# Contents

**CHAPTER 1: OVERVIEW** ................................................................. 1
- Getting Started Guide ........................................................................ 1
- About Canvas X Geo Documents .......................................................... 2
- About The Canvas X Geo User Interface ............................................... 3
  - Canvas X Geo Window ........................................................................ 3
  - Layout Area ....................................................................................... 4
  - Document Navigation Controls ............................................................ 4
- About Document Layout ....................................................................... 5
- Pages .................................................................................................... 5
- Layers .................................................................................................. 5
- Master Pages ....................................................................................... 5

**CHAPTER 2: CREATING AND ENHANCING TECHNICAL ILLUSTRATIONS** ...... 7
- Creating A New Illustration .................................................................. 7
- Using The Drawing Tools ...................................................................... 7
- Working With Inks And Strokes ............................................................. 9
  - Applying Inks And Strokes .................................................................. 9
  - Creating Custom Inks And Strokes ....................................................... 12
- Using The Painting Tools ...................................................................... 13
  - Painting ............................................................................................ 14
  - Selecting Colors For Painting ............................................................ 14
- Adding Text ........................................................................................ 15
  - Text Tools ........................................................................................ 15
- Typing Text ......................................................................................... 16
- Formatting Text ................................................................................... 16
- Using SpriteEffects ............................................................................. 17
  - Applying SpriteEffects ....................................................................... 17
  - Using Lens Objects With SpriteEffects ............................................. 18
- Using Symbols .................................................................................... 19
  - Using The Symbol Library Palette ..................................................... 20
  - Using Symbol Pen Strokes .................................................................. 20
  - Using Symbol Fill Inks ....................................................................... 21
- Selecting, Grouping, And Aligning Objects .......................................... 21
  - Selecting Objects ............................................................................... 21
  - Grouping And Ungrouping Objects ..................................................... 21
  - Aligning And Distributing Objects ...................................................... 21
Chapter 1: Overview

Getting Started Guide

Canvas X Geo is the preferred application for technical illustrators in many industries because it offers the most flexible, scalable and integrated design environment. Canvas X Geo has the full range of precise vector object illustration tools and advanced raster image editing tools that you need — all in one single, workflow-accelerating application.

Canvas X Geo provides a complete solution for home, small business, school, and corporate users:

- An array of tools for illustration, layout, editing, proofing, and final output, so you can take projects from start to finish in Canvas X Geo.
- A dynamic and flexible interface, including a Toolbar you can configure with commands, tools, and styles as well as customizable keyboard shortcuts, a Docking pane and Docking bar to store palettes, and a Properties bar for tool settings and object manipulation.
- Help when you need it, in the form of a Dynamic Help window and the Canvas Assistant help for the tool you’re currently using, built right into the interface, as well as a fully searchable Help system available from the Help menu.

This guide is designed to introduce you to just a few of the basic Canvas X Geo features to get you started. For more information about all the Canvas X Geo features and tools, see the Canvas X Geo Help. Simply press F1 at any time while you are using Canvas X Geo.
About Canvas X Geo Documents

In Canvas X Geo, you can create several different types of documents:

- Illustrations
- Publications
- Presentations
- Animations

For technical illustrations, the Illustration document type provides all the features and tools you need to create and enhance illustrations and save them in a wide range of file types. However, if you need to use your technical illustrations for another purpose, such as in an annual report, a presentation, or animation, Canvas X Geo provides the other three document types with additional tools to simplify your workflow.

Illustrations

The most commonly-used format, Illustration documents are the basis for most Canvas X technical illustrations.

Illustration documents are general-purpose documents for all types of illustrations and graphics. You can specify a custom document size, and the document can have multiple pages (called sheets), with multiple layers on each sheet.

Publications

Publish documents using one of the standard paper sizes or a custom size. Specify full pages or facing pages, or choose one of the standard templates to create brochures, flyers, labels, magazine pages, and more.

Publication documents are designed for publications printed with two-sided (facing) pages, although you can also create a Publication that has pages with single sides. You can use master pages to hold items that you want to appear throughout the publication. You can also use multiple layers on each page.

Presentations

Presentations and slideshows provide a powerful way of displaying technical data.

Presentation documents are designed for on-screen slideshow presentations. You can use multiple layers and a master slide to hold background elements. You can use more than a dozen transition effects, including wipe and dissolve, during slide show playback.

Animations

Create simple animations from your technical illustrations.

An Animation document is designed for creating and editing web (GIF) animation files. An animation is composed of multiple frames, which are equivalent to the image frames of film-based animations.
You can use onion-skinning in an Animation document. When you select onion-skinning, frames adjacent to the current frame appear in the background. This helps set up object movement in an animation.

About the Canvas X Geo User Interface

Canvas X Geo Window

The Canvas X interface contains eleven main components, providing you with a Layout area as the main area for working on your illustrations, and a variety of toolbars and docks with all the tools you need. Depending on your operating system and your Canvas X customizations, your interface may look different than what you see in the image below.

You can customize the interface in several ways, such as by hiding the Toolbar, Properties bar, Docking bar, and Docking pane. You can also dock various palettes and customize the Toolbar. Each document window has Zoom controls, Document controls, and scroll bars. All documents share the Smart Toolbox, Properties bar, and Status bar. You can switch between Canvas X documents using the Window menu, or you can tile or stack windows to see more than one document at a time.
document setup. You can toggle this bar on or off.

4 Dynamic help  Open this window to display information for selected tools and objects.

5 Docking bar  Provides a customizable dock for the Canvas X palettes you use often. You can move the Docking bar to the left, right, or above the layout area.

6 Docking pane  Provides a large dock for the following palettes:
- Canvas Assistant
- Document Layout
- Flowchart
- Page Navigator
- Symbol Library
- Presets Palette

7 Toolbox  Tool palettes snap out to the right. If you use a specific tool palette regularly, lock the palette so it remains open while you use other tools.

