



Inspiring Creativity

A large, stylized blue graphic resembling a large number '8' or a thick curved line that frames the right side of the page. The interior of this shape is filled with a dense collection of white line-art icons representing various creative and digital tools, such as a paint bucket, pencil, eraser, ruler, star, computer monitor, tablet, camera, and geometric shapes.

# DrawPlus X8

User Guide

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# Welcome



1



## Welcome to DrawPlus

Welcome to **DrawPlus X8**—the design and illustration solution from **Serif**, packed with all the features expected of award-winning design software. From **decorative page elements** and **logos** to **full-page illustrations**, **scale drawings**, **multi-page folded publications**, and **Stopframe** or **Keyframe animations**—DrawPlus X8 does it all. With the power of scalable vector graphics at your command, you'll see the creative possibilities open up right before your eyes! Whether you're a beginner or an expert, you'll find easy-to-use tools you can use right away.

### Upgrading

If you've upgraded from a previous version, this new edition of DrawPlus includes a host of exciting new features which complement DrawPlus's existing key features. We hope you also enjoy the additional power and performance edge.

### Registering

Don't forget to register your new copy, using the **Registration Wizard** on the **Help** menu. That way, we can keep you informed of new developments and future upgrades!

## New features

DrawPlus X8 (in 32 and 64-bit versions) introduces increased ease of use, a host of new and improved features and tools—including one for animating presentations, as well as photo and effect improvements, and also enhanced importing and exporting options.

- **High DPI support**  
Windows display scaling is supported with automatic selection of suitably sized, sharp-looking buttons, controls and menus, so for very high-resolution displays, displays at a distance, or for those with impaired vision, DrawPlus X8 will look better than ever.
- **Presentations with Rostrum Camera** (see p. 168)  
Show off your **presentation**, **slideshow**, or **storyboard** slide-by-slide in an innovative and creative way using cool **Rostrum Camera panning**, supporting slide **transitions** and progressive or layer-by-layer **reveals**. Create from preset page layouts or base each slide on drawn objects equally. Finally, export easily to Flash or video using a range of presets.

## Creative

- **B-Spline curves** (see p. 32)  
As an alternative to drawing Bézier curves with the Pen Tool, try the **B-Spline Tool**. Using a polygon framework, curve creation is made simpler without the complexity of node and control handle manipulation. Convert from B-spline curves to Bézier curves if needed.
- **Contours for cool tiered effects** (see p. 78)  
Shapes and text take on a stylish look with a **multi-contour** effect. Copies of the original object are placed in front or behind the original object; they incrementally scale and show with decreasing/increasing greyscale levels. Contours can be



**customized** to control the number of contour steps and be placed inside the object rather than outside.

- **New and improved filter effects** (see p. 128)  
Add a new Trail effect, add ripple effects to reflections, apply a cutoff setting for feathering, a directional/gradient feather, and an outline and contoured line texture for variable-intensity drop shadows.
- **Replicate** (see p. 70)  
The new **Replicate Tool** creates copies of selected objects directly on the page in repeating columns and rows, with controllable inter-object spacing. At any time, return to the replicated objects to add more or fewer objects.
- **Flooding areas** (see p. 38)  
The **Flood Tool** is perfect for creating and colouring areas between intersecting curves in your design as opposed to colouring an object's line or fill. With this level of selective colouring, otherwise restricted to objects, areas created by overlapping drawn curves or by QuickShapes converted to curves can be coloured freely. These coloured areas become closed shapes in their own right.
- **Vector pattern fills** (see p. 106)  
The Swatch tab provides a new **Vector** pattern fill category which hosts an impressive selection of brick, tile, dot, screen, line and hatched patterns that output as vectors. Each fill can be customized with respect to scaling, spacing, rotation and recolouring. You can even create custom fills from drawn shapes or imported Serif Metafiles.

## Ease of Use

- **Feed-based Startup Assistant** (see p. 10)  
The new-look starting point for new drawings provides a wealth of constantly updating cross-product news and DrawPlus-specific **learning resources** (video tutorials, written tutorials, help, and Tips & Tricks). The assistant keeps track of unread articles so you won't miss a thing! An Open option also gives you access to all your existing publications, based on document history.
- **Restore Last Session** (see p. 16)  
On DrawPlus restart, optionally enable this feature to automatically reopen previously opened drawings (view settings and current page display are preserved too!) and start from where you finished your last session.
- **Smart sizing and rotating** (see p. 68)  
Multiple objects can be scaled or rotated proportionally with a transformed selected object in your selection; individual objects always retain their relative position on the page—great for charts and plans! Shearing operations are also supported.

