaneously	Click the **Merge source** button 🖌 on the **Dab attributes** bar that displays in the **Brush settings** docker. This option is only available when the **Cumulative** button is disabled.

Sharpening images

You can sharpen images to increase contrast, enhance image edges, or reduce shading. To sharpen an image, or an editable area of an image, you can use filters or brush strokes. Filters can also be applied using a lens. For more information about lenses, see "Working with lenses" on page 409. Sharpening is usually done after adjusting the color and tone of an image and after resampling or resizing.

You can reveal more image detail by sharpening an image.

To sharpen an image by applying a filter

1   Click **Image ▶ Correction ▶ Tune sharpen.**

2   Move the **Percentage** slider to set the amount of sharpening that is applied each time you click a thumbnail button.

3   Click any of the following thumbnail buttons:
   • **Unsharp mask** — lets you accentuate edge detail and focus blurred areas in the image without removing low-frequency areas.
   • **Adaptive unsharp** — lets you accentuate edge detail by analyzing the values of neighboring pixels. This filter preserves most image detail, but its effect is most apparent in high-resolution images.
   • **Sharpen** — lets you accentuate the edges of the image by focusing blurred areas and increasing the contrast between neighboring pixels. Move the **Background** slider to set the threshold for the effect. Lower values increase the number of pixels changed by the sharpening effect.
   • **Directional sharpen** — lets you enhance the edges of an image without creating a grainy effect.

Remove shading	Click **Effects ▶ Sharpen ▶ High pass.** The High pass filter removes image detail and shading to give an image a glowing quality by emphasizing its highlights and luminous areas. However, it can also affect the color and tone of the image.

The **Unsharp mask** filter provides best results for most photographs.

Most sharpen filters support all color modes except 48-bit RGB, 16-bit grayscale, paletted, and black-and-white. The **Sharpen** filter supports all color modes except paletted and black-and-white.

You can access each of the sharpen filters individually by clicking **Effects ▶ Sharpen**, and clicking a filter.

You can use this procedure to sharpen an editable area of an image.

To sharpen selected areas by applying brush strokes

1 Open the **Brush** flyout ⬚, and click the **Effect** tool 🖌.

2 On the property bar, open the **Effect tool** picker, and click the **Sharpen** tool ◉.

3 Choose a brush from the **Brush type** list box.

4 Choose a nib from the **Shape** picker.

5 Type a value in the **Size** box to specify the nib size.

6 Drag across an image area.

Erasing image areas

You can edit images and objects by erasing areas. For example, you can erase part of an object to change its shape or reveal more of the layer below. You can also erase areas of the image to reveal the background color, or erase part of the last action applied to the image.

The tools used to erase have many of the same settings as brushes, which means you can control the size, shape and transparency to create unique effects. For example, you can

apply a bitmap fill to the entire image, increase the transparency value of the eraser tool, and create a superimposed effect by partially erasing the fill (the last action performed). You can also erase image areas based on color. The background color replaces the foreground color you erase.
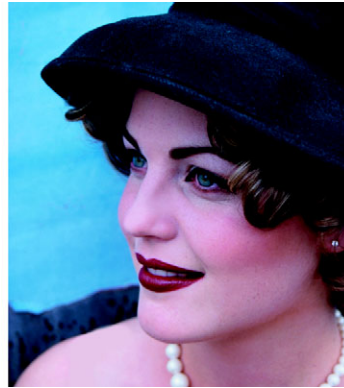
The Eraser tool was used to remove the strap from the woman's dress.

To erase part of an object

1   Select an object.

2   Click the **Eraser** tool ⟨⟩.

3   Specify the settings you want on the property bar.

4   Drag across the area you want to erase.

To erase image areas and reveal the background color

1   Click the **Eraser** tool ⟨⟩.

2   Specify the settings you want on the property bar.

3   Drag across the image area you want to erase.

To erase the last action applied to an image

1   Open the **Brush** flyout ⟨⟩, and click the **Undo brush** tool ⟨⟩.

2   Specify the settings you want on the property bar.

3   Drag across the area you want to erase.

If you want to erase the last action completely, click the **Undo** button ⟲ on the standard toolbar. For more information about undoing, see "Undoing, redoing, repeating, and fading" in the Help.

To replace a foreground color with the background color

1   Open the **Brush** flyout ▯ ◪ 🐍 ✎ ✎ , and click the **Replace color brush** tool ✎ .

2   On the property bar, choose a nib shape from the **Shape** picker.

3   Type a value in the **Tolerance** box to specify the the color tolerance based on color similarity.

4   In the color control area of the toolbox, double-click the **Foreground** color swatch ▣ , and choose a color.

5   Drag in the image window.

Smearing, smudging, and blending colors

You can smear, smudge, or blend the paint in an image. Smearing produces a similar effect to dragging across wet paint. Smudging has the same effect as rubbing across a pastel drawing. Blending softens the transition between colors or hard edges. You can smear, smudge, or blend the colors in an entire image or in an editable area you define. For more information about defining an editable area, see "Masking" on page 413.

The Smear tool was used to alter the woman's necklace.

To smear, smudge, or blend colors in an image

1 Open the **Brush** flyout ⊞ ⬚◢🌑➶➶, and click the **Effect** tool ◢.

2 On the property bar, open the **Effect tools** picker, and click one of the following tools:
   - **Smear** ◢
   - **Smudge** ➴
   - **Blend** ◗

3 Choose a brush from the **Brush type** list box on the property bar.

4 Drag in the image window.

You can also

Increase the effect of the brush across an area without clicking over the area multiple times	Click the **Cumulative** button 🗔 on the **Stroke attributes** bar that displays in the **Brush settings** docker. This option is available only for some of the **Effect** tools and the **Clone** tool. If the **Brush settings** docker is not open, click **Window ▶ Dockers ▶ Brush settings**.
Apply the effect to an object and the background simultaneously	Click the **Merge source** button 🖌 on the **Dab attributes** bar that displays in the **Brush settings** docker. This option is only available when the **Cumulative** button is disabled.

From here

For more information about	In the Help index, see...
Working with scanned images	scanning, images
Feathering objects to soften repaired areas	feathering
Color modes	color modes
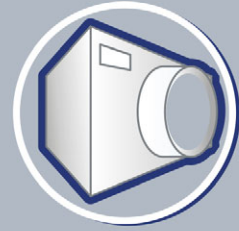
Working with lenses

Lenses let you view special effects, corrections, or adjustments, on a separate object layer before you apply the changes to the image.

In this section, you'll learn about

- creating lenses
- editing lenses
- combining lenses with the image background

Creating lenses

Lenses let you view adjustments and special effects that you want to apply to an image. When you create a lens, the changes you make are not applied to the image pixels; instead, they are displayed on the screen through the lens. The lens is created as a separate object on a layer above the image background so you can edit the lens and the background image separately.

You can create a lens to cover the entire image, or you can create a lens from the editable area of a mask. When you create a lens, you must choose a lens type based on the change that you want to apply. However, the types of lenses are determined by the image's color mode. For example, you cannot use a color lens on a grayscale image because there are no colors to modify. If you want to correct or adjust image color and tone, choose a lens type that corresponds to the adjustment and transform filters. For more information about using filters, see "Adjusting color and tone" on page 387. If you want to apply a special effect to improve image quality or dramatically transform an image, choose a special effects filter. For more information about special effects, see "Applying special effects" on page 423.

The picture of the man is an image object cut out from a darker image. A lens was applied to brighten the image object without permanently changing the image object or background.

To create a lens

1   Click **Object ▸ Create ▸ New lens**.

2   Choose a lens from the **Lens type** list.

3   Type a name in the **Lens name** box.

4   Click **OK**.

   If a dialog box displays, specify the lens properties.

To create a lens from an editable area

1   Define an editable area.

2   Click **Object ▸ Create ▸ New lens**.

3   Enable the **Create lens from mask** check box.

4   Choose a lens from the **Lens type** list.

5   Type a name in the **Lens name** box.

6   Click **OK**.

7   In the dialog box, specify the lens properties.

Editing lenses

After you create a lens, you can edit it. For example, you can add areas to it and remove areas from it.

Lenses can be selected and transformed in the same way that you select and transform objects. For information about selecting and transforming objects, see "Working with objects" on page 447 and "Modifying objects" on page 453. You can also change the shape of a lens using a special effects filter. For more information about special effects, see "Applying special effects" on page 423.

To add an area to a lens

1 Click the **Object pick** tool .

2 Select a lens.

3 Click one of the following:
    • **Paint** tool
    • **Rectangle** tool
    • **Ellipse** tool
    • **Polygon** tool
    • **Line** tool

4 On the property bar, specify the tool's attributes.

    Ensure the **New object** button on the extended property bar is disabled.

5 Drag across the areas that you want to add to the lens.

When adding areas to a lens, the grayscale value of the foreground color or fill color affects the lens opacity. White adds areas to the lens, while black makes lens areas transparent. For more information, see "Working with object transparency" in the Help.

To remove an area from a lens

1 Click the **Object pick** tool .

2 Select a lens.

3 Click the **Eraser** tool .

4 On the property bar, specify the **Eraser** tool's attributes.

5 Drag across the areas that you want to remove from the lens.

To change the shape of a lens using a special effects filter

1 Click the **Object pick** tool ⬚.

2 Select a lens.

3 Click **Effects**, and click a special effect.

4 Specify the settings of the special effects filter.

Combining lenses with the image background

To apply a lens's adjustment and special effects to the pixels of an image, you combine the lens with the image background. Combining a lens with the image background reduces the file size of the image and lets you save the image to a non-native file format. Once a lens is combined with the image background, the lens cannot be selected or modified.

To combine a lens with the image background

1 Click the **Object pick** tool ⬚.

2 Select a lens.

3 In the **Objects** docker, choose a merge mode from the **Merge mode** list box.

   If the **Objects** docker is not open, click **Window ▶ Dockers ▶ Objects**.

4 Click **Object ▶ Combine**, and click one of the following:
   • **Combine objects with background** — combines the selected lens with the image background
   • **Combine all objects with background** — combines the selected lens and all other objects with the image background

From here

For more information about	In the Help index, see...
Changing the properties of a lense	lenses, properties
Adjusting the transparency of a lens	lenses, transparency
Using special effects filters	filters

Masking

In Corel PHOTO-PAINT, you can isolate areas in an image that you want to edit, while protecting the remaining areas from change using masks. Masks, with their combination of editable and protected areas, let you modify images with precision.

In this section you'll learn about

• distinguishing protected and editable areas

• defining editable areas

• defining editable areas using color information

• inverting and removing masks

• cutting out image areas

For information about clip masks, see "Using clip masks to change object transparency" in the Help.

Distinguishing protected and editable areas

You can use masks for advanced image editing. Masks function like a stencil placed over an image: protected areas prevent paint and effects from affecting the underlying image, whereas editable areas let paint and effects reach the image. When you define an editable area for an image, you also define a corresponding mask, or protected area, for the same image.

Mask overlay

By default, a mask overlay displays only over protected areas to make it easy to differentiate between protected and editable areas. The mask overlay is a red-tinted, transparent sheet. If you adjust the transparency of a mask in certain areas, the degree of red displayed by the mask overlay in those areas will vary accordingly.

You can hide the mask overlay.

Mask marquee

The border separating an editable area and its corresponding protected area is indicated by a dashed outline, called the mask marquee. You can display the mask marquee only after hiding the mask overlay. You can change the color of the mask marquee so that it can be seen clearly against an image's colors.

To display or hide the mask overlay

• Click **Mask ▶ Mask overlay**.

A check mark beside the menu command indicates that the mask overlay is visible.

To display or hide the mask marquee

• Click **Mask ▶ Marquee visible**.

A check mark beside the menu command indicates that the marquee is visible.

The mask marquee does not display when you use a mask overlay or when you are adjusting the transparency of a mask.

Defining editable areas

There are a number of ways to define an editable area in an image without using color information from the image.

Defining an editable area using an object, text, or the Clipboard contents

You can define an editable area using objects. When you create an editable area that has the shape of one or more objects, you have to move the objects away from the editable area before editing it.

You can define an editable area using text. The editable area created when you type has the font and style characteristics you specify. You can also create an editable area from existing text.

You can define an editable area using the Clipboard contents by pasting the information from the Clipboard into the image window as an editable area. The area you create is a floating editable area, which you can edit and move without changing the underlying image pixels.

Defining an editable area by freehand

You can define an editable area by outlining the image area as you would using a pencil and paper, or by clicking at different points on the image to anchor straight line segments.

Defining a border-shaped editable area

You can define a border-shaped editable area from the edges of an existing editable area to frame parts of an image with a color, a texture, or a special effect. A new mask marquee is placed on either side of an existing mask marquee to define a border-shaped editable area.

Defining the entire image as an editable area

You can also define the entire image as an editable area. This feature is very useful when you want to apply a special effect requiring a mask to the entire image. For information about special effects, see "Applying special effects" on page 423.

To define an editable area using text, objects, or the Clipboard contents

To define an area using	Do the following
Text	Click the **Text** tool 𝔸, and specify the text attributes on the property bar. Click the **Create text mask** button 🖳 on the extended property bar, type the text, and click anywhere in the toolbox to apply the changes.
One or more objects	Select one or more objects, and click **Mask ▶ Create ▶ Mask from object(s)**.
The Clipboard contents	Click **Edit ▶ Paste ▶ Paste as new selection**.

To define an editable area by freehand

1   Open the **Mask** flyout ‖ ▢ ◌ ◔ ◔ ⬠ ✗ ▨ , and click the **Freehand mask** tool ◌.
2   Click the **Normal** button ▨ on the property bar.
3   Click where you want to start and end each line segment in the image window.
4   Double-click to finish.

You can also define an editable area by dragging the **Freehand mask** tool in the image window and double-clicking to complete the outline.

An editable area created with the Freehand mask tool

To define a border-shaped editable area

1 Open the **Mask** flyout ▯◯◌▱⬚✏✦⬚, and click a mask tool.
2 Define an editable area.
3 Click **Mask ▶ Mask outline ▶ Border**.
4 Type a value in the **Width** box.
5 Choose an edge type from the **Edges** list box.

To define the entire image as an editable area

• Click **Mask ▶ Select all**.

If the mask overlay is enabled, you cannot see the mask marquee.

Defining editable areas using color information

You can define the editable and protected areas of a mask using the color information in an image. When you use color information, you must specify seed colors and a color tolerance value. A seed color is the base color you use to define either protected or editable areas. The color tolerance value defines the percentage of color variation from

the seed color that is allowed in the mask; a greater tolerance value adds more colors to the protected or editable areas. Color tolerance is based on color similarity.

Defining editable areas using uniform colors

You can define an editable area of uniform color or an editable area surrounded by uniform colors. When the area is surrounded by uniform colors, you can either make a rough outline that contracts to fit the area you want to edit, or you can define an editable area based on the boundary between uniform colors.

Defining editable areas throughout an image

You can define editable areas throughout an image using a color mask. A color mask lets you select seed colors throughout the image instead of in a specific area.

The color threshold lets you further refine the range of colors that are included in the editable area. The threshold value evaluates the brightness of each seed color and determines which pixels are included in the editable area. Adjusting the color threshold lets you soften or sharpen the pixels at the edge of the editable area. To adjust the threshold levels of a color mask, you can use a grayscale preview of your image to display masked areas in black, and editable areas in white.

Defining editable areas in a specific color channel

You can define an editable area in specific color channels. Every color image has a number of color channels, each representing one component of the image's color model. For example, an RGB image is composed of a red channel, a green channel, and a blue channel. When an image is displayed in its individual color channels, only part of its color information is displayed. Displaying only certain color channels lets you define an editable area with greater precision.

To define an editable area of uniform color

1 Open the **Mask** flyout ⎸□ ○ ◌ ρ ⬚ 🔧 ⬚⎸, and click the **Magic wand mask** tool 🔧.
2 Click the **Normal** button 🔳 on the property bar.
3 Type a tolerance value in the **Tolerance** box.
4 Click a color in the image.

✍

>   To edit an intricate image shape set against a plain background, you can define the background as an editable area of uniform color, and then invert the mask

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to make the shape editable. For more information about inverting masks, see
"Inverting and removing masks" on page 420.

The color of the first pixel that you click establishes the seed color; all adjacent
pixels with colors within the specified color tolerance range are included in the
editable area. The editable area expands until it reaches pixels with colors that
exceed the specified color tolerance.

To define an editable area surrounded by uniform color

1 Open the **Mask** flyout ⎮ ▫ ○ ◔ ◌ ⌁ ⋏ ▣ ⎮, and choose one of the following:
   - **Lasso mask** tool ◌ — lets you roughly outline an image area and then contract
     the mask marquee around a specified range of colors within that area; uses an
     initial seed color
   - **Magnetic mask** tool ⌁ — lets you establish a mask marquee along a boundary
     between colors in an image; uses multiple seed colors

2 Click the **Normal** button ▣ on the property bar.

3 Type a tolerance value in the **Tolerance** box.

4 In the image window, click a color you want to protect from changes, and click at
   different points to outline the editable area.