8 Zoom controls  Use these controls to zoom in and out of a document.

9 Document controls  Add pages and move from one page or layer to another.

10 Status bar  Displays the status and properties of the currently selected item.

11 Layout area  The main working area for creating illustrations, page layouts, presentations, and animations.

12 Floating palette  Any palettes can be placed in the document layout area.

Layout Area

The rectangle centered in the Canvas X document window is the Layout area. The white space around the Layout area is known as the pasteboard and is additional working space where you can place objects before using them in an illustration. Objects on the pasteboard are saved with the document, but they are not printed.

The Layout area represents different things in the different Canvas X document types.

- **Illustration**: A page, called a “sheet,” with layers.
- **Publication**: A single-sided page or two facing pages with layers.
- **Presentation**: A “slide” with layers.
- **Animation**: A frame of an animation. If you select “onion-skinning”, you can see objects on adjacent frames.

You can change the color of the Layout area to represent the color of tinted paper.

**To Set the Layout Area Color:**

1. Choose **Layout | Document Setup**.

2. In the Document Setup dialog box, select a color from the **Paper color** popup palette.

Document Navigation Controls

A pop-up menu appears below the document window. Open this menu to move through a document.
About Document Layout

Pages, layers, and master pages are a common element of all types of Canvas X documents.

Pages

All Canvas X documents can contain multiple pages. Here, “pages” is used as a general term for elements that make up a document.

- Publications can have single or facing pages.
- Illustrations have pages, called “sheets,” which are single-sided.
- Presentations have pages, called “slides,” which can be displayed in sequence as “slide shows.”
- Animations have pages, called “frames,” which form animation sequences for animated GIF files.

In the Document Layout palette, pages are at the top level of the layout hierarchy, followed by layers, groups, and objects.

The Layout area in Canvas X represents a document page. Page and layer controls are located at the bottom of the screen. The current page is shown in the Page menu and the Page Navigator palette.

Layers

A layer is a transparent level that objects are placed on. On a page you might have one or more layers. You can use layers to organize similar objects together. For example, you might use one layer for text and another layer for objects. By default, when you place or draw objects on a page, they are placed on a single layer. Layers can help you work efficiently. You can organize objects on layers, and you can display, print, and save layers individually.

In the Document Layout palette, a page’s layers are listed after the page name. Objects are listed after the layer they are on. A new page has one layer (Layer #1). You can add layers to any page, including master pages.

You can save time by sharing layers in a document. A shared layer is similar to a master page. As with a master page, objects on a shared layer appear on every page where the shared layer is applied. You can update multiple pages by editing a shared layer.

Master Pages

Master pages are available in Publication documents. Similar elements called “master slides” are available in Presentation documents, and “master frames” are available in Animation documents.

Master pages are pages used as a master or background for other pages. The objects on the master page can appear on every page in a document. For example, if you wanted to add a logo to every page in your document, you could create a master page with the logo, and then apply the master page to your other pages. If the logo is changed or updated, you can simply update the master page, rather than having to update every page of your document.

In the Document Layout palette, the master page is listed under each page where the master page is visible. The main master page is at the top of the list. As with other pages, you can use one or more layers on a master page. By selectively hiding layers on the master page, you can control the master page’s appearance throughout a document or on selected pages. The master page at the top of the layout list can be locked.
Chapter 2: Creating and Enhancing Technical Illustrations

Creating a New Illustration

In Canvas X Geo there are two ways to create a new illustration:

- **Startup dialog box**: When you first start Canvas X Geo, you can create a new illustration from the Startup dialog box. The new document opens immediately. You can then use the Configuration Center to change document attributes, such as the document units and drawing scale.

- **Inside Canvas X Geo**: If you have Canvas X Geo open already, you can create a new illustration from the File | New menu or by clicking the New Document icon. The New Document dialog box opens so that you can set the document attributes immediately.

**To Create a New Document from the Startup Dialog Box:**

In the Startup dialog box, click Illustration.

💡 If you don’t see the Startup dialog box, choose Window | Show Startup.

**To Create a New Document from Inside Canvas X Geo:**

1. Do one of the following:
   - Choose File | New.
   - Click the New Document icon.

2. In the New Document dialog box, click the Illustration radio button.
3. In the Paper section, set the following options:
   - Paper size and unit
   - Portrait or landscape orientation
   - Paper color

4. In the Document Units section, set the ruler units and the number format.
5. If you are drawing an illustration to scale, set the drawing scale or drawing size.
6. Click OK.

Using the Drawing Tools

In Canvas X you can quickly draw simple shapes using the following drawing tools:

- Line
Each of these tools belongs to a tool palette containing additional similar drawing tools.

**To Open a Tool Palette:**
Click a tool in the Toolbox.

**To Float a Tool Palette:**
Press Shift and drag the tool palette away from the Toolbox.

**To Draw Simple Lines, Rectangles, Squares, Ovals, Circles, and Arcs:**
1. Click one of the drawing tools in the Toolbox.
2. Click in your document and drag to draw the shape (or press Shift and drag).

### Drawing Shapes

<table>
<thead>
<tr>
<th>Drawing Tool</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lines</td>
<td>Drag from the starting point to the end point in any direction</td>
</tr>
<tr>
<td>Lines at a 45° angle (horizontal, vertical, or diagonal)</td>
<td>Press Shift and drag from the starting point to the end point</td>
</tr>
<tr>
<td>Rectangles</td>
<td>Drag from one corner to the opposite corner</td>
</tr>
<tr>
<td>Squares</td>
<td>Press Shift and drag from one corner to the opposite corner</td>
</tr>
<tr>
<td>Rounded rectangles</td>
<td>Drag from one corner to the opposite corner</td>
</tr>
<tr>
<td>Rounded squares</td>
<td>Press Shift and drag from one corner to the opposite corner</td>
</tr>
<tr>
<td>Ovals</td>
<td>Drag from one corner to the opposite corner of the oval’s bounding box</td>
</tr>
</tbody>
</table>
When you draw a vector object, Canvas X Geo applies the current ink and stroke settings. The inks and stroke icons in the Toolbox show a preview of the current settings. You can change these attributes before or after you draw an object.