## Pictures

- **New photo editing tools and effects** (see p. 118)  
Vibrance, Split Tone, Tilt Shift, and Clarity are new PhotoLab filters that add fantastic effects to enhance pictures. Now control vignette positioning and sizing. Blend effects smoothly across an area using gradient masks, and remove unwanted blemishes, clutter or imperfections with a clone brush.

- **New scanning power** (see DrawPlus Help)  
As manufacturers have been very slow to introduce 64-bit scanning software, DrawPlus has been updated to support 32-bit and any newer 64-bit drivers, for both WIA and TWAIN driver types. Also scan and place multiple images in one operation if your scanner allows, without lifting the lid each time to swap pictures.

## Installation

Installing DrawPlus follows different procedures depending on whether you are installing from disc or via download.



You can install your new version alongside previous versions and use them independently.



32 or 64-bit DrawPlus X8 installs to respective 32 or 64-bit computers.

### Installation procedure (from disc)

- Insert your purchased disc into your disc drive.
  - If AutoPlay is enabled on the drive, this automatically starts the Setup Wizard. Follow the on-screen instructions for install.
- or-
- If AutoPlay is not enabled (or doesn't start the install automatically), navigate to your program disc and double-click **autorun.exe**.

## Installation procedure (from download)

- From serif.com, when logged into your Serif account, follow the on-screen instructions to download.

## System Requirements

### Minimum:

- Windows-based PC\* with mouse or equivalent input device
- Operating systems:
  - Windows® 8 (32 or 64 bit)
  - Windows® 7 (32 or 64 bit)
  - Windows® Vista (32 or 64 bit)
  - Windows® XP SP3 (32 bit)
- PC Memory:
  - 512MB RAM (Windows® XP)
  - 1GB RAM (Windows® Vista and 32-bit Windows 7® and 8)
  - 2GB RAM (For 64-bit Windows® 7 and 8)
- Hard Drive Space:
  - 665MB free hard disk space for physical media install (and a DVD drive)
  - 1GB free hard disk space for download install (additional space required during installation)
- Screen Resolution:
  - 1024 x 768 monitor resolution (at 100% scaling)
  - 1280 x 960 monitor resolution (at 125% scaling)
  - 1536 x 1152 monitor resolution (at 150% scaling)
  - 2048 x 1536 monitor resolution (at 200% scaling)

- **Other:**

Internet account and connection for accessing online resources.

\* Main processor must support SSE2 instructions. To enjoy the full benefit of brushes and their textures, you must be using a computer whose processor supports SSE (most modern computers do). On brush selection, an on-screen message will indicate if your computer is non-SSE.

Additional disk resources and memory are required when editing large or complex documents.

### **Recommended:**

As above but:

- Dual-processor PC technology

### **Optional:**

- Windows-compatible printer
- TWAIN-compatible scanner and/or digital camera
- Pressure-sensitive pen tablet

# Getting Started



2

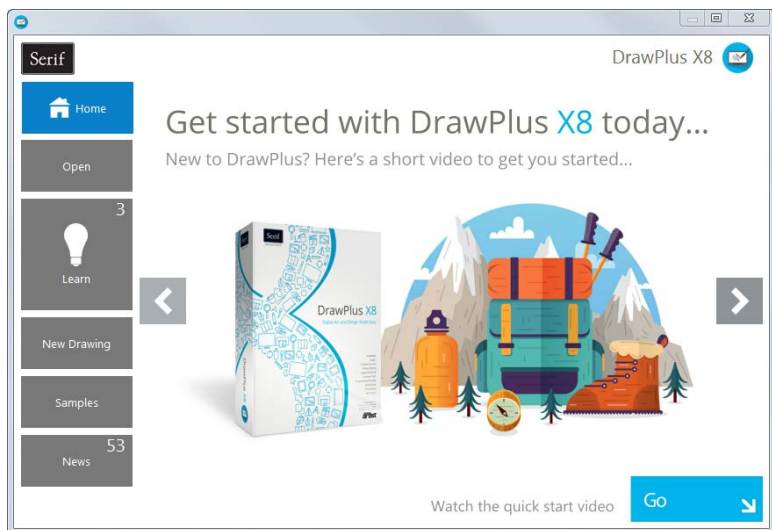


## Startup Assistant

Once DrawPlus has been installed, you're ready to start.