5 Double-click to complete the outline.

✎

You can choose whether only the color of the first pixel or the color of every
pixel you click establishes a seed color. The color tolerance range indicates the
range of colors protected from changes. When the first pixel that you click
establishes the seed color, the protected area expands until the specified color
tolerance is reached. When using the **Lasso mask** tool, the completed outline
of the editable area contracts from your original outline to fit the irregular
shape produced by excluding all the pixels from the original outline which fall
within the specified color tolerance range. When using the **Magnetic mask**
tool, every pixel that you click establishes a seed color, so that each time you
click, the protected area expands until the specified color tolerance is reached.
The color tolerance is measured in relation to the current seed color and within
a specific area around the pointer.

To define editable areas throughout an image

1 Click **Mask ▶ Color mask**.

2   Click the **Normal mode** button 🔲.

3   Choose **Sampled colors** from the top pop-up menu.

4   Click the **Eyedropper** tool 🔍, and click each seed color in the image window.

5   Click the **Preview** button 🔳.

6   From the list box beside the **Preview** button, choose one of the following:
    • **Overlay** — displays protected areas covered by a red-tinted transparent sheet
    • **Grayscale** — displays protected areas in black and the editable areas in white
    • **Black matte** — displays protected areas covered by a black-tinted transparent sheet
    • **White matte** — displays protected areas covered by a white-tinted transparent sheet
    • **Marquee** — displays a dotted line around the editable area

7   Click **More**, and enable one of the following options:
    • **Normal** — determines the color tolerance based on color similarity between pixels
    • **HSB mode** — determines the color tolerance based on similarity between hue, saturation, and brightness levels of pixels

8   In the box beside each seed color, specify the percentage of color variation permitted between pixels of that color and the remaining pixels.

9   In the **Threshold** area, move the **Threshold** slider and enable one of the following options:
    • **To black** — all pixels with a brightness value above the threshold value are added to the protected area
    • **To white** — all pixels with a brightness value above the threshold value are added to the editable area

✍

   If colors from a previous session display in the **Color mask** dialog box, click **Reset** before you create a new color mask.

   The **Marquee** display style is unavailable if you disable the **Marquee visible** command on the **Mask** menu.

To define editable areas in specific color channels

1   In the **Channels** docker, click the **Eye** icon 👁 beside a color channel.
    If the **Channels** docker is not open, click **Window** ▸ **Dockers** ▸ **Channels**.

2   Open the **Mask** flyout ▯ ◯ ◌ ◌ ◌ ◌ ◌ ◌ ◌, and click one of the following:
    • **Lasso mask** tool ◌
    • **Magic wand mask** tool ◌

3   Define an area in the image.

Inverting and removing masks

You can invert a mask so that the protected area becomes editable and the editable area becomes protected. Inverting a mask when defining the image area that you want to protect is easier than defining the area that you want to edit. For example, if you want to edit an intricate shape in an image that is set against a plain background, it is easier to select the background, and then invert the mask.

You can remove a mask from an image when you no longer need it.

To invert a mask

• Click **Mask ▸ Invert**.

To remove a mask

• Click **Mask ▸ Remove**.

If the editable area on your image was floating before you removed the mask, it is automatically merged with the background.

Cutting out image areas

You can cut out image areas by removing the surrounding background. This feature lets you isolate even the most detailed image areas while preserving edge detail, such as hair or blurred edges. The cut-out image area becomes an object that you can place against any background image.

To cut out an image area, you begin by drawing a highlight over its edges. Then, you apply a fill to define the inside of the area. You can preview the cut-out image with the background removed, and you can switch between the cut-out and original views of the image to evaluate the results. If necessary, you can erase and redo sections of the highlighted area.

*Highlight the edges of the image area (1); add a fill to the inside (2); preview
the cut-out image (3); bring the cut-out image into the image window (4);
place the cut-out image against a background image (5).*

You can customize the thickness of the highlighted and erased lines for best results. For
example, if an image area has hard edges, you can use a thinner line to define its edges
more precisely. Conversely, if an image area has blurred or wispy edges that are hard to
define, you can use a thicker line.

To make it easier to work, you can change the highlight and fill color. You can also zoom
in to get a closer look at image detail or zoom out to view a larger area of the image.
You can pan to view image areas that fall outside the preview window.

To cut out an image area

1   Click **Image ▶ Cutout**.

2   In the **Cutout** dialog box, click the **Highlighter** tool ![icon].

3   In the preview window, draw a line along the edges of the image area you want to
    cut out.

    The line should slightly overlap the surrounding background.

4   Click the **Inside fill** tool ![icon], and click inside the image area.

5   Click **Preview**.

If you want to switch between the original and cut-out view of an image, choose a view from the **View** list box.

You can also	Do the following
Erase highlighted sections	Click the **Eraser** tool ✎, and draw over highlighted sections you want to remove.
Set the nib size of the Highlighter and Eraser tools	Choose a nib size from the **Nib size** list box.
Change the highlight color	Choose a highlight color from the **Highlight color** list box.
Change the fill color	Choose a fill color from the **Fill color** list box.
Zoom in and out	Using the **Zoom in** 🔍 or **Zoom out** tool 🔍, click in the preview window.
Pan to another area of an image	Using the **Pan** tool ✋, drag the image until the area you want to see is visible.

✐ The **Cutout** command supports RGB, CMYK, grayscale, paletted, and Lab images. When brought into the **Cutout** dialog box, grayscale, paletted, and Lab images are automatically converted to RGB or CMYK images, which may result in a slight color shift. The original image colors are restored after applying or canceling the **Cutout** command.

From here

For more information about	In the Help index, see...
Positioning the mask marquee	mask marquee, aligning
Moving and aligning editable areas	editable areas, moving
Transforming editable areas	editable areas, transforming
Managing multiple masks with alpha channels	alpha channels

Applying special effects

Corel PHOTO-PAINT provides special effects filters that let you apply a wide range of transformations to images. For example, you can transform images to simulate drawings, paintings, etchings, or abstract art.

In this section, you'll learn about

- working with special effects
- applying preset styles
- applying color and tone effects
- managing plug-ins

Working with special effects

Corel PHOTO-PAINT special effects let you change the appearance of an image. You can apply a special effect to the entire image, or you can use a mask or a lens to transform only part of an image.

Applying special effects

The following are all the categories of special effects available, each of which includes several different effects:

• 3-D effects	• Color transform	• Distort
• Art strokes	• Contour	• Noise
• Blur	• Creative	• Texture
• Camera	• Custom	

When you apply a special effect, you can adjust its settings to control how the effect transforms an image. For example, when you use a vignette effect to frame an image, you can increase the offset value and decrease the fade value to decrease the size and

opacity of the frame. With a watercolor effect, you can decrease the size of the brush to show more image detail or increase the size of the brush for an abstract effect.

Applying special effects to part of an image

You can apply special effects to part of an image by defining an editable area. For information about editable areas, see "Masking" on page 413.

You can also use a lens to apply a special effect to part of an image. The following special effects are also preset lens types:

- Jaggy despeckle
- Scatter
- Invert

- Smooth
- Pixelate
- Posterize

- Soften
- Add noise
- Threshold

- Psychedelic
- Remove noise
- Solarize

- Sharpen

When you use a lens, changes are not applied to the image; instead, they are seen on the screen through the lens. For information about lenses, see "Working with lenses" on page 409.

Repeating and fading special effects

You can repeat a special effect to intensify its result. You can also fade an effect to diminish its intensity, and you can define how the effect is merged with the image. For information about repeating and fading a special effect that you've applied, see "Undoing, redoing, repeating, and fading" in the Help. For information about merge modes, see "Understanding merge modes" in the Help.

To apply a special effect

1 Click **Effects**, choose a special effect category, and click an effect.
2 Adjust the settings of the special effect filter.

If the image contains one or more objects, the special effect is applied only to the background or the selected object.

When you preview the special effect in the image window, you can press and hold **F2** to hide the special effect dialog box.

Some special effects can affect the shape of the object they are applied to. You can retain an outline of the object's original shape by enabling the **Lock object transparency** button 🔲 on the **Objects** docker. The areas which remain between the outline of the original shape and the new shape of the object are filled with black. If the **Objects** docker is not open, click **Window ▸ Dockers ▸ Objects**.

To apply a special effect to an editable area

1 Define an editable area.

2 Click **Effects**, choose a special effect category, and click an effect.

3 Adjust the settings in the dialog box.

To repeat a special effect

• Click **Effects ▸ Repeat**, and click one of the following:
  • **Repeat {last effect}** — repeats the last applied effect
  • **{Last effect} to all visible** — repeats the last applied effect to all visible elements in an image
  • **{Last effect} to all selected** — repeats the last applied effect to all selected objects in an image

Applying preset styles

Some special effects include preset styles. You can apply different preset styles and modify their settings to get the effect you want. When you are satisfied with an effect, you can save the customized settings as a preset style to apply it to other images. When you no longer need a preset style, you can delete it.

The following special effects include preset styles:

• The Boss
• Glass
• Mesh warp
• Lens flare
• Frame
• Whirlpool
• Lighting effects
• Alchemy

- Bevel effects
- Spot filter
- Bump map

To apply a preset style

1   Click **Effects**, choose a special effect category, and click an effect that includes preset styles.

2   Choose a preset style from the **Style** or **Presets** list box.

To create a custom preset style

1   Click **Effects**, choose a special effect category, and click an effect that includes preset styles.

    If you want to base the custom preset style on an existing preset style, choose a preset style from the **Style** or **Presets** list box.

2   Adjust the settings of the special effect.

3   Click the **Add preset** button ⊞.

4   Type a name in the dialog box.

To delete a custom preset style

1   Click **Effects**, choose a special effect category, and click an effect that includes preset styles.

2   Choose a preset style from the **Style** or **Presets** list box.

3   Click the **Delete preset** button ⊟.

✎   You cannot delete the default or the last-used preset style.

Applying color and tone effects

You can transform the color and tone of an image to produce a special effect. For example, you can create an image that looks like a photographic negative or flatten the appearance of an image.

To apply color and tone effects

* Click **Image ▶ Transform**, and click one of the following effects:
  * **Invert** — lets you reverse the colors of an image. Inverting an image creates the appearance of a photographic negative.
  * **Posterize** — lets you reduce the number of tonal values in an image to remove gradations and create larger areas of flat color
  * **Threshold** — lets you specify a brightness value as a threshold. Pixels with a brightness value higher or lower than the threshold will display in white or black, depending on the threshold option you specify.

  If a dialog box displays, adjust the effect settings.

Managing plug-ins

Plug-ins provide additional features and effects for image editing in Corel PHOTO-PAINT. Special effect plug-in filters process image information and alter an image according to preset specifications.

At start-up, Corel PHOTO-PAINT automatically detects and loads plug-ins placed in the plug-ins folder. For example, the Digimarc plug-in is loaded automatically, and added to the Effects menu. You can add more plug-ins to the plug-ins folder or you can add plug-ins installed in other locations, but third-party plug-ins must be installed in a folder for which you have read and write access.

You can disable plug-ins you are not using.

To install a plug-in from another location

1 Click **Tools ▶ Options**.
2 In the **Workspace** list of categories, click **Plug-ins**.
3 Click **Add**.
4 Choose the folder where the plug-in is stored.

To disable a plug-in

1 Click **Tools ▶ Options**.
2 In the **Workspace** list of categories, click **Plug-ins**.
3 Disable the checkbox next to the plug-in you want to disable.

If your plug-ins are installed in the Corel PHOTO-PAINT plug-ins folder, you must add individual plug-ins to the list on the Plug-ins page, and disable the first checkbox in the list (the Corel PHOTO-PAINT plug-in folder) before you can disable individual plug-ins. To add individual plug-ins to the list, see "To install a plug-in from another location" on page 427.

You can also disable a plug-in and remove it from the plug-in list by clicking a plug-in to highlight it, and clicking the **Remove** button.

From here

For more information	In the Help index, see...
Managing plug-ins	plug-ins
Special effect categories	special effects, categories
Bevel effects	Bevel effects filter
Lens flare effect	Lens flare effect filter
Lighting effects	Lighting effects filter

Painting
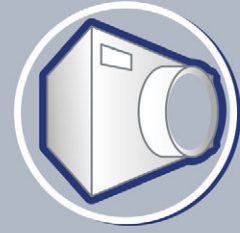
Corel PHOTO-PAINT lets you create images or modify existing ones using a variety of shape and paint tools.

In this section, you'll learn about

- drawing shapes and lines
- applying brush strokes
- spraying images
- repeating brush strokes
- using a pressure-sensitive pen

Drawing shapes and lines

You can add shapes, such as squares, rectangles, circles, ellipses, and polygons, to images. By default, shapes are added to an image as new objects. Shapes can be outlined, filled, or rendered as separate, editable objects. For more information about objects, see "Creating objects" on page 447.

You can also add lines to images. When you add lines, you can specify the width and transparency, as well as the way line segments join together. The current foreground color determines the color of a line.

To draw a rectangle or an ellipse

1   Open the **Shape** flyout, and click one of the following tools:
     • **Rectangle** tool
     • **Ellipse** tool

2   On the property bar, choose one of the following options in the **Fill** list box:
     • **Uniform fill**
     • **Fountain fill**
     • **Bitmap fill**
     • **Texture fill**

If you want to edit the fill, click the **Edit** button on the property bar.

3 Drag in the image window until the rectangle or ellipse is the size you want.

You can also

Disable the fill	Click the **Disable** button on the property bar.
Apply an outline	Type a value in the **Border** box on the property bar to specify the border width in pixels.
Round the corners of a rectangle	Type a value in the **Radius** box on the property bar.
Change the transparency	Type a value in the **Transparency** box in the extended property bar.

To draw a polygon

1 Open the **Shape** flyout ▯ □ ○ ◇ ✎ ⅄ , and click the **Polygon** tool ◇.

2 On the property bar, choose one of the following options in the **Fill** list box:
   • **Uniform fill** ▣
   • **Fountain fill** ▣
   • **Bitmap fill** ▧
   • **Texture fill** ▥

   If you want to edit the fill, click the **Edit** button on the property bar.

3 Click where you want to set the anchor points of the polygon, and double-click to set the last anchor point.

You can also

Disable the fill	Click the **Disable** button on the property bar.
Apply an outline to the polygon	Type a value in the **Border** box on the property bar to specify the border width in pixels.
Change the way outline segments join	Choose a join type from the **Shape joints** list box on the extended property bar.

To draw a line

1   Open the **Shape** flyout ▯▢◌◊⬙⬙, and click the **Line** tool ⬙.

2   Type a value in the **Width** box on the property bar.

3   Click the **Color** button on the property bar, and choose a color.

4   On the property bar, open the **Line joint** list box, and click one of the following:
    • **Butt** — joins the segments; if you specify a higher width value, a gap appears between the joined segments
    • **Filled** — fills the gaps between joined segments
    • **Round** — rounds the corners between joined segments
    • **Point** — makes points on the corners of joined segments

5   Drag in the image window to draw a single line segment.

You can also

Draw a line with multiple segments	In the image window, click where you want to start and end each segment, and double-click to end the line.
Change the transparency	Type a value in the **Transparency** box on the extended property bar.
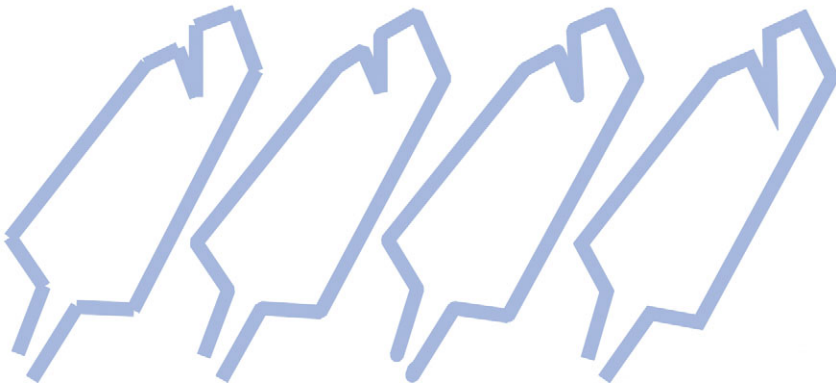
You can specify how lines join: Butt, Fitted, Round, or Point.

Applying brush strokes

Paint tools let you imitate a variety of painting and drawing media. For example, you can apply brush strokes that imitate watercolors, pastels, felt markers and pens. By

default, brush strokes are added to the active object or background. Brush strokes can also be rendered as separate objects. For information about objects, see "Creating objects" on page 447.

The paint tool and brush type you choose determines the appearance of the brush stroke on the image. When you paint with a preset brush, the brush attributes of the paint tool are predetermined.

The color of the brush stroke is determined by the current foreground color, which is displayed in the color control area. You can also choose a foreground color by taking a color sample from an image. For more information about choosing colors, see "Working with color" on page 153.