See the Canvas X Help to learn about drawing more complex shapes.

Working with Inks and Strokes

In Canvas X Geo, inks are solid colors or multicolored patterns that you apply to vector and text objects. You can apply inks to the interiors and outlines of vector objects and text. Strokes are lines centered on a path. You can modify the ink used for a stroke, or the stroke itself. You can shape a stroke with standard and calligraphic pens, parallel lines, even neon tubes. You can also add dashes and arrowheads to strokes.

Canvas X Geo comes with a number of preset inks and strokes that you can immediately apply to objects, or you can create your own custom inks and strokes.

Applying Inks and Strokes

You can apply inks to two areas of vector objects and text:

<table>
<thead>
<tr>
<th>Ink Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pen ink</td>
<td>Ink used for the strokes of objects and text characters.</td>
</tr>
<tr>
<td>Fill ink</td>
<td>Ink used for the interior of objects and text characters.</td>
</tr>
</tbody>
</table>

You can change the current inks before you create an object, or you can create an object and then modify the inks used.

Strokes are used for lines and outlines of objects. You can select the stroke itself, adjust the ink, thickness of the pen, and type of stroke, or you can use dashed strokes or arrowheads.
Stroke

Select one of the following pen strokes:
- Standard
- Calligraphic
- Neon
- Parallel
- Symbol

Dash

Select a type of dash.

Arrow

Select arrowheads.

To Change the Default Pen or Fill Ink:
1. Make sure no objects are selected in the document.
2. Click the Pen Ink or Fill Ink icon in the Toolbox.
3. Select an ink.

To Change the Pen or Fill Ink for a Selected Object:
1. Select a vector or text object.
2. Click the Pen Ink or Fill Ink icon in the Toolbox.
3. Select an ink.

To Change the Current Stroke:
1. Make sure no objects are selected in the document.
2. Click the Stroke icon in the Toolbox.
3. Select a stroke.
To Change the Stroke for a Selected Object:

1. Select an object.
2. Click the **Stroke** icon in the Toolbox.
3. Select a stroke.

To Use the Presets Palette:

Do one of the following:

- Click one of the ink or stroke icons in the Toolbox, then drag the palette away from the Toolbox to float it.
- Choose **Window | Palettes | Presets**.
Creating Custom Inks and Strokes

As well as using the preset inks and strokes, you can create your own custom inks and strokes and save them as presets. You do this in the Attributes palette.

To Open the Attributes Palette:

Do one of the following:

- In the Presets palette, click the Edit button.
- Choose Window | Palettes | Attributes.
To Create a Custom Ink or Stroke:

1. In the Attributes palette, select the options you want to use for your custom ink or stroke.
2. Click the Add Preset button.

Using the Painting Tools

Canvas X Geo provides a full range of painting tools, including the digital equivalents of markers, airbrushes, and paintbrushes, tools for creating effects like neon and blends, and tools for retouching, color-correction, and cloning images. To use the painting tools, you can begin in several ways. You can select a painting tool and begin painting with it, you can draw a blank paint object to use as a canvas, or you can import or place an image, and edit it using the painting tools.
Painting

To Paint with a Painting Tool:

1. Select a painting tool from the Toolbox, such as the Paint Brush, Pencil, or Airbrush tools.
2. Begin painting with the tool.
3. When you have finished with the paint object, press Esc to exit edit mode.

To Create a Blank Paint Object:

1. Select the Paint Object Creator tool from the Toolbox.
2. Drag diagonally in the document to create a rectangular paint object.
   A blank paint object appears in Edit mode. You can now use the painting tools to paint on the paint object.
3. When you have finished with the paint object, press Esc to exit Edit mode.

To Import an Image and Edit it with the Painting Tools:

1. Choose Image | Import.
2. In the Select images to import dialog box, browse to the image you want to import, then click Import.
3. Click on the image to enter edit mode.
4. Select a painting tool from the Toolbox to edit the image.
5. When you have finished with the paint object, press Esc to exit edit mode.

Selecting Colors for Painting

Painting tools use the foreground or background color, or both. In the Toolbox, instead of a pen ink icon for the foreground, a brush icon appears when you select a painting tool.

The brush icon shows the foreground color, and the bucket icon shows the background color.

You can use any solid color for painting, including multicolored inks, such as gradients, symbols, textures, pattern, or hatch inks. Alternatively, you can use the Color Dropper tool to select a color from the paint object you are editing.
To Select a Color for Painting:
1. Click the foreground or background color icon in the Toolbox.
2. In the Presets palette, on the Ink tab, click on an ink type and select a color.

To Select the Background Color from a Paint Object:
1. Select the Color Dropper tool from the Toolbox.
2. Click a color in the paint object or image.
   The background color changes in the Toolbox.

To Select the Foreground Color from a Paint Object:
1. Select the Color Dropper tool from the Toolbox.
2. Right-click a color in the paint object or image.
   The foreground color changes in the Toolbox.

Adding Text
Canvas X Geo has a full range of text and typography features that let you integrate text with illustrations and images. You can enter, format, edit, and arrange text in Canvas X Geo. You can also import text files and use Object Linking and Embedding (OLE) to place text in documents. To help you edit and proof text, Canvas X Geo provides spell-checking and text-searching tools.

Text Tools
The Text tool palette contains the tools you use to create text objects and edit text.

Text: Use the Text tool to create text objects and edit text.

Text Object: Use the Text Object tool to draw fixed text objects for page layouts.

Text Link: Use the Text Link tool to link text objects to create text flows.

Text Unlink: Use the Text Unlink tool to break text object links.

Link Info: Use the Link Info tool to check text flows in a document. The tool displays arrows showing the flow of text among linked text objects.

Text Path: Use the Path Text tool to type text along a vector path.

Text Form Field: Use the Text Form Field tool to create form text boxes.

Text Section: Use the Text Section tool to create sections and columns in the text.
Text Format Brush: Use the Text Format Brush tool to copy a text format and apply it to other text.

Vertical Text: Use the Vertical Text tool to create text objects and edit text when you are using a double-byte language.

Vertical Text Object: Use the Vertical Text Object tool to draw fixed text objects for page layouts when you are using a double-byte language.

Table: Use the Table tool to quickly create tables. Use the Text tool to type in each cell individually.

The Vertical Text and Vertical Text Object tools are only designed for languages that use vertical text, such as Japanese. These two tools are only available if you select the Enable two-byte script checkbox on the Type page of the Text manager in the Configuration Center. If you change this setting in the Configuration Center, you must close Canvas X Geo and restart it before the setting is applied.

Typing Text

The simplest way to add text to a document is to use the Text tool.

Formatting Text

Canvas X Geo provides three ways to format text: the Properties bar, the Text menu, and the Type palette. Using the Properties bar or the Text menu, you can quickly apply formatting to particular characters or an entire paragraph. The Type palette gives you additional options such as the ability to create and save character and paragraph styles, which you can use to consistently format text throughout a document.

To Apply Formatting from the Properties Bar:

1. Select the Text tool from the Toolbox.
2. Select the text you want to format.
3. In the Properties bar, select one or more text format options.

Properties Bar Text Format Options

<table>
<thead>
<tr>
<th>Font</th>
<th>Select one from the menu. The font applies to selected text objects, highlighted text, or the next text you type.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Select a size or enter one and press Enter. The size applies to selected text objects, highlighted text, or the next text you type.</td>
</tr>
<tr>
<td>Horizontal alignment</td>
<td>Select left, center, right, or justify.</td>
</tr>
<tr>
<td>Text attributes</td>
<td>Use the pop-up palettes to apply a text fill ink, text pen ink, background ink, and text frame ink. For the text stroke and frame stroke, you can also assign a pen width.</td>
</tr>
<tr>
<td>Leading</td>
<td>Select an option or enter a value and press Enter.</td>
</tr>
<tr>
<td>Scaling</td>
<td>Specify percentages (horizontal &amp; vertical) by which you want to scale the current type size.</td>
</tr>
<tr>
<td>Space</td>
<td>Insert spacing before or after a paragraph by entering values in the fields.</td>
</tr>
</tbody>
</table>
**Vertical alignment**
Select top, bottom, center, or justify.

**Text styles**
Click buttons to assign standard text styles.

**Tab**
Select left, right, center, decimal, or comma from the menu and then click in the ruler to set the tab.

**Kerning**
Select an option from the menu or enter a value and press **Enter**.

**To Apply Formatting from the Text Menu:**
1. Select the **Text tool** from the Toolbox.
2. Select the text you want to format.
3. Choose **Text | Font** (or any of the other formatting options).
4. Choose one of the options from the sub-menus.

**To Apply Formatting from the Type Palette:**
1. Select the **Text tool** from the Toolbox.
2. Select the text you want to format.
3. Choose **Text | Type**.
4. In the Type palette, select one or more text format options, and then click **Apply**.

**Using SpriteEffects**
SpriteEffects let you apply image effects and filters to vector objects, images, text, and grouped objects. The types of effects and filters you can apply include: Artistic effects, such as Crystallize, Lens Flare, Oil Painting, and Stained Glass; Blur effects, such as Gaussian, Radial, and Motion blur; Brightness/Contrast, Color Balance, Hue/Saturation, Noise, Ripple, Spherize, Twirl, and many more.

You can apply effects temporarily, adjust effects settings, change the order of effects, and hide or remove effects individually, all from the SpriteEffects palette, without having to use Undo or save the original image to preserve it. And you can apply an effect to an entire object, or you can create a lens object and apply an effect to just the area specified by the lens.

**Applying SpriteEffects**

**To Apply an Effect:**
1. Select an object or a lens.
2. Do one of the following:
   - In the Properties bar, select an effect from the SpriteEffects drop-down list.
   - Choose **Object | SpriteEffects | Add an Effect**, then select an effect.
   - In the SpriteEffects palette, click the New Effect icon, select an effect from the drop-down list, then click **OK**.
3. If a dialog box appears, select the settings you want to use, then click **OK**.
   - **You can apply multiple effects by repeating this task as many times as necessary.**
You can remove all effects quickly by selecting the object and pressing the Clear All SpriteEffects button in the Properties bar.

You can remove transparency effects by selecting the object and pressing the Remove SpriteLayer Effect button in the Properties bar.

**To Edit or Delete SpriteEffects:**
You can edit or delete SpriteEffects, depending on the type of effect.

1. Select the object.
2. Right-click the object and choose Edit from the context menu.
3. Under the Edit menu, choose one of the following:
   - Delete [SpriteEffect].
   - Edit [SpriteEffect]. This will open the SpriteEffect's dialog box, where you can adjust settings.

**To Manage SpriteEffects in the SpriteEffects Palette:**
Do one of the following:

- Choose Window | Palettes | SpriteEffects.
- In the Properties bar, click the SpriteEffects icon.

**To Show and Hide Effects:**

1. Select the object whose effects you want to hide/show.
2. In the SpriteEffects palette, click the eye symbol to hide/show the effect.

Hiding an effect temporarily removes the effect from the object. Showing an effect re-applies the effect to the selected object.

**Using Lens Objects with SpriteEffects**

Lens objects let you limit an effect to a particular region of an illustration, or they let you magnify an area when you want to show a detailed view. The default lens effect is normal (100%) magnification, but you can change this if you want to see a magnified view. You can also change the viewpoint of what is displayed in the lens. By default the viewpoint is the center of the lens. If you want to offset the lens from whatever is directly behind it, you can change the viewpoint.

**To Create a Lens Object:**

1. Create an object to use as a lens. You can create a new object or copy an existing object. Fill inks are removed when vector or text objects are converted to lenses.
2. Select the object you want to use as a lens.
3. Do one of the following:
   - In the Properties bar, click the **Make Lens** button.
   - Choose **Object | Convert to Lens**.
   - In the SpriteEffects palette, select the Lens checkbox.

   The object becomes a lens and remains selected.