In addition to painting with color, you can apply images and textures by painting with a fill. You can also apply a brush stoke to a path. For more information, see "Applying brush strokes to paths" in the Help.

Preset brush type   **Painting an image**
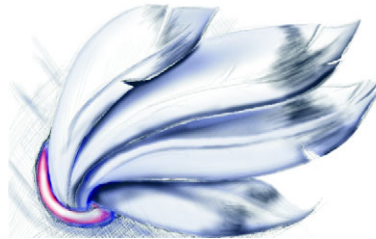
Airbrush

The Airbrush is used for shading.

Spray can
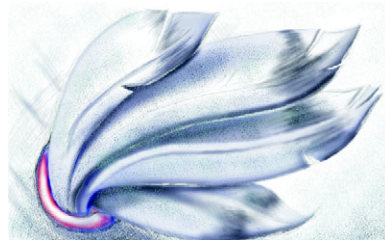
Colors are splattered to add texture.

Brush
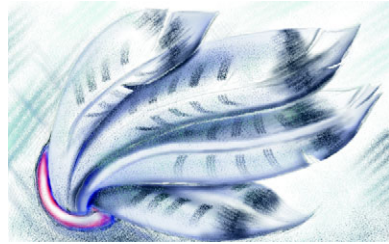
A decorative effect is added using a Camel hair brush.

To paint with a preset brush

1 Open the **Brush** flyout ⫿ 🖊 ✒ 🐾 ✏ ✎ ⫿, and click the **Paint** tool 🖊.

2 Open the **Paint tool** picker on the property bar, and click a paint tool.

3 Choose a preset brush type from the **Type** list box on the property bar.

4 In the color control area of the toolbox, double-click the **Foreground** color swatch ■, and choose a color.

5 Drag in the image window.

   If you want to constrain the brush to a straight horizontal or vertical line, hold down **Ctrl** while you drag and press **Shift** to change direction.

You can also

Change the brush shape	Choose a brush shape from the **Shape** picker on the property bar.
Change the brush size	Type a value in the **Size** box on the property bar.
Change the transparency	Type a value in the **Transparency** box on the extended property bar.

To paint with a color sampled from an image

1 Click the **Eyedropper** tool 🔎.

2 Click a color in the image window.

3 Open the **Brush** flyout ⫿ 🖊 ✒ 🐾 ✏ ✎ ⫿, and click the **Paint** tool 🖊.

4 Open the **Paint tool** picker on the property bar, and click a paint tool.

5   Choose a preset brush type from the **Type** list box on the property bar.

6   Drag in the image window.

To paint with a fill

1   Open the **Fill** flyout ⬛ , and click the **Fill** tool ⬛.

2   On the property bar, choose a fill type.

3   Open the **Touch-up** flyout ⬛ , and click the **Clone** tool ⬛.

4   On the property bar, open the **Clone tool** picker, and click the **Clone from fill** tool ⬛.

5   Drag in the image window.

Spraying images

You can paint with small-scale, full-color bitmaps, instead of a brush. For example, you can enhance landscapes by spraying clouds across the sky or foliage across the ground.

Corel PHOTO-PAINT includes a variety of images, which are used to create spraylists. You can load a preset spraylist, edit a preset, or create a spraylist by saving images in an image list. You can edit the source images at any time.

You can enhance a photo by spraying it with images or create an image from scratch using presets. This image features presets, such as Planets, Fire, Clouds, and Stardust.

To spray images

1 Open the **Brush** flyout , and click the **Image sprayer** tool .

2 Choose a preset image list from the **Type** list box on the property bar.

3 Type a value in the **Size** box on the property bar.

4 Drag in the image window.

You can also

Change the transparency of the spraylist images	Type a value in the **Transparency** box on the extended property bar.
Specify the number of images sprayed in each dab of the brush	Type a value in the **Number of dabs** box on the extended property bar.
Specify the distance between dabs along the length of a stroke	Type a value in the **Spacing** box on the extended property bar.
Specify the distance between dabs along the width of a brush stroke	Type a value in the **Spread** box on the extended property bar.
Change the rate at which paint fades in a brush stroke	Type a value in the **Fade out** box on the extended property bar. Negative numbers fade in while positive numbers fade out.

To load an image list

1 Open the **Brush** flyout , and click the **Image sprayer** tool .

2 Click the **Load image sprayer list** button on the extended property bar .

3 Choose the folder where the image list is stored.

4 Click a filename.

   If you want to view a thumbnail of the image list, enable the **Preview** check box.

5 Click **Open**.

To create a spraylist

1 Open the **Brush** flyout , and click the **Image sprayer** tool .

2 Choose a preset image list from the **Type** list box on the property bar.

3 Click the **Create spraylist** button on the extended property bar.

4   In the **Create spraylist** dialog box, specify the contents of the spraylist.

Repeating brush strokes

You can save a brush stroke and then reapply it to the same image or other images. You can also repeat a brush stroke along the border of a path or mask. For information about applying a brush stroke to a path, see "Applying brush strokes to paths" in the Help.

You can edit a saved brush stroke to create new effects by adjusting attributes such as the size, number, angle, and color of the brush stroke.

To save a brush stroke

1   Open the **Brush tool** flyout ⟦ 🖌 ✐ 🐾 ✐ ✐ ⟧, and click the **Paint** tool 🖌.

2   On the property bar, open the **Brush tool** picker, and click a tool.

3   Apply a brush stroke.

4   Click **Edit ▶ Repeat brush stroke**.

5   In the **Repeat stroke** dialog box, click the **Stroke** flyout arrow, and click **Add last tool stroke**.

6   Choose the folder where you want to save the brush stroke.

7   Type a filename in the **Filename** box.

To apply a saved brush stroke

1   Open the **Brush tool** flyout ⟦ 🖌 ✐ 🐾 ✐ ✐ ⟧, and click the **Paint** tool 🖌.

2   On the property bar, open the **Brush tool** picker, and click a tool.

3   Click **Edit ▶ Repeat brush stroke**.
    If there are two menu items called **Repeat brush stroke**, click the second one.

4   Choose a brush stroke from the **Stroke** list box.

5   Click in the image window to apply the brush stroke.
    If you want to apply more than one brush stroke, continue clicking.

To edit a saved brush stroke

1   Open the **Brush tool** flyout ⟦ 🖌 ✐ 🐾 ✐ ✐ ⟧, and click the **Paint** tool 🖌.

2   On the property bar, open the **Brush tool** picker, and click a tool.

3   Click **Edit ▶ Repeat brush stroke**.

If there are two menu items called **Repeat brush stroke**, click the second one.

4   In the **Repeat stroke** dialog box, choose a saved brush stroke from the **Stroke** list box.

5   In the **Repeat stroke** dialog box, modify any attributes.

6   Click in the image window to apply the brush stroke.

Using a pressure-sensitive pen

Corel PHOTO-PAINT provides settings to control brush strokes applied using a pressure-sensitive pen, or stylus. The pressure applied with the pen on a pen tablet determines the size, opacity, and other attributes of the brush stroke.

The pressure-sensitive pen attributes can be saved for future use when you save a custom brush. For more information about custom brushes, see "Creating custom brushes" in the Help.

To configure a pen tablet

1   Click **Tools ▶ Options**.

2   In the **Workspace** list of categories, click **General**.

3   In the **Pen tablet** area, click the **Configuration** button.

4   Apply five strokes using a full range of pressure.

Corel PHOTO-PAINT automatically configures many pressure-sensitive pens. If your pressure-sensitive pen has been configured automatically, the **Pen tablet configuration** button appears grayed.

To set the attributes of a pressure-sensitive pen

1   Open the **Brush** flyout ║ ♭ ⬭ ▤ ✐ ✐ │, and click the **Paint** tool ♭.

2   On the property bar, open the **Paint tool** picker, and click a paint tool.

3   In the **Brush settings** docker, click the flyout arrow on the **Pen settings** bar.

If the **Brush settings** docker is not open, click **Window ▶ Dockers ▶ Brush settings**.

4   Type values in any of the following boxes:

- **Size** — lets you specify the size of the brush tool. Use a value from -999 to 999.
- **Opacity** — lets you adjust the transparency of the brush stroke. Positive or negative values have no impact if the transparency of the tool is set to 0 or is already set to the maximum. Use a value from -99 to 100.
- **Soft edge** — lets you specify the width of the transparent edge along a brush stroke. Use a value from -99 to 100.
- **Hue** — lets you shift the hue of the paint color around the Color Wheel up to the specified degree
- **Saturation** — represents the maximum variation in the saturation of the paint color. Use a value from -100 to 100.
- **Lightness** — represents the maximum variation of lightness of the paint color. Use a value from -100 to 100.
- **Texture** — lets you specify the amount of texture visible for the current paint tool. Use a value from -100 to 100.
- **Bleed** — lets you specify how quickly a brush stroke runs out of paint. Use a value from -100 to 100.
- **Sustain color** — works in conjunction with the bleed value to adjust the traces of paint that remain throughout the brush stroke. Use a value from -100 to 100.
- **Elongation** — represents the amount of tilt and rotation of the pen. Use a value from 0 to 999.

5   Drag the pen, varying the amount of pressure you apply to the tablet, to test the attributes.

From here

For more information about	In the Help index, see...
Repeating brush strokes	brush strokes, repeating
Creating custom brushes	brushes, creating custom brushes
Creating an image list	spraying images, creating image lists
Editing a source image	spraying images, editing source images
Painting symmetrical patterns and orbits	painting, symmetrical patterns; painting, orbits
Understanding merge modes	merge modes
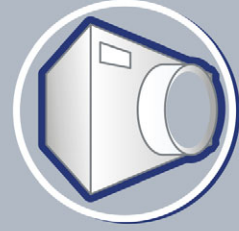
Filling images

In Corel PHOTO-PAINT, you can fill objects, editable areas, and images with colors, patterns, and textures. You can choose from a wide variety of fills and create your own fills.

In this section, you'll learn about
- applying uniform fills
- applying fountain fills
- applying bitmap fills
- applying texture fills
- applying gradient fills

Applying uniform fills

Uniform fills are the simplest fill type. They are solid colors that you can apply to images.

To apply a uniform fill

1   Open the **Fill** flyout ⬚⬚, and click the **Fill** tool ⬚.

   If you want to fill an object, you must select it using the **Object pick** tool ⬚ before applying the fill.

2   Click the **Uniform fill** button ⬚ on the property bar.

3   Click the **Edit** button on the property bar.

4   In the **Uniform fill** dialog box, choose a color model from the **Model** list box.

5   Click a color in the visual selection area.

6   Click **OK**.

7   Click where you want to apply the fill in the image.

To apply a fill to a text object, you can first render the text as an editable area by selecting the text object with the **Text** tool 🄰 and clicking the **Create text mask** button 🄰 on the extended property bar. This produces a text-shaped editable area to which you can apply fills.

Applying fountain fills

Fountain fills gradually change from one color to the next, along a linear, radial, conical, square, or rectangular path. You can use fountain fills to create the illusion of depth. You can choose a preset fill, or you can create a two-color or a custom fountain fill.
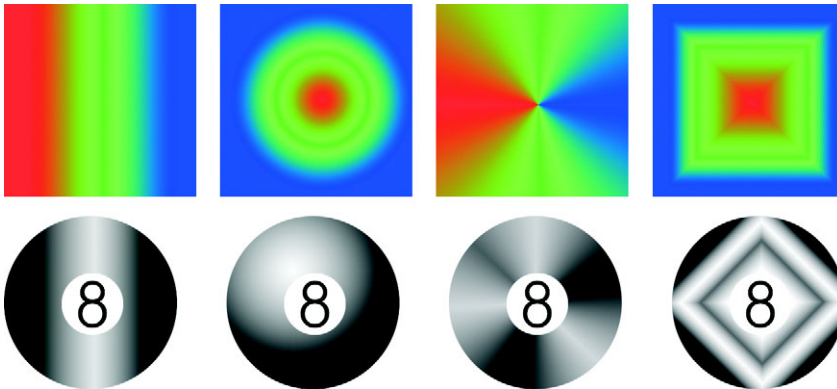
Linear, radial, conical, and rectangular fountain fills

To apply a preset fountain fill

1 Open the **Fill** flyout ⬚ 🖌🖌, and click the **Fill** tool 🖌.

   If you want to fill an object, you must select it using the **Object pick** tool ▸ before applying the fill.

2 Click the **Fountain fill** button ▢ on the property bar.

3 Click the **Edit** button on the property bar.

4 In the **Fountain fill** dialog box, choose a preset fountain fill from the **Presets** list box.

5 Click **OK**.

6 Click where you want to apply the fill in the image.

To create a two-color fountain fill

1   Open the **Fill** flyout , and click the **Fill** tool .

2   Click the **Fountain fill** button on the property bar.

3   Click the **Edit** button on the property bar.

4   In the **Fountain fill** dialog box, choose a fountain fill from the **Presets** list box.

5   Choose a fountain fill type from the **Type** list box.

6   Enable the **Two color** option in the **Color blend** area.

7   Open the following color pickers, and click a color:
    - **From** — determines the start color for the progression
    - **To** — determines the end color for the progression

8   Move the **Mid-point** slider to set the midpoint between the two colors.

9   Click one of the following:
    - **Direct color path** — blends the colors along a straight line, beginning at the start color and continuing across the color wheel to the end color
    - **Counterclockwise color path** — blends the colors along a counterclockwise path around the color wheel
    - **Clockwise color path** — blends the colors along a clockwise path around the color wheel

To create a custom fountain fill

1   Open the **Fill** flyout , and click the **Fill** tool .

2   Click the **Fountain fill** button on the property bar.

3   Click the **Edit** button on the property bar.

4   In the **Fountain fill** dialog box, choose a fountain fill from the **Presets** list box.

5   Choose a fountain fill type from the **Type** list box.

6   Enable the **Custom** option in the **Color blend** area.

7   Double-click the area above the **Color band** to add a color marker, and click a color on the color palette.

    If you want to change the location of a color marker, drag it to a new position.

Applying bitmap fills

Bitmap fills are bitmaps that you can use to fill an object or image. You can fill an area with a single bitmap. You can also tile, or repeat, a smaller bitmap across an area to create a seamless pattern.

You can fill images with preset bitmap fills, or you can create custom bitmap fills from saved images or editable areas. For more information about defining editable areas, see "Defining editable areas" on page 414.

It is best to use less complex bitmaps for fills, because complex bitmaps are memory-intensive and slow to display. The complexity of a bitmap is determined by its size, resolution, and bit depth.

Bitmap fills can be used to create interesting backgrounds and textures.

To apply a bitmap fill

1   Open the **Fill** flyout ⬚ ◈ ◈, and click the **Fill** tool ◈.

   If you want to fill an object, you must select it using the **Object pick** tool ▸ before applying the fill.

2   Click the **Bitmap fill** button ⊠ on the property bar.

3   Click the **Edit** button on the property bar.

4   In the **Bitmap fill** dialog box, open the **Bitmap fill** picker, and click a fill.

5   Specify the attributes you want.

6   Click **OK**.

7   Click where you want to apply the fill in the image.

Merge modes control the way the foreground or fill color blends with the base color of the image. You can change the merge mode setting from the default (Normal) for specific blending purposes. For more information about merge modes, see "Understanding merge modes" in the Help.

To tile a bitmap fill

1 Open the **Fill** flyout ⧉ ⧉, and click the **Fill** tool ⧉.
2 Click the **Bitmap fill** button ⧉ on the property bar.
3 Click the **Edit** button on the property bar.
4 In the **Bitmap fill** dialog box, open the **Bitmap fill** picker, and click a fill.
5 In the **Size** area, disable the **Use original size** and **Scale bitmap to fit** check boxes.
6 Type values in the **Width** and **Height** boxes to specify the size of bitmap tiles.

To fill an image with a single, large bitmap, enable the **Scale bitmap to fit** check box in the **Size** area.

To create a bitmap fill from an editable area

1 Define an editable area.
2 Click **Edit ▸ Create fill from selection**.
3 Choose the folder where you want to save the file.
4 Type a filename in the **File name** box.
   The bitmap fill you create is added to the **Bitmap fill** picker.

To import a bitmap fill

1 Open the **Fill** flyout ⧉ ⧉, and click the **Fill** tool ⧉.
2 Click the **Bitmap fill** button ⧉ on the property bar.
3 Click the **Edit** button on the property bar.
4 In the **Bitmap fill** dialog box, click the **Load** button.
5 In the **Load bitmap fill** dialog box, choose the folder, disk, or CD where the file is stored.

6 Double-click the filename.

Thumbnail images of the bitmap files you import are added to the **Bitmap fill** picker.

Applying texture fills

Texture fills are three-dimensional patterns. You can use preset texture fills, such as water, minerals, and clouds, or you can edit a preset to create a custom texture fill. You cannot import files to use as texture fills.

When you edit a texture fill, you can modify parameters, such as the softness, density, brightness, and colors. Parameters vary for each texture.

You can modify the attributes of a texture fill to change its appearance.

To apply a texture fill

1 Open the **Fill** flyout ⬚, and click the **Fill** tool ⬚.

If you want to fill an object, you must select it using the **Object pick** tool ⬚ before applying the fill.

2 Click the **Texture fill** button ⬚ on the property bar.

3 Click the **Edit** button on the property bar.

4 In the **Texture fill** dialog box, choose a texture library from the **Texture library** list box.

5 Choose a texture from the **Texture** list.

6   Click **OK**.

7   Click where you want to apply the fill in the image.

Texture fills are scaled to the image or image area to which you apply them. You cannot tile texture fills.

To apply a fill to a text object, you can first render the text as an editable area by selecting the text object with the **Text** tool ⒜ and clicking the **Create text mask** button ⒜ on the extended property bar. This produces a text-shaped editable area to which you can apply fills.

Applying gradient fills

Gradient fills let you create a gradual blend between colors in an area. They are similar to fountain fills, but they can be adjusted directly in the image window. Gradient fills can be flat, linear, elliptical, radial, rectangular, square, or conical. They can also be made up of bitmaps or texture patterns.

When you apply a gradient fill to an image, a gradient arrow, which marks the transition from one color to another, displays in the image window. Each color in the gradient fill is represented by a square node on the gradient arrow. You can change and add colors or adjust the transparency of individual colors. You can also adjust the size of the gradient fill.
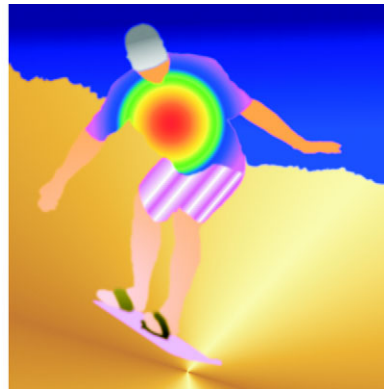
Gradient fills can be used to enhance an image. You can adjust gradient fills in the image window.

To apply a gradient fill

1 Open the **Fill** flyout ||⬧ ⬧ , and click the **Interactive fill** tool ⬧.

   If you want to fill an object, you must select it using the **Object pick** tool ⬧ before applying the fill.

2 Choose a gradient type from the **Fill type** list box on the property bar.

3 Choose **Custom** from the **Interactive fill style** list box on the property bar.

4 Drag in the image window to set the gradient arrow.

5 Drag a color swatch from the color palette to a color node on the gradient arrow. A black arrow displays to indicate that the color swatch is in position.

   If a color palette is not displayed, click **Window ▶ Color palettes**, and choose a color palette.

✍

If you are adding a gradient fill to an object, you must click the **Lock object transparency** button ⬧ in the **Objects** docker before you select and apply the fill. When the **Lock object transparency** button is enabled, the object's shape and transparency are protected.

When you choose a flat, bitmap, or texture fill type from the **Fill type** list box, color nodes do not display in the image window; the current foreground color determines the color of the flat fill, and the last settings for the bitmap fill or texture fill are applied.

From here

For more information about	In the Help index, see...
Applying a transparency pattern to fills	fills, transparency patterns
Rendering text as an editable area	editable areas
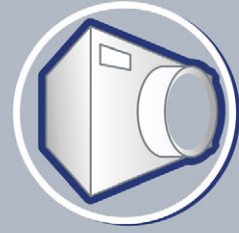
Working with objects

You can increase your image-editing capabilities using objects, which are independent image elements that float above the background. Objects are transparent layers that stack on top of one another. The background forms the bottom layer, and when you create new objects, they are added to the top of the stack. For example, when you open a photo, it becomes the background. You can then add shapes, brush strokes, sprayed images, and other objects on top of the photo.
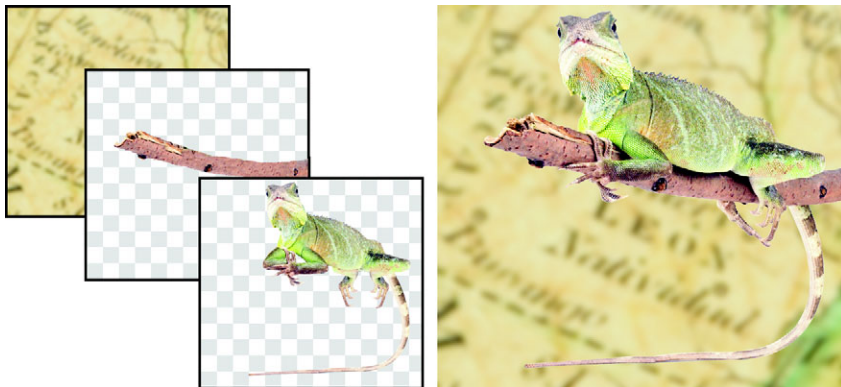
Objects are like layers that you can stack on top of one another. This image consists of the background and two photo objects.

In this section you'll learn about
- creating objects
- grouping and combining objects

Creating objects

In Corel PHOTO-PAINT, you can create objects from:
- brush strokes
- shapes

- the background
- editable areas

You can create objects from scratch by applying brush strokes or creating shapes, or you can add brush strokes and shapes to an existing object. For more information about applying brush strokes and creating shapes, see "Painting" on page 429.

You can also create an object using an entire image background. The background cannot be edited or moved in the stacking order unless it is converted to an object.

Another way you can create an object is to define an editable area on an image background or another object. When you create an object from an editable area, you can include only the visible elements in that area. If an object is obscured by other objects, and you cannot see it, then it will not be included in the editable area. For information about defining editable areas, see "Masking" on page 413.

You can create an object using part of an image background. Here, an editable area is defined and then the selection is copied and moved.

All objects in an image have the same resolution and color mode. As you add objects to a file, the file size and memory requirements increase. To decrease file size, you can flatten an image by combining objects. For more information on combining objects, see "Grouping and combining objects" on page 450.

To retain objects when you save an image, you must save the image in the native Corel PHOTO-PAINT (CPT) file format. For more information on saving images, see "Saving and closing" on page 471.

To create an object using a brush tool

1   Click **Object** ▶ **Create** ▶ **New object**.

2   Open the **Brush** flyout ⫴ 🖌 ⫶ 🝆 ⫶ ⫶, and click the **Paint** tool 🖌.

3   Set the attributes on the property bar.

4   Drag in the image window to create a brush stroke.

☞

> When the **Marquee visible** command in the **Object** menu is enabled, a dashed outline, called a marquee, surrounds the new object.
>
> All brush strokes and sprayed images are added to the active object by default.

💡

> You can also create an object by clicking the **New object** button 🗏 in the **Objects** docker. If the **Objects** docker is not open, click **Window** ▶ **Dockers** ▶ **Objects**.

To create an object using a shape tool

1   Open the **Shape** flyout ⫴ ▢ ○ ◇ ✐ ⅄ ⫶, and click a shape tool.

2   Set the attributes on the property bar.

3   Drag in the image window to create a shape.

☞

> When the **Marquee visible** command in the **Object** menu is enabled, a dashed outline, called a marquee, surrounds the new object.
>
> If you want to add a shape to the active object, instead of creating a new object, disable the **New object** button 🗏 on the extended property bar ▹.

To create an object using the entire image background

•   Click **Object** ▶ **Create** ▶ **From background**.

To create an object using an editable area

1   In the **Objects** docker, click the thumbnail of the background, or of an object.
    If the **Objects** docker is not open, click **Window** ▶ **Dockers** ▶ **Objects**.

2   Define an editable area.

3   Click **Object** ▶ **Create** ▶ **Object: copy selection**.

If you want to remove the editable area of an image as you create an object, click **Object ▶ Create ▶ Object: cut selection**.

To create an object using all visible elements in an editable area

1   Define an editable area.

2   Click **Edit ▶ Copy visible**.

3   Click **Edit ▶ Paste ▶ Paste as new object**.

Grouping and combining objects

You can group objects so they behave as one unit. Grouped objects can be moved, deleted, or transformed as a single entity. You can add objects to an existing group, and ungroup the objects when you want to edit them individually.

Another way to group objects is to create a clipping group. Clipping groups let you combine the characteristics of objects by placing the image elements from one or more objects into the shape of another; the characteristics of child objects are inserted into the shape of the parent object. For example, if the parent object is a picture of a flower, and the child object is a picture of the sky, the result will be a flower shape with the color and texture of the sky. An object is the parent to objects above it in the stacking order; a child object cannot be below the parent object. If you want to create a clipping group using the background image, you must first turn the background into an object. You can undo a clipping group at any time.

Combining objects lets you group them permanently. You can combine multiple objects into one object, or combine objects with the background. When you combine objects, you lose the ability to edit the objects independently. You can also decrease the file size of an image by combining objects.

To group objects

1   In the image window, select the objects.

2   Click **Object ▶ Arrange ▶ Group**.

To add an object to a group of objects

1   In the image window, select an object in a group.

2   Hold down **Shift**, and click the object you want to add.

3   Click **Object ▶ Arrange ▶ Group**.

To ungroup objects

1   In the image window, click an object in a group.

2   Click **Object ▶ Arrange ▶ Ungroup**.

To create a clipping group

1   In the **Objects** docker, click the column to the left of the object thumbnail to make it a child object. A **Paper clip** icon ✐ displays.

    If the **Objects** docker is not open, click **Window ▶ Dockers ▶ Objects**.

2   In the image window, select the child object and drag it over the parent object.

Only areas of the child object that fall within the boundaries of the parent object are visible. Otherwise, only the object marquee of the child object is visible.

A child object must be above a parent object in the **Objects** docker stacking order.

To undo a clipping group

•   In the **Objects** docker, click the **Paper clip** icon ✐ next to each child object.

    If the **Objects** docker is not open, click **Window ▶ Dockers ▶ Objects**.

To combine objects

To combine

To combine	
Multiple objects into one object	Select the objects, and click **Object ▶ Combine ▶ Combine objects together**.
One or more objects with the background	Select an object or objects, and click **Object ▶ Combine ▶ Combine objects with background**.
All objects with the background	Click **Object ▶ Combine ▶ Combine all objects with background**.

When objects are combined with the background, they become part of the background layer and can no longer be edited as individual objects.

You can specify a merge mode and transparency level before you combine objects by modifying the settings in the **Merge mode** list box and **Opacity** box in the **Objects** docker. If the **Objects** docker is not open, click **Window ▶ Dockers ▶ Objects**.

From here

For more information about	In the Help index, see...
Changing object properties	objects, changing properties
Displaying and arranging objects	objects, arranging
Changing the properties of an object	objects, changing properties
Selecting objects	objects, selecting
Moving objects to another location	objects, moving
Copying objects	objects, copying
Displaying and hiding objects	objects, displaying

Modifying objects

Objects are independent image elements that can be layered on top of one another. You can transform objects, change their edges, add drop shadows, and adjust their transparency. Objects can be changed without affecting the other objects, or the background, in an image.

In this section you'll learn about
- transforming objects
- changing the edges of objects
- adding drop shadows to objects

Transforming objects

You can change the appearance of objects using the following transformations.

Transformation	Description
Sizing	Lets you change the width and height of an object
Scaling	Lets you size an object to a percentage of its original size
Rotating	Lets you turn an object around its center of rotation
Flipping	Lets you create a horizontal or vertical mirror image of an object
Skewing	Lets you slant an object to one side
Distorting	Lets you stretch an object disproportionately
Applying perspective	Lets you give an object the appearance of depth

You can apply freeform transformations in the image window or manually adjust settings for more precise results.

You can apply transformations to a single object or multiple objects simultaneously.
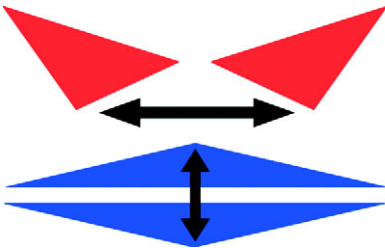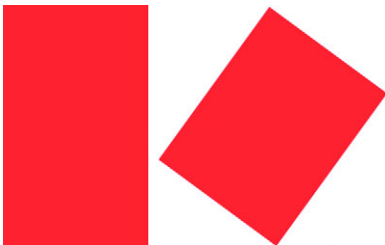
Transformation	Applied to objects in an image
Sizing and scaling	_The photo object is scaled down to fit onto the background image._
Flipping	_The object is flipped to create a reflection._
Rotating	_The reflection is rotated._
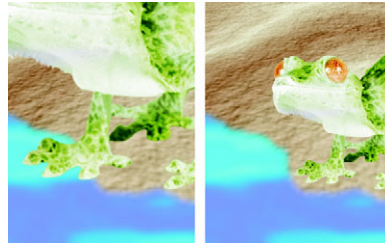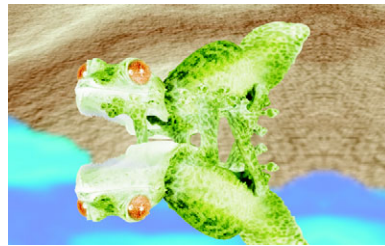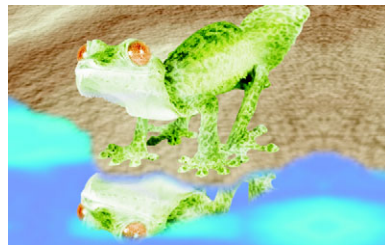
Skewing

The reflection is skewed to create a realistic angle.
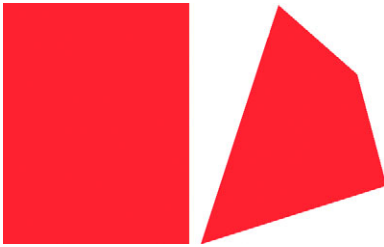
Distorting
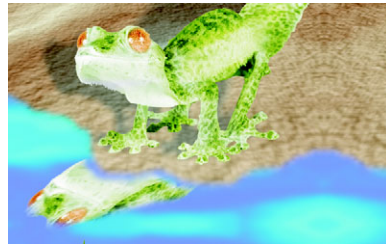
The shadow is distorted to indicate the direction of a light source.

Perspective
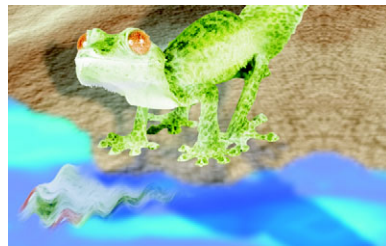
A second shadow is added and modified.

To size an object

1 Select an object.

2 Click the **Position and size mode** button ⊹ on the property bar.

3 Drag any of the handles on the highlighting box.

4 Click the **Apply** button 🖲 on the extended property bar ⏩ .

   If you want to cancel the transformation, double-click outside the object.

To scale an object

1 Select an object.

2 Click the **Scale mode** button ⊞ on the property bar.

3 Drag a corner handle on the highlighting box.

4 Click the **Apply** button ⬛ on the extended property bar ⏩.

   If you want to cancel the transformation, double-click outside the object.

To rotate an object

1 Select an object.

2 Click the **Rotate mode** button ⟳ on the property bar.

3 Drag a rotation handle on the highlighting box.

4 Click the **Apply** button ⬛ on the extended property bar ⏩.

   If you want to cancel the transformation, double-click outside the object.

To flip an object

1 Select an object.

2 Hold down **Ctrl**, and drag a middle handle on the highlighting box across the object, past the middle handle on the opposite side.

3 Click the **Apply** button ⬛ on the extended property bar ⏩.

   If you want to cancel the transformation, double-click outside the object.

To skew an object

1 Select an object.

2 Click the **Skew mode** button ⬜ on the property bar.

3 Drag a skewing handle on the highlighting box.

4 Click the **Apply** button ⬛ on the extended property bar ⏩.

   If you want to cancel the transformation, double-click outside the object.

To distort an object

1 Select an object.

2 Click the **Distort mode** button ⬚ on the property bar.

3   Drag a distortion handle on the highlighting box.

4   Click the **Apply** button ⊛ on the extended property bar ⧐.

    If you want to cancel the transformation, double-click outside the object.

To apply perspective to an object

1   Select an object.

2   Click the **Perspective mode** button ⬚ on the property bar.

3   Drag a perspective handle on the highlighting box.

4   Click the **Apply** button ⊛ on the extended property bar ⧐.

    If you want to cancel the transformation, double-click outside the object.

Changing the edges of objects

You can adjust the appearance of an object by changing the characteristics of its edges. You can blend the edges of an object with the background by feathering, defringing, and removing black and white edges. To emphasize a certain object in an image, you can define its edges by sharpening them.

Feathering

Feathering softens the edges of an object by gradually increasing the transparency of the edge pixels. You can specify the width of the feathered section of the object and the transparency gradient you want to use.

The object on the right has been feathered to soften its edges.

Defringing

An object created from an editable area sometimes includes stray pixels along its edges. This is apparent when the editable area is surrounded by pixels of a different brightness or color. Defringing replaces the color of the stray pixels with a color from the object so that the object blends with the background.