**To Set Magnification:**

1. Select the lens object.
2. Do one of the following:
   - In the Properties bar, enter the magnification value in the Lens Mag text box.
   - In the SpriteEffects palette, enter the magnification value in the Mag text box.

   ![Basic lens](image)

   With the magnification set to 300% and its viewpoint set about 2 inches to the right, a lens made from a circle shows a detail view of an illustration.

**To Set a Viewpoint Precisely:**

1. Select the lens object.
2. In the Properties bar or SpriteEffects palette, select one of the following:
   - **Absolute**: Select Absolute and enter horizontal (X) and vertical (Y) distances from the rulers’ zero point to the viewpoint; e.g., enter 0 in the X and Y boxes to set the viewpoint at the zero point. If you move the lens object, the viewpoint does not change.
   - **Relative**: Select Relative and enter horizontal (X) and vertical (Y) distances from the center of the lens to the viewpoint. Positive values move the viewpoint down and right of the lens center. Negative values move the viewpoint up and left of the lens center; e.g., to set the viewpoint 1 ruler unit left of the lens center, enter -1 (X) and 0 (Y). If you move the lens, the viewpoint changes.

**Using Symbols**

You can use symbols to enhance your illustrations. You can open the Symbol Library palette, and drag and drop symbols onto your illustration, you can use Symbol pen strokes to draw a line or shape using symbols, or you can use a symbol fill ink.
Using the Symbol Library Palette

The Symbol Library palette comes stocked with a range of symbols you can use in your Canvas X documents, or you can create your own symbols and add them to the Symbol Library. You can create symbols from any vector, text, group, or paint object. If you change the symbol in the palette, all the copies in the document will also change. For example, if you add a logo to the Symbol Library, and the logo is updated, you can simply replace the logo in the Symbol Library, and all instances of the logo in your document are updated.

To Open the Symbol Library Palette:

Choose Window | Palettes | Symbol Library...

To Place Symbols:

1. Select the symbol in the Symbol Library palette.
2. Move the cursor into the layout area. The cursor changes to a place pointer.
3. Do one of the following:
   - To place the symbol at its original size, click in the layout area where you want to place the upper left corner of the symbol.
   - To scale the symbol while you place it, drag the pointer to set the bounding box size. Canvas X scales the symbol to fit the bounding box.
   - To constrain the proportions as you drag the point to set the bounding box, press Shift while scaling.

Using Symbol Pen Strokes

To Draw with a Symbol Stroke:

1. Click the Strokes icon in the Toolbox.
2. Drag the pop up palette away to see the full palette.
3. In the Presets palette, on the Pen tab, click the Symbol icon.
4. Do one of the following:
   - Select one of the preset symbol strokes.
   - Click the Edit button to create a new symbol stroke.
5. Click one of the drawing tools in the Toolbox and draw an object.

To Create a Custom Symbol Stroke:

1. Click the Strokes icon in the Toolbox.
2. Drag the pop up palette away to see the full palette.
3. In the Presets palette, on the Pen tab, click the Symbol icon.
4. Click the Edit button to create a new symbol stroke.
5. Select a symbol, and specify the width, color, gap, offset, angle and centerline of the stroke.
6. Click the Add Preset button.
Using Symbol Fill Inks

To Apply Symbol Inks:

1. In the Presets palette, select the Pen or Fill Ink icon.
2. Click the Symbol ink icon.
3. Select a color.
4. Do one of the following:
   - If an object is selected, click on the Symbol Ink cell.
   - If an object is not selected, click on the Symbol Ink cell and drag the ink to the object.

To Create Symbol Inks:

1. In your Canvas X document, create an object to use in your new Symbol Ink.
   If you want to use more than one object or object type in the Symbol Ink, you must group the objects.
2. Deselect any objects in your Canvas X document by pressing Esc.
3. In the Presets palette, click the Symbol Ink icon, and then the Edit button to open the Symbol manager.
4. Click the Create button.
5. Click the object in your document that you want to use in the Symbol Ink.
6. Adjust the settings for the Symbol Ink in the Symbol manager.
7. Click the Add Preset button to add the new symbol ink to the preset inks.

Selecting, Grouping, and Aligning Objects

In Canvas X Geo, you need to select objects in order to edit them. If you want to edit several objects at once, you can group the objects first. You might also want to align two or more objects, or distribute them so the spacing between them is the same.

Selecting Objects
(missing or bad snippet)

Grouping and Ungrouping Objects
(missing or bad snippet)

Aligning and Distributing Objects
(missing or bad snippet)
Saving a Canvas X Document

In Canvas X you can choose to save an entire document, a selection, or a layer. You can also use compression, or apply a password to protect a document.

Use one of the following:

- **Save**: Updates a document file on disk and overwrites the previously saved version.
- **Save As**: Lets you create a new file on disk from an open document, save documents as templates, and use other graphics and text file formats.

When you use these commands, the default format for storing documents is the native Canvas X format.

**Saving Files**

**To Save a New Canvas X Document:**

1. Choose **File | Save As**.
2. In the Save As dialog box, select a location to store the document and type a file name.
3. Click **Save** to store the document on disk.

**To Save Changes to a Document as You Work:**

Choose **File | Save** to update the document file on disk.

**To Save a Document with a New Name or in a New Location:**

Choose **File | Save As**. Enter a new name or select a new location in the directory dialog box, and then click **Save**.

To avoid losing your work in the event of a power failure or system failure, use the Save command frequently as you work to store changes on disk. Also use the AutoSave feature located in the General settings in the Configuration Center.

**Saving Selections and Layers**

In the Save As dialog box you can choose options to save selections or layers, and create previews.

<table>
<thead>
<tr>
<th>Save Entire Document</th>
<th>The default setting tells Canvas X to save a complete document.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save Selection</td>
<td>Choose this option after you select the objects in the document that you want to save as a new document. If you don’t select anything, this option is not available.</td>
</tr>
<tr>
<td>Save Layer</td>
<td>Select this option to save one or more layers in a new document. Then, click <strong>Layers</strong> to specify which layers to save. This option isn’t available if the document has only one layer.</td>
</tr>
<tr>
<td>Use Compression</td>
<td>Check this box to reduce the size of files saved on disk.</td>
</tr>
<tr>
<td>Save Preview</td>
<td>Select the this option to save a low resolution preview of the document. In applications that support previews, you can see a thumbnail image of the document before opening the file.</td>
</tr>
</tbody>
</table>
Applying Password Protection to Canvas X Documents

If you want to control who can open a Canvas X document, you can protect the document with a password.

To Add a Password to a Document:

1. In the Save As dialog box, select the **Encrypt file** checkbox.
2. In the Password text box, enter a password.
3. In the Confirm text box, enter the same password again.
4. Click **OK**.

To Change the Password on a Document:

1. In the Save As dialog box, click the **Modify key** button.
2. Enter and confirm the new password, and then click **OK**.

The encrypt option is only available when you save the document in the native Canvas X format. The PDF export has its own encryption method.
Chapter 3: Publishing, Presenting, and Collaborating on Technical Illustrations

Printing

When it’s time to print your document, Canvas X Geo provides a full range of printing options, allowing you to quickly deliver high quality printed documents or postscript files for professional printing. In Canvas X Geo you can choose whether to print an entire document, a selection of objects, or a selection of pages. You can also make use of layers to show or hide objects so that you only print what you need. For example, if you added annotations to a layer in your document during a review, you can choose to not print that particular layer when you print the document.

Printing a Document

If your document uses a standard paper size and you want to print all the visible objects on the page, you can simply select a printer and print the document. However, Canvas X also offers the flexibility to print multiple pages on a page, scale the page to fit the paper, print color, print registration marks, and much more.

To Print a Document:

1. Choose File | Print.
2. In the Print dialog box, select a printer from the Name drop-down list in the Printer section.
3. On the General tab, set the Print range and Copies settings.
4. Select any other options you want to use from the Advanced and Page setup tabs.
5. Click the Print button.

See the Canvas X Help for a description of all the options available in the Print dialog box.

Previewing Your Printed Document

The print preview reflects the current print settings and the page setup. In the preview, you can see which objects, layers, and pages will be printed. You can make sure the layout fits in the printable area of the paper. If you choose the Tile option in the Page Setup tab or dialog box, the preview shows the tiles as separate pages.

To Preview a Printed Document:

1. Do one of the following:
   * Choose File | Print Preview...
   * Choose File | Print, then click the Preview button.
2. Do one or more of the following to preview the document:
   * Click the zoom buttons to increase or decrease the magnification of the preview.
   * Click the arrow buttons to view other pages.
3. When you have finished previewing the document, do one of the following:
   - Click **Print** to send it to the current printer when you finish previewing a document and the settings are correct.
   - Click **Close** to return to the document without printing.

### Setting the Print Area

If you want to print only a selected area of a page, you can set the print area to define how much of the page is printed. This can be especially useful for large documents that don’t fit easily on standard sizes of paper or complex documents where you want to focus on a single component. Once you have set a print area, you can choose to toggle it on or off depending on whether you want to print just the print area or the entire document.

**To Set the Print Area:**

1. Choose **File** | **Print Area** | **Set Print Area**.
2. Use the Print Area cursor to draw a box around the area you want to print.
3. In the Print Area dialog box, check and adjust the Left, Top, Width, and Height measurements as necessary.
4. Click the **OK** button.
   
   An orange box appears in the document to indicate the printable area.

**To Toggle the Print Area on or off:**

In the Properties bar, select or deselect the **Print area** checkbox.

When the Print area is on, an orange box appears to indicate the printable area. When the Print area is off, the orange box disappears.

**To Remove the Print Area:**

Choose **File** | **Print Area** | **Clear Print Area**.

### Adding Annotations

Canvas X Geo makes it easy to collaborate on a document with other members of your team. Once you have created your document, you can share it with your colleagues and they can add annotations or mark up the document as they review it. Having the annotations in the file itself makes it easy to see exactly where changes need to be made.

You can use the annotations tools to add labels, callouts, or comments to your diagrams or illustrations, or to create simple flowcharts. The annotation tools can be found in the Toolbox with the Markup tools.

<table>
<thead>
<tr>
<th><strong>Basic</strong></th>
<th>Adds a single annotation and points to a single object.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiple Sources</strong></td>
<td>Adds a single annotation and points to one or more objects.</td>
</tr>
<tr>
<td><strong>Multiple Notes</strong></td>
<td>Adds multiple annotations and points to a single object.</td>
</tr>
<tr>
<td><strong>Flowchart</strong></td>
<td>Creates a simple flowchart.</td>
</tr>
</tbody>
</table>
When you draw in the Layout area with these tools, Canvas X creates an object shape and connector lines. You can change the shape of the object, size, or the type of connector line in the Properties bar. You can also edit the label (before you place the annotation), and modify the font and style of the text.

From the Text drop-down menu, you can select Number, Alphabet (L) (upper case letters), Alphabet (S) (lower case letters), or Custom. In the field below, enter the number or letter to begin a sequence of annotations, such as 1 or A. Annotations will continue in sequence with 2 or B, and so on. If you have selected Custom, enter a custom label in the field. You can choose the color for the text of the annotations from the Color drop-down menu, choose the shape and its size, and choose the line type preset of the connectors in the Properties bar. Press ESC to discontinue adding annotations.

You can also modify the outline and fill of the flowchart shapes and connectors using the Pen and Fill inks in the Toolbox.

Before you add annotations to your illustration, consider whether you want to print the annotations. If you do not want to print them, you might consider creating a new layer for the annotations, which you could hide when you print the illustration.

To Add a Basic Annotation:

1. Select the Basic annotation tool.
2. In the Layout area, click on the object you want the annotation to point to.
3. Move the cursor to place the annotation and click to release the tool.
4. Double-click the annotation text to edit it.

In a similar way you can use the Multiple Sources, Multiple Notes, and Flowchart annotation tools to add more complex annotations. See the Canvas X Help for additional instructions.