Removing black or white object edges

You can remove black or white edges from a feathered object by making pixels along the edges more transparent or more opaque.

Sharpening

Sharpening defines the edges of an object by making the edges crisp. The edges become sharper as the pixels below the threshold become transparent and the pixels within the threshold become opaque.

The object on the right has been sharpened to define its edges and make them more crisp.

Changing the appearance of the object marquee

You can customize the appearance of the object marquee by changing its color and threshold value. Changing the marquee threshold value modifies the location of the visual boundary of the active object. You can also change the color of the object marquee to make it more visible against the image background.

To feather the edges of an object

1   Select an object.

2   Click **Object ▸ Feather**.

3   Type a value in the **Width** box.

4   From the **Edges** list box, choose one of the following:
    • **Linear** — changes the edge transparency in even increments from the beginning
      to the end of the feathered section
    • **Curved** — results in small transparency increments at the beginning of the
      feathered edge, larger transparency increments in the middle, and small
      transparency increments at the end

    If you want to view the effect in the image window, click **Preview** 🖻.

To defringe an object

1   Select an object.

2   Click **Object ▸ Matting ▸ Defringe**.

3   Type a value in the **Width** box.

    Higher values create a more gradual transition between the edges of the object and
    the background.

To remove black or white edges from an object

1   Select an object.

2   Click **Object ▸ Matting**, and click one of the following:
    • **Remove black matte** — makes edge pixels more transparent
    • **Remove white matte** — makes edge pixels more opaque

To sharpen the edges of an object

1   Select an object.

2   Click **Object ▸ Matting ▸ Threshold**.

3   Type a value from 1 to 255 in the **Level** box.

    Higher values include fewer semitransparent pixels.

To change the object marquee

1   Click **Tools ▸ Options**.

2   In the **Workspace** list of categories, click **Display**.

3   Type a value from 1 to 255 in the **Object threshold** box.

Lower values enclose more of the object's pixels.

4   Open the **Object marquee** color picker, and click a color.

When you change the threshold value of the object marquee, the area enclosed by the marquee changes, but the object itself does not change. Pixels that are not completely opaque can lie outside the marquee even though they are still part of the object.

Adding drop shadows to objects

There are three types of drop shadows: glow, flat, and perspective. Glow drop shadows silhouette objects and are centered horizontally and vertically; they simulate a light source shining straight onto an object. Flat drop shadows simulate the effect of directional light, so shadows are offset. Perspective drop shadows create three-dimensional depth. You can add a drop shadow to any object, including text.

The object on the left has a flat drop shadow, while the object on the right has a perspective drop shadow.

You can create and adjust drop shadows interactively in the image window. You can also change the color, position, direction, and transparency of a drop shadow directly in the image window.

You can also apply preset drop shadows. When you apply a preset, you can modify it to create a custom drop shadow. For example, you can change its direction and distance from an object, its color, and its opacity. By default, the edges of drop shadows feature squared feathering. You can choose another feathering type, such as a Gaussian blur

which creates a realistic-looking drop shadow. You can also copy a custom drop shadow or save it as a preset.

When you change the shape or transparency of an object that has a drop shadow, the drop shadow automatically also changes.

To add an interactive drop shadow

1 Open the **Interactive/Transparency** flyout ⊞ ▣ ⅋ ⅋ ⅋ , and click the **Interactive dropshadow** tool ▣.

2 Select an object.

If you want to create a flat drop shadow, drag from the center of the object

If you want to create a perspective drop shadow, drag from the edge of an object.

You can also

Change the color of the drop shadow	Drag a color swatch from the color palette to the end node on the drop shadow arrow.
Move the drop shadow	Drag the start node on the drop shadow arrow.
Change the direction of the drop shadow	Drag the drop shadow arrow head.
Adjust the drop shadow's opacity	Drag the triangular **Transparency** handle on the drop shadow arrow.
Adjust the edge feathering	Drag the triangular **Feather** handle on the drop shadow arrow. By default, squared feathering is used, but you can choose another type from the **Shadow feather edge** picker ▣ on the extended property bar ▣ . For example, the Gaussian blur creates a realistic drop shadow.

To add a preset or custom drop shadow

1 Open the **Interactive/Transparency** flyout ⊞ ▣ ⅋ ⅋ ⅋ , and click the **Interactive dropshadow** tool ▣.

2 Select an object.

3 Choose a preset from the **Preset** list box on the property bar.

4 Open the **Shadow color** picker on the property bar, and click a color.

5 On the extended property bar 🔽, type values in any of the following boxes:
   • **Shadow direction** — lets you specify the angle of the shadow in relation to the object
   • **Shadow offset** — lets you specify the distance of the shadow from the object's point of origin
   • **Shadow fade** — lets you specify the percentage by which a perspective drop shadow fades as it moves away from the object
   • **Shadow stretch** — lets you specify the length of a perspective shadow
   • **Shadow transparency** — lets you specify the transparency of the shadow
   • **Shadow feather** — lets you specify the number of pixels on the edge of the shadow that are feathered to create a soft edge. By default, squared feathering is used, but you can choose another type from the **Shadow feather edge** picker 🔲 on the extended property bar. For example, if you want to create a realistic drop shadow, choose the Gaussian blur. You can also specify a direction for the feathered pixels from the **Shadow feather direction** picker 🔳.

To copy a drop shadow

1 Select the object to which you want to apply a drop shadow.

2 Open the **Interactive/Transparency** flyout ▎ 🔲 🖋 🖋 🖋 ▎, and click the **Interactive dropshadow** tool 🔲.

3 Click the **Copy shadow properties** button 🔲 on the extended property bar 🔽.

4 Click the object that has the drop shadow properties you want to copy.

From here

For more information about	In the Help index, see...
Removing black or white edges from an object	objects, changing edges
Changing the object marquee	object marquee, customizing
Using clip masks to change object transparency	transparency, using clip masks

Creating images for the Web

Corel PHOTO-PAINT gives you the tools you need to create images for the World Wide Web.

In this section, you'll learn about

- exporting and optimizing images for the Web
- creating and editing rollovers

Exporting and optimizing images for the Web

In Corel PHOTO-PAINT, you can export and optimize images for the Web.

Exporting images

Before you use an image on the Web, you must export it to a Web-compatible file format, such as the GIF or JPEG format. The GIF file format is best for line drawings, text, and images with sharp edges or few colors, while the JPEG file format is suitable for photos. For information about these file formats and alternatives, see "Choosing a Web-compatible file format" in the Help.

Optimizing images

You can also optimize an image for the Web before you export it to adjust its display quality and file size. In Corel PHOTO-PAINT, you can preview an image with up to four different configurations of settings. You can compare file formats, preset settings, download speeds, compression, file size, image quality, and color range. You can also examine previews by zooming and panning within the preview windows.

Corel PHOTO-PAINT provides preset settings, but you can edit these presets, and add and delete custom presets. Once you specify the settings you want for all of the preview areas, you can save the settings for the entire optimization dialog box.
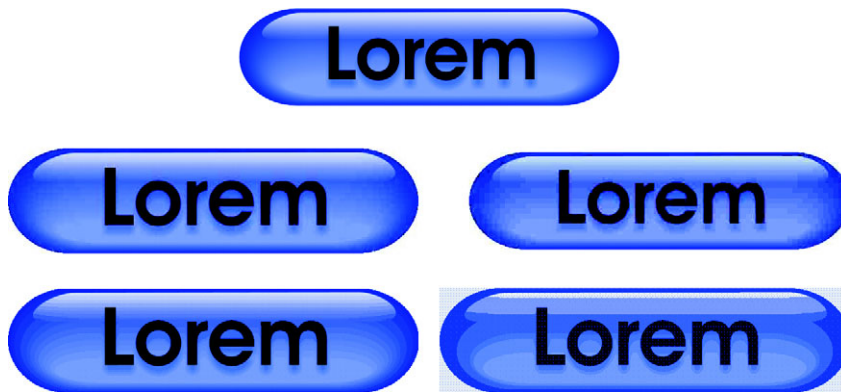
The Web image optimizer lets you preview an image in different Web-compatible file formats.

To export an image for the Web

1   Click **File ▶ Export for Web**.

2   Choose the folder where you want to save the file.

3   Type a filename in the **Filename** box.

4   Disable the **Slices** check box.

5   Choose a file format from the **Save as type** list box.

6   Enable the **Images only** option.

7   Click **Save**.

8   In the export dialog box for the chosen file format, specify the settings you want.

To optimize and export an image for the Web

1   Click **File ▶ Web image optimizer**.

2   Below the image preview windows, choose from the following list boxes:
    • **File type**
    • **Web preset**

    If you want the image previews, download speeds, compression percentages, file sizes, and color palettes to update automatically, ensure that **Preview** is enabled.

3   Choose an option from each of the list boxes below an image preview window to select the file format to which you want to save.

    A red border indicates the selected format.

4   Click **OK**.

5   In the **Save Web image to disk** dialog box, type a filename in the **Filename** box.

6   Choose the folder where you want to save the image.

7   Click **Save**.

You can also

Increase the number of preview areas	In the top right corner, click one of the preview area display buttons.
Pan to another section of the image	Drag in the first preview window.
Zoom in	Choose a magnification level from the **Zoom level** list box.
Edit preset settings for a single preview area	Click **Advanced** in one of the preview areas. In the **Export** dialog box, customize the preset options. If you select **GIF** or **PNG8** file formats, you can modify the color palette and settings in the **Convert to paletted** dialog box.
Save the current configuration of settings for a preview area	Click the **Save settings** button 🖫 for each area where you want to save the settings.
Save a custom preset	Click **Add** ⊞.
Delete a custom preset	Click **Delete** ⊟.
Preview the file download time for a particular connection speed	Choose a speed from the **Connection speed** list box.

You can compare file types with the original image by selecting **Original** file type in one of the preview panes.

Creating and editing rollovers

A rollover is an interactive image that changes in appearance when you click or point to it. For example, you can make a button change color when it is clicked, or display text when you point to it. Rollovers are frequently used on Web pages as navigation buttons.

Creating rollovers

Rollover are made using objects, such as shapes, brush strokes and text. You can use a single object or a group of objects, such as an ellipse with text on it. Rollovers consist of the following states:

- **Normal** — displays the default state
- **Over** — is triggered when you point to it
- **Down** — is triggered when you click it

Each state consists of an object or multiple objects.
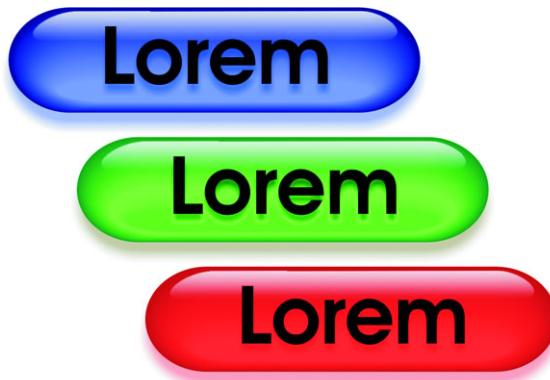
The three states of a rollover: normal, over, and down

You can assign properties to a rollover, such as a Web address that opens when you click a rollover, and alternate text that displays when you point to it. You can specify a target for the down state which determines how a Web page opens in a browser window. You can also add sound to the over and down rollover states, which will play when these rollover states are activated.

Editing rollover objects

You can edit rollover states by adding, modifying and removing objects in each state. When you create a rollover, the original objects are copied to the normal, over, and down states. Adding an object to a rollover state adds the object to all states. However, any changes you make to an object are applied only to the current state. For example, you can use different text for the over state by replacing the original text in that state.

If you want to create a rollover using an editable area or the background, they must first be converted to objects. For more information about defining editable areas, see "Masking" on page 413.

When you create a rollover, the image is sliced, and the rollover becomes a slice. For more information on working with image slices, and exporting and optimizing sliced images, see "Slicing images" in the Help.

To create a rollover

1   Select one or more objects.

    When you create a rollover, the original objects are destroyed. If you want to retain the original objects, save them before you create a rollover.

2   Click **Web ▸ Create rollover from object**.

3   In the **Rollover** docker, set any of the following properties for the rollover:
    • **URL** — specifies an address, or URL, for a Web page.
    • **ALT** — specifies the alternate text that displays when you point to a rollover.

4   Choose one of the following rollover states from the **States** list box:
    • **Normal**
    • **Over**
    • **Down**

5   Edit the selected rollover state by adding, removing, and modifying objects.

6   Click the **Finish editing** button.

    Each state retains its component objects, so you can continue to edit the rollover.

You can also

Add sound to a rollover state	In the **Sound** box, type a filename of the sound you want to play when the selected state is triggered. You can also click the **Browse** button to locate and choose the sound file.
Specify the target frame or browser window for the URL	Click a target type in the **Target** list box: **_self** opens the URL in the current frame, **_blank** opens the URL in a new browser window, **_top** opens the URL in the root frame of the browser, **_parent** opens the URL in the highest level frame.
Preview a rollover in a browser	In the **Rollover** docker, click the **Preview in browser** button.

You can also

Create a new rollover	Click the **Create rollover from object** button 🔘.

✍ In the **Objects** docker, rollover objects are highlighted, grouped, and have a **Rollover object** icon ⊙ to the right of the object name. The **Text rollover object** icon ⊙ ⚠ indicates that the rollover object is text.

In the **Objects** docker, the **Rollover object** icon turns red when a rollover overlaps another rollover. Overlapping rollovers cannot be exported. You must move the rollover so it no longer overlaps with another rollover object.

To edit a rollover

1 In the **Objects** docker, select a rollover.

   Rollovers have **Rollover object** icons ⊙ to the right of their object names.

   If the **Objects** docker is not open, click **Window ▶ Dockers ▶ Objects**.

2 Click **Web ▶ Edit rollover**.

3 In the **Rollover** docker, choose one of the following rollover states from the **States** list box:
   • **Normal**
   • **Over**
   • **Down**

4 Edit the rollover state by adding, removing, and modifying objects.

5 Click the **Finish editing** button 🔘.

You can also

Return a state to the current Normal state, so you can start over again	Click **Reset**.
Return all states in a rollover to simple objects	Click **Web ▶ Extract rollover**.

✍ When you extract a rollover to simple objects, the component objects are named automatically.

It is not possible to edit two rollovers at the same time.

You can edit a rollover by double-clicking it in the image window.

You can also edit a rollover by clicking the **Edit rollover** button in the **Rollover** docker.

To add an object to a rollover

1 In the **Rollover** docker, choose one of the following rollover states from the **States** list box:
   - **Normal**
   - **Over**
   - **Down**
2 Open the **Shape** flyout , and click a shape tool.
3 Drag in the image window to create a shape.

   The object is added to all rollover states.

You can also

Add brush strokes	Open the **Brush** flyout , click the **Paint** tool , and drag in the image window to create a brush stroke.
Add text	Click the **Text** tool , click in the image window, and type the text.

For more information about adding shapes and brush strokes, see "Working with objects" on page 447. For more information about adding text, see "Working with text" in the Help.

All brush strokes are added to the active object by default. You can also create an object by clicking the **New object** button in the **Objects** docker. If the **Objects** docker is not open, click **Window ▶ Dockers ▶ Objects**.

To modify an object in the current rollover state

1 In the **Rollover** docker, choose one of the following rollover states from the **States** list box:

- **Normal**
- **Over**
- **Down**

2 In the **Objects** docker, select the object you want to modify.

If the **Objects** docker is not open, click **Window ▶ Dockers ▶ Objects**.

3 Modify the object.

The changes apply only to the object in the current state.

A rollover can display different text in each of the normal, over and down states. To edit text in a rollover, click the **Text** tool Ⓐ, point to the text until the pointer becomes a cursor, and select the text. Type new text to replace the current text.

To remove an object from the current rollover state

1 In the **Rollover** docker, choose one of the following rollover states from the **States** list box:
- **Normal**
- **Over**
- **Down**

2 In the **Objects** docker, select the object you want to remove.

3 Double-click the **Eraser** tool 🖉.

The object is removed only from the current state.

From here

For more information about	In the Help index, see...
E-mailing images	e-mail, sending images
Choosing a Web-compatible file format	file formats, Web-compatible
Slicing images	slicing, images for the Web
E-mailing images	e-mail, sending images
Choosing a Web-compatible file format	file formats, Web-compatible

Saving and closing

In Corel PHOTO-PAINT, you can save your work as you create and edit an image and before you close it. You can also save images to many different file formats.

In this section, you'll learn about

- saving images
- exporting images to other file formats
- closing images

Saving images

You can save an image to preserve it. You can also save images automatically at regular intervals and save backup copies of the file.

When you save an image, you can specify a file format, a filename, and a folder where you want to save the file. Images are automatically saved using the currently selected file format, name, and location. The default format is the native Corel PHOTO-PAINT (CPT) file format. Saving to the Corel PHOTO-PAINT (CPT) file format retains all image properties — objects, the most recently created mask, alpha channels, grids, guidelines, and color information — so you can edit them later.

To save an image

1   Click **File ▶ Save as**.
2   Choose the folder where you want to save the file.
3   Choose a file format from the **Save as type** list box.
4   Type a filename in the **Filename** list box.

    The file extension for the file format you choose is appended to the filename automatically, but can be removed.

5   Click **Options**.
6   Enable any of the following active check boxes:

- **Selected only** — saves only the editable areas defined in your image, when there are no active and selected objects. If there are no editable areas, this option saves only the active and selected objects.
- **Web_safe_filenames** — replaces the white space in a filename with an underscore. Special characters are replaced by characters suitable for Web-based filenames.
- **Do not show filter dialog** — suppresses dialog boxes that provide other options when exporting

7 Click **Save**.

You can also

Compress a file	Choose a compression type from the **Compression type** list box.
Save a file in a new folder	Click **New**, type a name in the **Name of new folder** box, and click **Create**.
Specify information about a file	Type any comments you want in the **Notes** box.

When you save an image containing objects to a file format that does not support objects, you can continue working on the original file (which still contains the objects) in the image window. The image and its objects can still be saved to the Corel PHOTO-PAINT (CPT) format.

You can also save an image by clicking the **Save** button 🖻 on the standard toolbar.

You can add notes to an image when you save it by typing text in the **Notes** box. You can view notes in the **Notes** box in the **Open** dialog box when you open an image, or in the **Import** dialog box when you import an image. Some file formats do not let you save annotations with an image.

Exporting images to other file formats

You can export Corel PHOTO-PAINT images to a variety of file formats. The file format you choose depends on how you want to use the image in the future. However, when you export an image to another file format, you may lose some image properties;

each file format has its own idiosyncrasies and appropriate use. For example, if you want to work on an image in another image editing application, you can export it to the Adobe Photoshop (PSD) file format. You retain many image properties, such as objects and masks, so you can continue to edit the image. If you want to share an image, the Tagged Image File Format (TIFF) or the Windows bitmap (BMP) file format are suitable because they are standard formats; images in these formats can be opened in most image viewers and most image editing and desktop publishing applications.

You can also export a file so that it is optimized for use with a suite of office productivity applications, such as Microsoft Office or WordPerfect Office.

For information about the image properties supported by file formats, consult the technical notes for each file format in "File formats" in the Help.

To export an image to another file format

1   Click **File ▶ Export**.

2   Choose the folder where you want to save the file.

3   Choose a file format from the **Files of type** list box.

4   Type a filename in the **File name** list box.

    The file extension for the file format you choose is appended to the filename automatically, but can be removed.

5   Click **Options**.

6   Enable any of the following active check boxes:
    • **Selected only** — saves only the editable areas defined on your image, when there are no active and selected objects. If there are no editable areas, this option saves only the active and selected objects.
    • **Web_safe_filenames** — replaces the white space in a filename with an underscore. Special characters are replaced by characters suitable for Web-based filenames.
    • **Do not show filter dialog** — suppresses dialog boxes that provide other options when exporting

7   Click **Save**.

To compress an image while exporting, choose a compression type from the **Compression type** list box.

To export an image to Microsoft Office or WordPerfect Office

1   Click **File ▶ Export for Office**.

2   From the **Export to** list box, choose one of the following:
    - **Microsoft Office**
    - **WordPerfect Office**

3   Click **OK**.

4   Locate the folder where you want to save the file.

5   Type a filename in the **File name** list box.

6   Click **Save**.

Images are exported at 96 DPI with color management settings unchanged.

Layers in an image are flattened when exported to Microsoft Office or WordPerfect Office.

Closing images

You can close an image or all images at any time. If you close images without saving them, your work is lost.

To close an image

To close	Do the following
An image	Click **File ▶ Close**.
All images	Click **Window ▶ Close all**.

Managing color for display, input, and output
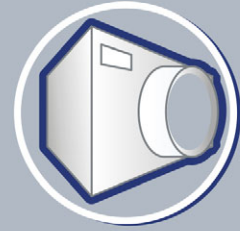
You may find that the colors displayed on your monitor don't match the colors of a scanned image or of a printer's output. Color management lets you reproduce colors accurately by using color profiles and by correcting colors for display.

In this section, you'll learn about

- working with color profiles
- choosing advanced color management settings
- correcting colors for display

Working with color profiles

A color management system helps you achieve accurate colors across a variety of devices consistently. The first stage in setting up your color management system is to choose color profiles for your monitor and each of the devices you use, such as scanners, digital cameras, and printers.

Understanding color management

Each device has a range of colors, or color space, that it uses. For example, a monitor displays a different set of colors than a printer reproduces. So, you may see some colors on the screen that cannot be printed.

You can use a color management system to translate colors from one device to another. Color profiles define the color space for your monitor and for the input and output devices you use.

Choosing color profiles

Different brands and models of monitors, scanners, digital cameras, and printers have different color spaces, and thus require different color profiles. Some widely used profiles are installed with your application.

Standard ICC (International Color Consortium) color profiles are used in your application. You can choose color profiles for a:

- monitor
- scanner/digital camera
- composite printer
- separations printer
- internal RGB color space

Obtaining additional color profiles

If you need additional profiles or updates, you can get them from the application CD, or you can download them. You can access other color profiles.

To choose a color profile

1 Click **Tools ▶ Color management**.
2 Click a profile name under one of the following icons:
   - **Scanner/digital camera**
   - **Separations printer**
   - **Monitor**
   - **Composite printer**
   - **Internal RGB**
3 Choose a profile from the list box.

By default, color profiles are stored in the application's **Color** folder.

To copy a color profile from the CD

1 Click **Tools ▶ Color management**.
2 Below a device icon, click a color profile list box, and choose **Get profile from disk**.
3 Insert the application CD.
4 In the **Browse for folder** dialog box, choose the folder where the profiles are located.

If you want to load color profiles that you have stored in a different location, such as on a network or on your hard disk, you can choose the folder where the profiles are located.

5   In the **Install from disk** dialog box, choose the color profile you want to copy.

6   Click **Choose**.

To download a color profile

1   Click **Tools ▶ Color management**.

2   Below a device icon, click a color profile list box, and choose **Download profiles**.

3   In the dialog box, enable the check box for each profile you want to download.

4   Click **Download**.

5   In the **Save as** dialog box, choose a destination for the color profile.

6   If you want to store the new color profile with the existing profiles, download it to the application's **Color** folder.

You can also

Choose a different profile type	Click the **Profile type** list box, and choose a type.
Specify your connection speed	Click the **Connection speed** list box, and choose a speed. The faster your connection speed, the shorter the download time.
Update the profiles list	Click **Refresh**.
Return to the main **Color management** dialog box	Click **Cancel**.

Choosing advanced color management settings

Once you choose color profiles, the color management system uses a Color Matching Module (CMM) to match colors between devices as closely as possible. Your application uses the Kodak Color Management System by default. You can also choose different rendering intents, which control how the color management system converts colors between different color spaces.

To choose a color engine and rendering intent

1 Click **Tools ▶ Color management**.

2 Click on the **Internal RGB** 🌐.

3 In the **Advanced settings** dialog box, from the **Rendering intent** list box, choose one of the following:
   • **Absolute colorimetric** — preserves the white point throughout conversion
   • **Automatic** — default setting, which uses saturation for vector graphics and perceptual for bitmaps
   • **Perceptual** — good for a variety of images, especially bitmaps and photographic images
   • **Relative colorimetric** — good for producing proofs on inkjet printers
   • **Saturation** — good for vector graphics (lines, text, and solid colored objects)

4 Choose an option from the **Color engine** list box.

Correcting colors for display

You can correct colors so that they display as accurately as possible on screen. If you correct only the display colors, the colors are shown according to the internal RGB, and monitor color profiles.

If you display colors as they will print, on-screen colors simulate output using the Internal RGB, monitor, and printer color profiles. Simulating printer output may cause on-screen colors to appear dull.

To correct colors for display

• Click **Tools ▶ Color management**.

✎
  Arrows appear orange when they are turned on, and grayed and broken when they are turned off.

  The display simulation of a separations printer on a composite printer does not affect output.

Printing

Corel PHOTO-PAINT provides extensive options for printing your work.

In this section, you'll learn about

- printing your work
- laying out print jobs
- previewing print jobs

Printing your work

In the Corel PHOTO-PAINT application, you can print one or more copies of the same image. You can specify whether to print the current image or specific images. Before printing an image, you can specify printer properties, including paper size and device options.

To set printer properties

1 Click **File ▶ Print**.

2 Click the **General** tab.

3 Click **Properties**.

4 Set any properties in the dialog box.

To print your work

1 Click **File ▶ Print**.

2 Click the **General** tab.

3 Choose a printer from the **Name** list box.

4 Type a value in the **Number of copies** box.

   If you want the copies collated, enable the **Collate** check box.

5 Enable one of the following options:

- **Current document** — prints the active drawing
- **Current page** — prints the active page
- **Pages** — prints the pages that you specify
- **Documents** — prints the documents that you specify

The **Collate** check box is available only for documents with more than one page.

Laying out print jobs

You can lay out a print job by specifying the size, position, and scale. Tiling a print job prints portions of each page on separate sheets of paper that you can assemble into one sheet. You would, for example, tile a print job that is larger than your printer paper.

If the orientation of a print job differs from the orientation specified in the printer properties, a message prompts you to adjust the paper orientation of the printing device. You can disable this prompt, so that the printer adjusts paper orientation automatically.

To specify the size and position of a print job

1 Click **File ▶ Print**.
2 Click the **Layout** tab.
3 Enable one of the following options:
    - **As in document** — maintains the image size, as it is in the document
    - **Fit to page** — sizes and positions the print job to fit to a printed page
    - **Reposition images to** — lets you reposition the print job by choosing a position from the list box

Enabling the **Reposition images to** option lets you specify size, position, and scale in the corresponding boxes.

To tile a print job

1 Click **File ▶ Print**.
2 Click the **Layout** tab.
3 Enable the **Print tiled pages** check box.

4   Type values in the following boxes:
    - **Tile overlap** — lets you specify the number of inches by which to overlap tiles
    - **% of page width** — lets you specify the percentage of the page width the tiles will occupy

Enable the **Tiling marks** check box to include tiling alignment marks.

To change the page orientation prompt

1   Click **Tools ▶ Options**.

2   In the list of categories, double-click **Global**, and click **Printing**.

3   Choose **Page orientation prompt** from the **Option** list.

4   Choose one of the following from the **Setting** list box:
    - **Off — always match orientation**
    - **On — ask if orientations differ**
    - **Off — don't change orientation**

Previewing print jobs

You can preview your work to show how the position and size of the print job will appear on paper. For a detailed view, you can zoom in on an area. You can view how the individual color separations will appear when printed. You can also increase the speed of a print preview by hiding the graphics.

Before printing your work, you can view a summary of issues for a print job to find potential printing problems. For example, you can check the current print job for print errors, possible print problems, and suggestions for resolving issues.

To preview a print job

- Click **File ▶ Print preview**.

You can quickly preview a print job in the **Print** dialog box by clicking **File ▶ Print**, and clicking the **Mini preview** button [▶].

To magnify the preview page

1   Click **File ▶ Print preview**.

2   Click **View ▸ Zoom**.

3   Enable the **Percent** option, and type a value in the box.

🔆   You can also magnify the preview page by choosing a preset zoom level.

You can also zoom in on a portion of the print preview by clicking the **Zoom** tool 🔍 in the toolbox and marquee selecting an area.

To preview color separations

1   Click **File ▸ Print preview**.

2   On the property bar, click the **Enable color separations** button 🖺.

🔆   You can preview the composite by clicking **View ▸ Preview separations ▸ Composite**.

To hide or display graphics

1   Click **File ▸ Print preview**.

2   Click **View ▸ Show image**.

A check mark beside the menu command name indicates that graphics are displayed.

✍   When the **Show image** menu command is disabled, the print job is represented by a bounding box that you can use to position and size the job.

To view a summary of issues for a print job

1   Click **File ▸ Print**.

2   Click the **Issues** tab.

If you don't want Preflight to check for certain issues, click **Settings**, double-click **Printing**, and disable any check boxes that correspond to issues you want overlooked.

🔆   You can save settings by clicking the **Add preflight settings** button ⊞ and typing a name in the **Save preflight style** box.

CorelDRAW®
Graphics Suite 12

Glossary

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

A

accelerator table

A file that contains a list of shortcut keys. Different tables are active depending on the task that you are performing.

active object

An object that has a red border around its thumbnail in the Objects docker.

add-in

A separate module that extends the functionality of an application.

alpha channel

A temporary storage area for masks. When you save a mask to an alpha channel, you can access and reuse it in the image as many times as you want. You can save an alpha channel to a file or load a previously saved channel in the active image.

ambient lighting

The lighting in a room, including natural and artificial light sources.

anchor point

The point that remains stationary when you stretch, scale, mirror, or skew an object. Anchor points correspond to the eight handles that display when an object is selected, as well as the center of a selection box marked by an X.

animation

An animated object or objects. An animation consists of a succession of frames and can be an entire Corel R.A.V.E. movie or part of a movie.

animation file

A file that supports moving images; for example, animated GIF and QuickTime (MOV).

anti-aliasing

A method of smoothing curved and diagonal edges in images. Intermediate pixels along edges are filled to smooth the transition between the edges and the surrounding area.

arrow keys

Direction keys that move or "nudge" selected objects in small increments. You can also use arrow keys to position the cursor when you type or edit text onscreen or in a dialog box.

artistic text

A type of text created with the Text tool. Use artistic text to add short lines of text, such as titles, or to apply graphic effects, such as fitting text to a path, creating extrusions and blends, and creating all other special effects. An artistic text object can contain up to 32,000 characters.

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.

audio object

A sound file imported into a movie project.

B

base color

The color of the object that appears under a transparency. The base color and the color of the transparency combine in various ways depending on the merge mode you apply to the transparency.

behavior

A command that is executed either when a movie reaches a certain point (for a behavior applied to a frame), or when the user interacts with an object (for a behavior applied to a rollover state). Behaviors let you create more complex and interactive movies. For example, you can start and stop movies, jump to other parts of a movie, load additional movies, and control sound.

Bézier line

A straight or curved line made up of segments connected by nodes. Each node has control points that allow the shape of the line to be modified.

bit depth

The number of binary bits that define the shade or color of each pixel in a bitmap. For example, a pixel in a black-and-white image has a depth of 1 bit, because it can only be black or white. The number of color values that a given bit depth can produce is equal to 2 to the power of the bit depth.

bitmap

An image composed of grids of pixels or dots.

See also vector graphic.

bitmap fill

A fill created from any bitmap.

black-and-white color mode

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

bleed

The part of the printed image that extends beyond the edge of the page. The bleed ensures that the final image goes right to the edge of the paper after binding and trimming.

blend

An effect created by transforming one object into another through a progression of shapes and colors.

bookmark

An indicator for marking an address on the Internet.

bounding box

The invisible box indicated by the eight selection handles surrounding a selected object.

button

An interactive object or group of objects that changes its appearance or executes a behavior when you click or point to it.

See also rollover.

brightness

The amount of light that is transmitted or reflected from a given pixel. In the HSB color mode, brightness is a measure of how much white a color contains. For example, a brightness value of 0 produces black, and a brightness value of 255 produces white.

C

calligraphic angle

The angle that controls the orientation of a pen to the drawing surface, like the slant of the nib on a calligraphy pen. A line drawn at the calligraphic angle has little or no thickness, but widens as its angle gets farther from the calligraphic angle.

cascading style sheet (CSS)

An extension to HTML that allows styles such as color, font, and size to be specified for parts of a hypertext document. Style information can be shared by multiple HTML files.

See also HTML.

center of rotation

The point around which an object rotates.

CERN

CERN (Conseil Europeén pour la Recherche Nucléaire) is the scientific laboratory in which the World Wide Web was developed. CERN is also one of the World Wide Web server systems. Contact your server administrator to find out which system your server uses.

CGI script

An external application that is executed by an HTTP server in response to an action you perform in a Web browser, such as clicking a link, image, or another interactive element of a Web page

channel

An 8-bit grayscale image that stores color or mask information for another image. There are two types of channels: color and mask. Images have one color channel for each component of the color model on which they are based. Each channel contains the color information for that component. Mask (alpha) channels store masks that you create for your images and can be saved with images in formats that support mask information, for example, Corel PHOTO-PAINT (CPT).

character

A letter, number, punctuation mark, or other symbol.

child color

A color style created as a shade of another color style. For most of the available color models and palettes, child colors share the same hue as the parent, but have different saturation and brightness levels.

See also parent color.

child object

An object whose image elements are inserted into the shape of another object, called a parent object. The child object and parent object are called a clipping group. The child object must be on a layer above the parent object.

choke

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

client/server image map

A rarely used image map type that includes code for both client-side and server-side image maps. This type of image map automatically defaults to the user's Web browser for image map processing. If the browser does not support image maps, the server uses the external map file to process information. Currently, most Web browsers support image maps, so client-side image maps are more common.

client-side image map

This common image map type does not depend on the server to process the map information.

clipart

Ready-made images that can be imported into Corel applications and edited if required.