Creating Flowcharts

In Canvas X Geo, you can use the Flowchart palette to create a flowchart using standard flowchart symbols and lines. You can adjust the pen, fill, dash, and arrow attributes of the lines, the amount of offset spacing between symbols, the size of the symbols, and the position of symbols relative to each other.

To Create a Flowchart:

2. Drag a flowchart symbol into your document.
3. Add additional symbols, by doing one or more of the following:
   - Select a symbol in the Flowchart palette, and then click one of the red arrow direction buttons in the Create Controls section.
   - Select a symbol in the Flowchart palette, and then click one of the blue arrow direction buttons in the Branch Controls section.

To Set the Default Attributes of Flowchart Lines:

In the Flowchart palette, set the Smart Line Attributes to control the Pen, Fill, Dash, and Arrow attributes.

You can quickly select and edit the attributes of smart lines without clicking each one individually. Select the type of Smart Line tool you want to edit from the Toolbox and press Ctrl + A.
To Set the Default Attributes of Flowchart Symbols:
1. Make sure that no objects are selected in the document.
2. In the Toolbox, set the Pen, Fill, Dash, and Arrow attributes.

To Change the Attributes of Flowchart Lines or Symbols:
1. Select the flowchart lines or symbols in the document.
2. In the Toolbox, set the Pen, Fill, Dash, and Arrow attributes.

As with any Canvas X object, you can also change the size of the selected symbols, the opacity, and effects such as bevel and shadow. You can also align symbols, rotate them, or skew them.

To Replace One Symbol with Another:
1. Select the symbol you want to replace in your document.
2. Select the replacement symbol in the Flowchart palette.
3. Click the Replace button.

To Add Text to Symbols and Lines:
1. In the document, select the symbol or line that you want to add text to.
2. Select the Selection tool from the Toolbox.
3. Type the text you want to add.

You can edit the text, change the font, size, color and other attributes as you would for any text you enter in Canvas X Geo.
Chapter 4: Simplifying and Accelerating Your Workflow

Importing Files and Images

Importing Files

Canvas X Geo lets you import and export files in many different formats, letting you easily work with colleagues who use different applications and formats. Since the native Canvas X Geo format (.CVX) saves all the objects, properties, and effects that your document can contain, it's recommended that you always save your document in this format, in addition to saving or exporting the document in other formats.

When you save or export a document in a non-Canvas X Geo format, you should be aware of the capabilities and limitations of that file format, so that you can avoid problems such as lost information and printing errors. For example, some formats support only one type of data (vector, raster, or text), while others support multiple types.

In Canvas X Geo you can open a file directly, or you can create a Canvas X document and then place one or more files into it. This lets you work on a single file, or combine files of different formats into a single document.

To Open or Place a File:

1. Choose File, then choose one of the following:
   - Open: Opens the file as a new Canvas X document.
   - Place: Inserts the file in the current Canvas X document. This command is available only if a Canvas X document is open.

2. In the Open or Place dialog box, select the file you want to open, then click the Open or Place button.
   - For some file formats, a dialog box presents options for opening files. Select the appropriate settings, then click OK.
   - If you open the file, Canvas X Geo creates a new document.
   - If you are placing the file, a Place pointer appears. Click where you want to place the top-left corner of the file.

Importing Images

Importing an image places it in the current document as a paint object. In most cases, Canvas X Geo stacks imported images at the center of the current view. You can also choose to import a low-resolution proxy of an image. The proxy image is linked to the original image file. The Acquire as Proxy option is only available when you import TIFF, JPEG, and CVI files.

To Import an Image:

1. Choose Image | Import.

2. In the Select images to import dialog box, select the image you want to import.

3. Click the Import button.
To Import an Image Proxy:

1. Choose **Image | Import**.
2. In the Select images to import dialog box, select a TIFF, JPEG, or CVI image.
3. Select the **Acquire as Proxy** checkbox.
4. Click the **Import** button.
   The proxy image is linked to the image file.

Exporting Files and Images

Exporting Files

In Canvas X Geo, exporting files in different formats is as simple as saving the file in your selected format. Because not all the different file formats support all Canvas X objects and effects, it's recommended that you always save your document in the standard Canvas X (.CVX) format in addition to other formats.

For example, a TIFF file can save only a single raster image; it does not support text or vector objects. If you save a Canvas X document containing vector objects or text in TIFF format, all the objects in the document are changed into an image. If you then open the TIFF file, its contents appear as one raster image, so you can't edit the original text or reshape the vector objects.

When you save a document in another format, Canvas X Geo creates a new file on disk, but does not close the document or change the name of the document in the title bar. If you then try to close the Canvas X document (without saving it in Canvas X format), a message asks you to confirm that you want to close the document without saving it.

💡 **Always save your work as a Canvas X (.CVX) document, so you can edit your work later in Canvas X if necessary.**

Exporting Images

When you export an image from a Canvas X document, Canvas X creates a file on disk from a single selected paint object. Using Export is similar to using Save As, except that you must select a paint object before you choose Export.

To Export an Image:

1. Select the paint object or image to export.
   ![Images in Edit mode can't be exported. Press Esc to exit Edit mode.](image)
2. Choose **Image | Export**, and select a file format.
3. In the Export Image dialog box, type a file name, select a location for the exported file, and then click **Save**.

Saving Files in Multiple Formats

Canvas X Geo lets you save your file in multiple formats with a single click. Instead of having to save your file numerous times in the different formats you need, you can simply set the Multiple Save options and save all your selected formats at once.
To Save a Document in Multiple Formats:

1. Choose File | Save As.
2. In the Save As dialog box, select the Multiple Save checkbox.
3. Click the Options button to select the formats you want to save.

| Raster Formats / Non-raster Formats | Select the formats you want to save the file in. |
| Display Options dialog             | Select this checkbox to display the Render Image or PDF Options dialog boxes so that you can select the settings for each format. |
| Save companion files in subfolder  | Select this checkbox to save the files in a subfolder. The Canvas X image is saved in the folder you specify in the Save As dialog box, and the other files are saved in a subfolder with the same name as the Canvas X image. For example, if your Canvas X image is named New_1.cvx, the subfolder containing the other files will also be named New_1. If you do not select this checkbox, files are saved in the same folder as the Canvas X document. |
| Reset                              | Click this button to reset the Multiple Save options to the factory defaults. |

Once you have saved a document in multiple formats, next time you save the document, it will be saved in all the formats you selected by default. If you want to choose different formats, click File | Save As, and click the Options button to change the multiple format options.