Clipboard

An area that is used to temporarily store cut or copied information. The information is stored until new information is cut or copied to the Clipboard, replacing the old.

clip mask

A mask that lets you edit an object's transparency levels without affecting the pixels in the object. You can change the transparency levels directly on the object and then add the clip mask, or add the clip mask before making the changes.

clipping range

The percentage of the range of values that is not displayed in the upper part of the histogram's vertical axis.

clone

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

See also symbol.

closed object

An object defined by a path whose start point and end point are connected.

closed path

A path whose start point and end point are connected.

CMY

A color mode made up of cyan (C), magenta (M), and yellow (Y). This mode is used in the three-color printing process.

CMYK

A color mode made up of cyan (C), magenta (M), yellow (Y), and black (K). CMYK printing produces true blacks and a wide tonal range. In the CMYK color mode, color values are expressed as percentages; therefore, a value of 100 for an ink means that the ink is applied at full saturation.

code page

A code page is a table in the DOS or Windows operating system that defines which ASCII or ANSI character set is used for displaying text. Different character sets are used for different languages.

color channel

An 8-bit grayscale version of an image. Each channel represents one level of color in the image; for example, RGB has three color channels, while CMYK has four. When all the channels are printed together, they produce the entire range of colors in the image.

See also RGB and CMYK.

color gamut

The range of colors that can be reproduced or perceived by any device. For example, a monitor displays a different color gamut than a printer, making it necessary to manage colors from original images to final output.

color mode

A system that defines the number and kind of colors that make up an image. Black-and-white, grayscale, RGB, CMYK, and paletted are examples of color modes.

color model

A simple color chart that defines the range of colors displayed in a color mode. RGB (red, green, blue), CMY (cyan, magenta, yellow), CMYK (cyan, magenta, yellow, black), HSB (hue, saturation, brightness), HLS (hue, lightness, saturation), and CIE L*a*b (Lab) are examples of color models.

color palette

A collection of solid colors from which you can choose colors for fills and outlines.

color profile

A description of the color-handling capabilities and characteristics of a device.

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 cyan, magenta, yellow, and black) must be made.

color space

In electronic color management, a virtual representation of a device or the color gamut of a color model. The boundaries and contours of a device's color space are mapped by color management software.

See also color gamut.

color swatch

A solid-colored patch in a color palette.

color tolerance

The value that determines the color range or sensitivity of the Lasso mask tool, Magic wand mask tool, and Fill tool. Tolerance is also used in the Color mask dialog box to

determine which pixels are protected when you create a color mask. A pixel is included in the specified color range if its grayscale value falls within the defined tolerance.

color value

A set of numbers that define a color in a color mode. For example, in the RGB color mode, color values of 255 for red (R) and zero for both green (G) and blue (B) result in the color red.

combined object

An object created by combining two or more objects and converting them into a single curve object. A combined object takes on the fill and outline attributes of the last selected object. Sections where an even number of objects overlapped have no fill. Sections where an odd number of objects overlapped are filled. The outlines of the original objects remain visible.

compound blend

A blend created by blending the start or end object of one blend with another object.

compound tween

A tween consisting of three or more keyframes. The timeline of a compound tween consists of two or more timeline sections.

concave

Hollowed or rounded inward like the inside of a bowl.

content

The object or objects that appear inside a container object when you apply PowerClip effects.

contour

An effect created by adding evenly spaced concentric shapes inside or outside the borders of an object.

contrast

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

control object

The original object used to create effects such as envelopes, extrusions, drop shadows, contours, and objects created with the Artistic media tool. Changes made to the control object control the appearance of the effect.

control points

The points that extend from a node along a curve that is being edited with the Shape tool. Control points determine the angle at which the curve passes through the node.

convex

Curved or rounded outwards like the exterior of a sphere or circle.

crop

To cut unwanted areas of an image without affecting the resolution of the part that remains.

cubist

An abstract style of art that stresses several aspects of the same object simultaneously, generally in the form of squares or cubes.

curve object

An object that has nodes and control points, which you can manipulate to change the object's shape. A curve object can be any shape, including a straight or curved line.

D

desktop

The area in a drawing where you can experiment and create objects for future use. This area is outside the borders of the drawing page. You can drag objects from the desktop area to the drawing page when you decide to use them.

diacritical mark

An accent mark above, below, or through a written character; for example, the acute (é) and cedilla (ç) accents.

dimension line

A line that displays the size of objects or the distance or angle between objects.

distortion handles

The outward-facing, double-headed arrows located at each corner of the highlighting box.

dithering

A process used to simulate a greater number of colors when only a limited number of colors is available.

document navigator

The area at the bottom-left of the application window that contains controls for moving between pages and adding pages. The document navigator also displays the page number of the active page and the total number of pages in a drawing.

dpi (dots per inch)

A measure of a printer's resolution in dots per inch. Typical desktop laser printers print at 600 dpi. Image setters print at 1270 or 2540 dpi. Printers with higher dpi capabilities produce smoother and cleaner output. The term dpi is also used to measure scanning resolution and to indicate bitmap resolution.

drawing

A document you create in CorelDRAW.

drawing page

The portion of a drawing window enclosed by a rectangle with a shadow effect.

drawing window

The portion of the application window on which you can create, add, and edit objects.

drop shadow

A three-dimensional shadow effect that gives objects a realistic appearance.

duotone

An 8-bit color mode that displays images using 256 shades of up to four tones. An image in the duotone color mode is simply a grayscale image that has been enhanced with one to four additional colors.

dynamic guides

Temporary guidelines that appear from the following snap points in objects — center, node, quadrant, and text baseline.

E

editable area

An editable area (selection) allows paint and effects to be applied to the underlying pixels.

See also protected area and mask.

embedding

The process of placing an object created in one application into a document created in a different application. Embedded objects are included entirely in the current document; they are not linked to their source files.

encoding

Determines the character set of text, letting you correctly display text in the appropriate language.

envelope

A closed shape that can be placed around an object to change the object's shape. An envelope consists of segments connected by nodes. Once an envelope has been placed around an object, the nodes can be moved to change the shape of the object.

Exchangeable Image File (EXIF)

A file format that embeds digital camera information, such as the time and date a photo is taken, shutter speed, focus, and flash conditions, into TIFF and JPEG images.

extrusion

A feature that lets you apply a three-dimensional perspective by projecting lines from an object to create the illusion of depth.

F

feathering

The level of sharpness along a drop shadow's edges.

fill

A color, bitmap, fountain, or pattern applied to an area of an image.

filter

An application that translates digital information from one form to another.

flattened image

An image in which objects and masks are combined with the background and can no longer be edited.

floating editable area

An editable area that hovers or floats above an image and can be moved and modified without affecting the underlying pixels.

floating object

A bitmap with no background. Floating objects are also referred to as photo objects or cutout images.

font

A set of characters with a single style (such as italic), weight (such as bold), and size (such as 10 point) for a typeface such as Times New Roman.

fountain fill

A smooth progression of two or more colors applied to an area of an image that follow a linear, radial, conical, or square path. Two-color fountain fills have a direct progression from one color to another, while custom fills may have a progression of many colors.

fountain steps

The shades of color that make up the appearance of a fountain fill. The more steps in a fill, the smoother the transition from the beginning color to the end color.

fractal

An irregular shape generated by a repeating pattern. Fractals can be used to mathematically generate an irregular and complex image by following a pattern, without having to define all of the individual components in the image.

freehand marquee select

To marquee select objects or nodes by holding down the Option key while dragging the Shape tool and controlling the shape of the marquee box enclosure as if you were drawing a freehand line.

See also marquee select.

FTP (File Transfer Protocol)

A method of moving files between two computers. Many Internet sites have established repositories of material that can be obtained using FTP.

G

Gaussian

A type of pixel distribution that spreads the pixel information outward using bell-shaped curves rather than straight lines.

GIF

A graphic file format designed to use a minimum of disk space and be easily exchanged between computers. This format is commonly used to publish images of 256 or fewer colors to the Internet.

glyph

Diamond-shaped handles that can be dragged to alter the form of a shape.

grab area

The area of a command bar that can be dragged. Dragging the grab area moves the bar, while dragging any other area of the bar has no effect. The location of the grab area depends on the operating system you are using, the orientation of the bar, and whether the bar is docked or undocked. Command bars with grab areas include toolbars, the toolbox, and the property bar.

gradient node

A square point that represents each color on the gradient arrow of a gradient fill, which is used to change the fill's start and end points, colors, and transparency values.

grayscale

A color mode that displays images using 256 shades of gray. Each color is defined as a value between 0 and 255, where 0 is darkest (black) and 255 is lightest (white).

grayscale image

An image that uses the grayscale color mode, which can display up to 256 shades of gray ranging from white to black. Grayscale images, especially photographs, are commonly referred to as "black and white."

greeking

A method of representing text using either words that have no meaning or a series of straight lines.

grid

A series of evenly spaced horizontal and vertical dots that are used to help draw and arrange objects.

group

A set of objects that behaves as one unit. Operations you perform on a group apply equally to each of its objects.

guideline

A horizontal, vertical, or slanted line that can be placed anywhere in the drawing window to aid in object placement.

gutter

The space between columns of text, also called the alley. In printing, the white space formed by the inside margins of two facing pages.

H

halftone

An image that has been converted from a continuous tone image to a series of dots of various sizes to represent different tones.

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 the object. If you click a selected object, the shape of the handles changes to arrows so that you can rotate and skew the object.

highlighting box

A rectangle with eight handles that encloses a selection in an image.

hotspot

The area of an object that you can click to jump to the address specified by a URL.

hotspotting

The process of adding data to objects or groups of objects, so that they respond to events, such as pointing or clicking. For example, you can assign a URL to an object, making it a hyperlink to an external Web site.

hot zone

The distance from the right margin at which hyphenation begins.

HSB (hue, saturation, brightness)

A color model that defines three components: hue, saturation, and brightness. Hue determines color (yellow, orange, red, and so on); brightness determines perceived intensity (lighter or darker color); and saturation determines color depth (from dull to intense).

HTML

The World Wide Web authoring standard 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 you create a Web page.

hue

The property of a color that allows it to be classified by its name. For example, blue, green, and red are all hues.

hyperlink

An electronic link that provides access directly from one place in a document to another place in that document or to another document.

I

icon

A pictorial representation of a tool, object, file, or other application item.

image map

A graphic in an HTML document that contains clickable areas that link to locations on the World Wide Web, to other HTML documents, or to graphics.

image resolution

The number of pixels per inch in a bitmap measured in ppi (pixels per inch) or dpi (dots per inch). Low resolutions can result in a grainy appearance to the bitmap; high resolutions can produce smoother images but result in larger file sizes.

imagesetter

A high-resolution device that creates film or film-based paper output used in the production of plates for printing presses.

insert

To import and place a photo image, clipart object, or sound file into a drawing.

intensity

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

interlaced video image

Interlaced video images take two passes to fill a screen, painting every other line in each pass. This can produce a flicker.

interlacing

In GIF images, a method that lets you display a Web-based image on the screen at a low, blocky resolution. As the image data loads, the image quality improves.

intersection

The point at which one line crosses another.

J

JavaScript

A scripting language used on the World Wide Web to add interactive functions to HTML pages.

JPEG

A format for photographic images that offers compression with some loss of image quality. Because of their compression (up to 20 to 1) and small file size, JPEG images are widely used in Internet publishing.

JPEG 2000

An improved version of the JPEG file format that features better compression and allows you to attach image information and assign a different compression rate to an image area.

justify

To modify the spacing between characters and words so that the edges on the left, right, or both margins of a block of text are even.

K

kerning

The space between characters, and the adjustment of that space. Often, kerning is used to place two characters closer together than usual, for example WA, AW, TA, or VA. Kerning increases readability and makes letters appear balanced and proportional, especially at larger font sizes.

keyframe

A movie frame which defines change to an object or a group of objects. When tweening, Corel R.A.V.E. fills in the frames between keyframes so that objects change gradually over time.

L

Lab

A color model that contains a luminance (or lightness) component (L) and two chromatic components: "a" (green to red) and "b" (blue to yellow).

label

A name that can be attached to a frame. A label lets you reference frames easily when working with sprites and using behaviors.

leader tabs

A row of characters placed between text objects to help the reader follow a line across white space. Leader tabs are often used in place of tab stops, especially before text that is flush right such as in a list or table of contents.

leading

The spacing between lines of text. Leading is important for both readability and appearance.

lens

An object that protects part or all of an image when you perform color and tonal corrections. You can view the effect of a correction through a lens without affecting the underlying pixels. If you move a lens, the correction is applied to the pixels at the new location.

linking

The process of placing an object created in one application into a document created in a different application. A linked object remains connected with its source file. If you want to change a linked object in a file, you have to modify the source file.

library (CorelDRAW)

A collection of symbol definitions that are included in a CorelDRAW (CDR) file. To share a library between drawings, you can export it to the Corel Symbol Library (CSL) file format.

library (Corel R.A.V.E.)

A collection of symbol and sprite definitions included in a Corel R.A.V.E. (CLK) file. To share a library between movies, you can export it to the Corel Symbol Library (CSL) file format.

life span

The series of frames in which an object exists in a movie.

ligature

A character consisting of two or more letters joined together.

lightness

The level of brightness that is shared between a transparency and the object to which it is applied. For example, if a transparency is applied to an object whose color appears bright, the transparency color will take on a comparable brightness. The same holds true for a transparency that is applied to an object whose color appears dark—the transparency will take on a comparable darkness.

lossless

A kind of file compression that maintains the quality of an image that has been compressed and decompressed.

lossy

A kind of file compression that results in noticeable degradation of image quality.

low-frequency areas

Smooth areas in an image where gradual changes take place. That is, areas where there are no edges or noise.

LZW

A lossless file compression technique that results in smaller file size and faster processing time. LZW compression is commonly used on GIF and TIFF files.

M

marquee

A dashed outline that surrounds an editable area or an object in an image. By default, object marquees are blue and mask marquees are black.

marquee select

To select objects or nodes by dragging the Pick tool or Shape tool diagonally and enclosing objects in a marquee box with a dotted outline.

mask

A mask is applied to an image during image editing to define protected areas and editable areas.

master object

An object that has been cloned. Most changes you make to the master object are automatically applied to the clone.

mask modes

Mask tool operation modes that you must choose before you create or fine-tune a mask and its editable area. There are four mask modes: Normal, Additive, Subtractive, and XOR. The Normal mode (default) lets you select an area in an image. The Additive mode lets you expand the editable regions by selecting multiple areas in an image. The Subtractive mode lets you reduce the editable regions by removing areas from a selection. The XOR mode lets you select multiple areas in an image. If areas overlap, the overlapping regions are excluded from the editable area and added to the protected area.

master layer

A layer on a master page whose objects appear on every page of a multipage drawing. A master page can have more than one master layer.

master page

A page that controls the master settings for the Grid, Guideline, and Desktop layers plus one initial active layer.

merge mode

An editing state that determines how the selected paint, object, or fill color combines with other colors in the image.

mesh fill

A type of fill that lets you add patches of color to the inside of a selected object.

metadata

Information about objects. Examples of metadata are names, comments, and cost assigned to objects.

micro nudge

To move an object in small increments.

See also nudge and super nudge.

midpoint

The point of a Bézier line that divides it into two parts of equal length.

miter limit

A value that determines when two lines that meet at a sharp angle switch from a pointed (mitered) joint to a squared-off (beveled) joint.

moiré pattern

The visual effect of radiating curves created by superimposing two regular patterns. For example, a moiré pattern can result by overlapping two halftone screens of different angles, dot spacing, and dot size. Moiré patterns are the undesirable result of rescreening an image with a different halftone screen or with the same halftone screen on an angle different from the original.

mosaic

The decorative artwork made by arranging small pieces of variously colored material to form pictures or patterns.

movie frame

One image in a series of images that make up a movie. A movie frame can contain one or more objects.

multichannel

A color mode that displays images using multiple color channels, each comprised of 256 shades of gray. When you convert an RGB color image to the multichannel color mode, the individual color channels (red (R), green (G), and blue (B)) are converted to grayscale information that reflects the color values of the pixels in each channel.

multiple select

To select multiple objects using the Pick tool or multiple nodes using the Shape tool.

N

NCSA (National Center for Supercomputing Applications)

NCSA is a server system. If you are creating an image map to be displayed on the World Wide Web, you need to know the system your server uses, because different codes are used in the map files. Contact your server administrator to find out which system your server uses.

nested group

A group of two or more groups that behaves as one object.

nested PowerClip objects

Containers that hold other containers to form complex PowerClip objects.

nodes

The square points at each end of a line or curve segment. You can change the shape of a line or curve by dragging one or more of its nodes.

noise

In bitmap editing, random pixels on the surface of a bitmap, resembling static on a television screen.

nonprinting characters

Items that appear on the screen but do not print. They include the rulers, guidelines, table gridlines, hidden text, and formatting symbols, such as spaces, hard returns, tabs, and indents.