The Multiple Save checkbox is only available if you have selected CVX - Canvas X as the document type in the Save As dialog box.

If you use the same Multiple Save options regularly, you might want to create a Canvas X Template TPL file to save your settings. When you create a new document using the template file, your Multiple Save options are applied to the file.

Viewing and Editing 3D Illustrations

In Canvas X, you can place a 2D view of a 3D object in your document. After you've placed the object, you can edit the view, adjusting the orientation, rotation, zoom, and lighting of the object.

This feature works best with the latest video card drivers. If an object is slow to load, consider updating your video card driver.

To Place a 2D View of a 3D Object:

1. Select the 3D View tool from the Toolbox.
2. Drag and define a rectangular area where the view of the 3D object will be placed.
3. In the AutoCAD 3D File Import dialog box, click the Browse button, select the 3D DWG or DXF file you want to place, then click Open.
4. Click **OK**.

   A 2D view of the object is placed in the document. By default, the object is cached at a resolution of 300 ppi to optimize redrawing.

   You can change the resolution of the cached image. Select the object, then enter the resolution in the Res text box in the Properties bar. You can also choose to not cache the object by deselecting the **Cache Object** checkbox.

**To Modify the View of the 3D Object:**

1. Double-click the 3D object in your Canvas X document.

2. In the 3D View Editor dialog box, use the **View**, **Rotation Angles**, and **Lighting** tools to modify the view of the object.

3. Click **OK**.

### 3D View Editor Dialog Box

<table>
<thead>
<tr>
<th><strong>View Controls</strong></th>
<th>Adjust the orientation, rotation, and zoom of the object.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Magnifying glass:</strong> Select this tool, then click on the preview image to zoom in. To zoom out, click the tool, then right-click the preview image.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Hand tool:</strong> Select this tool, then drag the preview to change the part of the image that is displayed in the view.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Free rotation:</strong> Drag the preview image through any angle.</td>
<td></td>
</tr>
<tr>
<td>• <strong>X-axis rotation:</strong> Drag the preview image along the X axis.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Y-axis rotation:</strong> Drag the preview image along the Y axis.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Z-axis rotation:</strong> Drag the preview image along the Z axis.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Step rotation:</strong> Activated when the X-axis, Y-axis, or Z-axis rotation icon is selected. Set the step of rotation that will be applied with the Down and Up icons.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Zoom controls:</strong> Zoom in or out using the zoom icons, or enter a specific level of zoom.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Revert:</strong> Click this button to revert the transform (rotation, positioning, and zoom) of the viewed object to the state it was in before you opened the 3D View Editor.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Reset:</strong> Click this button to reset the transform of the viewed object to the default setting in the original file.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Rotation Angles</strong></th>
<th>Use the Rotation Angles to set the degree of rotation precisely.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Lighting</strong></th>
<th>Select the <strong>Lighting</strong> checkbox to adjust the lighting.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Light color:</strong> Set a color of the light source by dragging R, G, and B sliders or entering in numerical values, or select a color by clicking on the color spectrum bar with the color picker mouse pointer.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Light source:</strong> Enter X, Y, and Z coordinates to set the position of the light source. Also, you can drag the light source handle in the Preview window to set X and Y positions intuitively.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Back/Front slider:</strong> Drag the slider to set the depth of the light source along the Z axis (0 – 100).</td>
<td></td>
</tr>
<tr>
<td>• <strong>Light intensity:</strong> Drag the slider to adjust the overall brightness of the light source.</td>
<td></td>
</tr>
</tbody>
</table>
### Ambient light color
Set the color of the ambient light. The default color is white.

<table>
<thead>
<tr>
<th>Wireframe</th>
<th>Displays the preview image in wireframe.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>Select the background color of the image. By default the color comes from the original file, or it’s set to black.</td>
</tr>
</tbody>
</table>

Only opaque, solid colors can be used. ie. Transparent is not a valid background color.
Chapter 5: What's Next?

What's Next?

Explore

Canvas X Geo is packed with many more useful features and tools—more than we can cover in this simple guide. Hopefully, these instructions have given you some ideas on how the program can help you create and enhance technical illustrations or use it as a collaborative tool as part of your technical illustration workflow.

We encourage you to explore the rest of Canvas X Geo, and to experiment with some of the features for yourself. If you get stuck, or need more information about a particular tool or feature, try one of the following options:

Consult the Help File

The Canvas X Help provides explanations and steps for using all of the Canvas X Geo features. As well as detailed descriptions of all the tools, the Help provides more information about how to create and enhance, import and export your technical illustrations. Press the F1 key while using Canvas X Geo at any time to open the Help file. Help is available whether you are online or offline.

Product Support and Resources

If you have an Internet connection, you can access the latest information instantly by clicking Help | Product Support and Resources. You will find a PDF of the User Guide, a PDF of this Getting Started Guide, online tutorials, and any updates to the software.

Community

Visit the Canvas GFX Community by clicking Help | Canvas Forum. Here you can find our forums, chat to other Canvas X Geo users, and sign up for our free email newsletters to get tips and tricks, and other useful information.

Web Site

On the Web site, www.canvasgfx.com, you can find more information about Canvas X Geo, and articles about other products.

Contacting Canvas GFX

When you buy Canvas X Geo, you are automatically eligible for ongoing service by our technical support team. If you have any technical or product-related questions, or just general feedback you would like to share, please visit our Web site at:

www.canvasgfx.com/en/support

Canvas GFX 2/19/2020