NTSC (National Television Standards Committee)

A video color filter that is commonly used to define the gamut of colors supported by television monitors in North America.

nudge

To move an object in increments.

See also micro nudge and super nudge.

O

object (CorelDRAW)

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

object (Corel R.A.V.E.)

An independent bitmap that is layered above the background image. Changes applied to objects do not affect the underlying image.

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 one direction.

onion skinning

Displaying multiple frames on the stage at once. Objects in the current frame appear in full color while objects in other frames display in wireframe view.

opacity

The quality of an object that makes it difficult to see through. If an object is 100% opaque, you cannot see through it. Opacity levels under 100% increase the ability to see through objects.

See also transparency.

open object

An object defined by a path whose start point and end point are not connected.

origin

The point in the drawing window at which the rulers intersect.

output resolution

The number of dots per inch (dpi) that an output device, such as an imagesetter or laser printer, produces.

outline

The line that defines the shape of an object.

overexposure

Excessive light in an image that gives it a washed-out appearance.

overlay

A red-tinted, transparent sheet that you can superimpose on the protected areas in an image. The mask overlay makes it easy to distinguish between the editable and the masked (protected) regions in an image. When the overlay is applied, the masked areas are displayed in varying degrees of red (according to their transparency). The deeper the saturation of the red tint, the greater the degree of protection.

See also editable area and protected area.

P

PAL

A video color filter that is commonly used to define the gamut of colors supported by television monitors in Europe and Asia.

paletted color mode

An 8-bit color mode that displays images using up to 256 colors. You can convert a complex image to the paletted color mode to reduce file size and to control the colors used throughout the conversion process more precisely.

pan (CorelDRAW)

To move the drawing page around in the drawing window. Panning changes the page view in the same way that scrolling moves the drawing up, down, to the left, or to the right in the drawing window. When working at high magnification levels where not all of the drawing is displayed, you can quickly pan to see parts of the drawing that were previously hidden.

pan (Corel R.A.V.E.)

To move the stage around in the drawing window. Panning changes the stage view in the same way that scrolling moves the stage up, down, to the left, or to the right in the drawing window. When working at high magnification levels where not all of the stage is displayed, you can quickly pan to see parts of the stage that were previously hidden.

pan (Corel PHOTO-PAINT)

To move the image around in the image window, usually when the image is larger than its window. Panning changes the image view in the same way that scrolling moves the image up, down, to the left, or to the right in the image window. When working at high magnification levels where not all of the image is displayed, you can quickly pan to see parts of the image that were previously hidden.

PANOSE font matching

A feature that lets you choose a substitute font if you open a file that contains a font not installed on your computer. You can make a substitution for the current working session only, or you can permanently make a substitution so that when you save and reopen the file, the new font automatically displays.

PANTONE process colors

The colors that are available through the PANTONE Process Color System, which is based on the CMYK color model.

paragraph text

A text type that allows you to apply formatting options and directly edit large blocks of text.

parent color

An original color style that you can save and apply to objects in a drawing. You can create child colors from the parent color.

See also child color.

parent object

An object whose shape is combined with the image elements of another object, called a child object. The child object and parent object are called a clipping group. The parent object must be on an object layer below the child object.

path (CorelDRAW)

The basic component from which objects are constructed. A path can be open (for example, a line) or closed (for example, a circle), and it can be made up of a single line or curve segment or many joined segments.

path (Corel PHOTO-PAINT)

A series of line or curve segments connected by square endpoints called nodes.

pattern fill

A fill consisting of a series of repeating vector objects or images.

Perfect Shapes

Predefined shapes, such as basic shapes, arrows, stars, and callouts. Perfect Shapes often have glyphs, which let you modify their appearance.

perpendicular line

A line that intersects another line at a right angle.

perspective handles

The hollow circles in the corners of the highlighting box.

pixel

A colored dot that is the smallest part of a bitmap.

See also resolution.

pixelation

A type of image distortion in which individual pixels are discernible to the naked eye, or groups of pixels display as blocks of colors. Pixelation is caused by incorrect resolution, by incorrect image dimensions, or it can be created intentionally for a special effect.

PNG (Portable Network Graphics)

A graphic file format designed for use in online viewing. This format can import 24-bit color graphics.

playhead

The indicator in the Timeline docker that shows which frame in a movie is displayed on the stage and lets you navigate through frames.

point

A unit of measure used primarily in typesetting to define type sizes. There are approximately 72 points to an inch and 12 points to a pica.

PostScript fill

A type of texture fill designed using the PostScript language

PowerClip effect

A way of arranging objects that lets you contain one object inside another

PowerClip object

An object created by placing objects (contents objects) inside other objects (container objects). If the contents object is larger than the container object, the contents object is automatically cropped. Only the contents that fit inside the container object are visible.

pressure-sensitive pen

A stylus that you can use to access commands and draw your images. To use with Corel PHOTO-PAINT, you must install the pressure-sensitive pen, along with a pressure-sensitive tablet and its corresponding drivers.

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

In JPEG images, a method of having the image appear on screen in its entirety, at a low, blocky resolution. As the image data loads, the image quality progressively improves.

protected area

An area that prevents paint and effects from being applied to the underlying pixels.

See also mask and editable area.

Q

QuickCorrect

A feature that automatically displays the fully worded form for abbreviations or the correct form for errors as you type. You can use QuickCorrect to capitalize words or to correct common spelling and typographic errors automatically; for example, QuickCorrect can replace "asap" with "as soon as possible" and "hte" with "the."

R

radius

As applied to orbits, sets the distance between the center of the brush stroke and the nibs that travel around the center of the brush stroke when you paint with orbits. Increasing this value increases the size of the brush stroke.

As applied to the Dust & Scratch filter, sets the number of pixels surrounding the damaged area that are used to apply the filter.

range sensitivity

A paletted color mode option that lets you specify a focus color for the paletted conversion. You can adjust the color and specify its importance to guide converting.

rasterized image

An image that has been rendered into pixels. When you convert vector graphics files to bitmap files, you create rasterized images.

render

To capture a two-dimensional image from a three-dimensional model.

resample

To change the resolution and dimensions of a bitmap. Upsampling increases the size of the image; downsampling decreases the size of the image. Resampling with fixed resolution lets you maintain the resolution of the image by adding or subtracting pixels while varying the image size. Resampling with variable resolution keeps the number of pixels unchanged while changing the image size, resulting in lower or higher resolution than that of the original image.

resolution

The amount of detail that an image file contains, or that an input, output, or display device is capable of producing. Resolution is measured in dpi (dots per inch) or ppi (pixels per inch). Low resolutions can result in a grainy appearance; high resolutions can produce higher quality images but result in larger file sizes.

RGB

A color mode in which the three colors of light (red, green, and blue) are combined in varying intensities to produce all other colors. A value between 0 and 255 is assigned to each channel of red, green and blue. Monitors, scanners, and the human eye use RGB to produce or detect color.

rollover

An interactive object or group of objects that changes its appearance when you click or point to it.

rollover

An interactive object or group of objects that changes its appearance or executes a behavior when you click or point to it.

rollover state

One of the following three conditions of a rollover:

Normal—default state when there is no mouse activity associated with the rollover

Over—triggered when the pointer is over the rollover

Down—triggered when the rollover is clicked

rotate

To reposition and reorient an object by turning it around its center of rotation.

rotation handles

The curved, double arrows in the corners of the highlighting box.

ruler

A horizontal or vertical bar marked off in units that is used to determine the size and position of objects. By default, the rulers display on the left side and along the top of the application window, but they can be hidden or moved.

S

saturation

The purity or vividness of a color, expressed as the absence of white. A color that has 100% saturation contains no white. A color with 0% saturation is a shade of gray.

scale

To change an object's horizontal and vertical dimensions proportionally by a specified percentage. For example, a rectangle with a height of 1" and a width of 2" that is scaled by 150% results in a height of 1.5" and a width of 3". The aspect ratio of 1:2 (height to width) is maintained.

scanner

A device that converts images on paper, transparency, or film to digital form. Scanners produce bitmaps or rasterized images.

seed color

The color of the first pixel that you click when you define an editable area and mask using the Lasso and Magic wand mask tools. This color is used by the tolerance value to set the sensitivity of the color detection in color masks.

segment

The line or curve between nodes in a curve object.

segment (path)

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

selection

An area of an image, also called editable area, that is not protected by a mask and that is, therefore, available for editing. The selection can be modified by painting and editing tools, special effects, and image commands.

selection box

An invisible rectangle with eight visible handles that appears around any object you select using the Pick tool.

server-side image map

A rarely used image map type that relies on a server to process image map information. It requires a separate map (*.map) file for the Web server. Currently, most Web browsers can process image maps, so client-side image maps are more common.

shape cursor

Uses the shape and size of the nib of the current tool as a cursor.

shape recognition

The ability to recognize and convert hand-drawn shapes into perfect forms. To take advantage of shape recognition, you must use the Smart drawing tool. For example, you can draw four pen strokes to sketch a rectangle, and the application will convert your hand-drawn lines into a perfect rectangle.

simple wireframe view

An outline view of a drawing that hides fills, extrusions, contours, and intermediate blend shapes. Bitmaps are displayed in monochrome.

See also wireframe view.

size

To change an object's horizontal and vertical dimensions proportionally by changing one of the dimension's values. For example, a rectangle with a height of 1" and a width of 2" can be sized by changing the value of the height to 1.5". A width of 3" automatically results from the new height value. The aspect ratio of 1:2 (height to width) is maintained.

skew

To slant an object vertically, horizontally, or both.

skewing handles

The straight, double-headed arrows located in the center of each side of the highlighting box.

snap

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

source object

The object you use to perform a shaping action on another object, such as welding, trimming, or intersecting. The source object receives the fill and outline attributes of the target object.

See also target object.

splash screen

The screen that appears when CorelDRAW starts. It monitors the progress of the startup process and provides information about copyright and registration.

split blend

A single blend that is broken into two or more components to create a compound blend. The object where the blend is split becomes the end object for one component of the blend and start object for the other.

spot color

In commercial printing, a solid ink color that prints individually, one plate per spot color.

spread

In commercial printing, a type of trap that is created by extending the foreground object into the background object.

sprite

A reusable animation. A sprite is an animated symbol that is defined once and can be referenced many times in a movie.

sprite instance

An occurrence of a sprite in a movie. A sprite instance automatically inherits any changes made to the sprite. You can also apply unique properties to the objects in each instance, including size, position, and uniform transparency.

stacking order

The sequence in which objects are created in the image window. This order determines the relationship between objects and, therefore, the appearance of your image. The first object you create appears on the bottom; the last object appears on the top.

stage

The portion of the drawing window in which you add objects to a movie, compose the contents of individual frames, and test animation results.

style

A set of attributes that controls the appearance of a specific type of object. There are three style types: graphic styles, text styles (artistic and paragraph), and color styles.

stylus

A pen device, used in conjunction with a pen tablet, that allows you to draw paint strokes. A pressure-sensitive stylus allows you to vary your strokes with subtle changes in pressure.

subpaths

Paths that are part of one object.

subpath

A segment which is not joined to the main path.

subscript

Text 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 creates color by subtracting wavelengths of light reflected from an object. For example, a colored ink appears blue if it absorbs all colors except blue.

super nudge

To move an object in large increments by pressing Shift and an Arrow key. The super nudge value is multiplied by the nudge value to obtain the distance by which the object is moved.

See also nudge and micro nudge.

superscript

Text characters that are positioned above the baseline of the other characters in a line of text.

swap disk

Hard drive space used by applications to artificially increase the amount of memory available in your computer.

swatch

One of a series of solid-colored patches used as a sample when selecting color. A printed booklet of swatches is called a swatchbook. Swatch also refers to the colors contained in the color palette.

symbol (CorelDRAW)

A reusable object or group of objects. A symbol is defined once and can be referenced many times in a drawing.

symbol (Corel PHOTO-PAINT)

A reusable object or group of objects. A symbol is defined once and can be referenced many times in an image.

symbol (Corel R.A.V.E.)

A reusable object or group of objects. A symbol is defined once and can be referenced many times in a movie.

symbol instance

An occurrence of a symbol in a drawing. A symbol instance automatically inherits any changes made to the symbol. You can also apply unique properties to each instance, including size, position, and uniform transparency.

symbol instance

An occurrence of a symbol in a movie. A symbol instance automatically inherits any changes made to the symbol. You can also apply unique properties to each instance, including size, position, and uniform transparency.

T

tangent

A straight line that touches a curve or an ellipse at a point, but does not cross the curve or ellipse at that point.

target

The frame or Web browser window in which a new Web page displays.

target object

The object you perform a shaping action on, such as welding, trimming, or intersecting with another object. The target object retains its fill and outline attributes while copying these attributes to the source objects used to perform the action.

See also source object.

template

A predefined set of information that sets the page size, orientation, ruler position, and grid and guideline information. A template may also include graphics and text that can be modified.

text baseline

The imaginary horizontal line that text characters appear to be placed on.

text frame

The rectangle that appears as a series of dashed lines around a block of paragraph text created using the Text tool.

text style

A set of attributes that controls the appearance of text. There are two text style types: artistic text styles and paragraph text styles.

texture fill

A fractally generated fill that, by default, fills an object or image area with one image instead of with a series of repeating images.

threshold

A level of tolerance for tonal variation in a bitmap.

threshold (path)

A control available when you create a path from a mask. Threshold values range from 1 to 10 and determine the size of the angle required between two sections of a mask for a node to be created there. A low value produces more cusps, and therefore more nodes on the resulting path.

thumbnail

A miniature, low-resolution version of an image or illustration.

tightness (path)

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

tiling

The technique of repeating a small image across a large surface. Tiling is often used to create a patterned background for World Wide Web pages.

timeline

The graphical representation of an object's life span in a movie.

timeline section

A portion of an object's timeline consisting of two keyframes and all the frames in between.

tint

A semitransparent color applied over an image. Also called a color cast.

tint

The lighter shade of a spot color.

tone

The variations in a color or the range of grays between black and white.

transparency

The quality of an object that makes it easy to see through. Setting lower levels of transparency causes higher levels of opacity and less visibility of the underlying items or image.

See also opacity.

TrueType fonts

A font specification developed by Apple. TrueType fonts print the way they appear on the screen and can be resized to any height.

true color

A term that refers to digital RGB color that is composed of 24-bits, or 16.7 million colors.

TWAIN

By using the TWAIN driver supplied by the manufacturer of the imaging hardware, Corel graphics applications can acquire images directly from a digital camera or scanner.

tween

To animate an object by modifying some of the frames in its timeline and letting Corel R.A.V.E. create the frames in between, so that objects change gradually over time.

Also, the animation created by tweening.

two-point perspective

An effect created by lengthening or shortening two sides of an object to create the impression that the object is receding from view in two directions.

U

underexposure

The lack of light in an image that makes it too dark.

uniform fill

A type of fill used to apply one solid color to your image.

See also fill.

Unicode

A character encoding standard that defines character sets for all written languages in the world by using a 16-bit code set and more than 65, 000 characters. Unicode lets you handle text effectively regardless of the language of the text, your operating system, or the application you are using.

URL (Uniform Resource Locator)

A unique address that defines where a Web page is located on the Internet.

V

vanishing point

A marker that appears when you select an extrusion or an object to which perspective has been added. With an extrusion, the vanishing point marker indicates the depth (parallel extrusion) or the point at which the extruded surfaces would meet if extended (perspective extrusion). In both cases, the vanishing point is indicated by an X.

vector graphic

An image generated from mathematical descriptions that determine the position, length, and direction in which lines are drawn. Vector graphics are created as collections of lines rather than as patterns of individual dots or pixels.

See also bitmap.

vector object

A specific object within a drawing that is created as a collection of lines rather than as patterns of individual dots or pixels. Vector objects are generated from mathematical descriptions that determine the position, length, and direction in which lines are drawn.

W

watermark

A small amount of random noise added to the luminance component of the image pixels which carries information about the image. This information survives normal editing, printing, and scanning.

weld

To combine two objects into a single curve object with a single outline. A source object is welded to a target object to create a new object that takes on the fill and outline attributes of the target object.

white point

The measurement of white on a color monitor that influences how highlights and contrast display.

Microsoft Windows Image Acquisition (WIA)

A standard interface and driver for loading images from peripheral devices, such as scanners and digital cameras.

wireframe view

An outline view of a drawing that hides fills but displays extrusions, contour lines, and intermediate blend shapes. Bitmaps are displayed in monochrome.

See also simple wireframe view.

workspace

A configuration of settings that specifies how the various command bars, commands, and buttons are arranged when you open the application.

Z

zoom

To reduce or magnify the view of a drawing. You can zoom in to see details or zoom out for a broader view.

ZIP

A lossless file compression technique that results in smaller file size and faster processing time.

CorelDRAW Index