- For Windows Vista/7: Setup adds a **Serif DrawPlus X8** item to the **All Programs** submenu of the Windows **Start** menu. Use the Windows **Start** button to pop up the Start menu, click on **All Programs** and then click **Serif DrawPlus X8**.
- For Windows 8: The Setup routine during install adds a **Serif DrawPlus X8** entry to the desktop and also to the Start screen. Double-click the DrawPlus icon from the desktop, or click the DrawPlus tile on the Start screen.

On program launch, the **Startup Assistant** is displayed which offers different routes into DrawPlus:

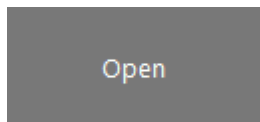


The options are described as follows:



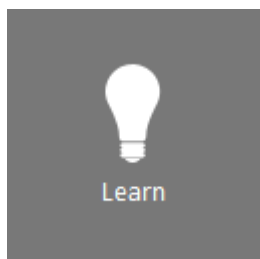
The default home page provides access to Serif promotions and tutorial articles to get you started with DrawPlus.

View the DrawPlus Overview or click **Go** to see the Quick Start video.



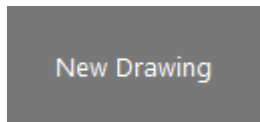
Provide document history, such as files you have recently worked on including Restore the Last Session which opens the most recent drawing you created.

Browse your computer to access DrawPlus files and picture files or create a design from an existing PDF file.



Online videos and written tutorials, help, tips & tricks, and more via an updating learn feed that can be filtered by article Type.

The Product Help and your electronic DrawPlus X8 user guide are also provided.



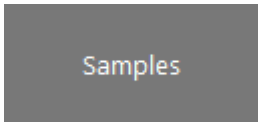
Create a New Drawing from scratch using a simple setup.

Create a New Keyframe Animation.

Create a New Stopframe Animation.

Create a Custom drawing.

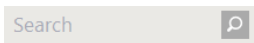




Create an instant drawing from a pre-designed sample.



For cross-product news, company news, articles, and product announcements, using Serif's news feed.



Use the keyword Search box to filter specific file names, learn articles, samples, news or articles.

Any time you access the Startup Assistant, the Learn or News buttons indicate the number of new articles to be viewed (if available). This number will decrease as you read each article in the Learn or News pane. When new articles arrive, these will be indicated the next time you open the Startup Assistant.



Any new unread article arriving in the Learn or News pane will display a "new" indicator in its thumbnail.



Once you've clicked on a new article the "new" indicator changes to a "read" indicator.



To access the Startup Assistant when DrawPlus is already running, choose **Startup Assistant** from the **File** menu.

## Starting with a new drawing

The first time you launch DrawPlus, you'll see the **Startup Assistant**, with a menu of choices.



The **New Drawing** option offers an easy way to create your new drawing and lets you choose the initial setup for the particular type of document you'll be producing.

DrawPlus offers a wide range of preset document types from several categories:

### Category

### Document types



#### Regular

Portrait or landscape in all the commonly encountered page sizes.



#### Folded Publications

Greeting cards, menus, and tri- or Z-fold booklets.



#### Presentations

Slide presentations with Rostrum Camera.



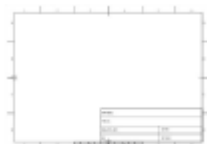
#### Large Publications

Banners, posters



Labels, business cards, tags

**Small  
Publications**

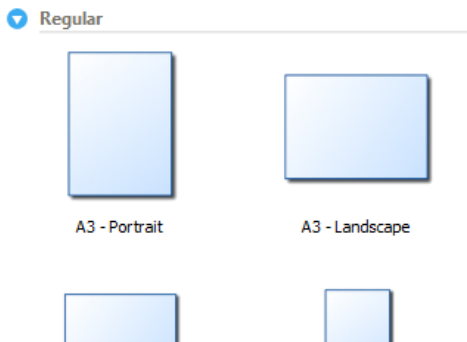


ISO and ANSI layouts

**Technical  
Drawing**

**To start a new drawing from scratch using the Startup Assistant:**


1. Start DrawPlus (or choose **File>Startup Assistant** if it's already running).
2. Select **New Drawing** from the Startup Assistant.
3. Review document categories in the right-hand pane (and sub-categories if applicable). Categories contain preset document types (see above) or if you select **Regular**, you can choose from standard document sizes presented in Portrait or Landscape sub-categories.
4. Select a document type thumbnail from a category in the right-hand pane.




The new document opens.

## To start a new drawing during your DrawPlus session:

- Click  **New Blank Drawing** on the **Standard** toolbar.

 You can always adjust the page settings later via **File>Page Setup**.

 To start with a new keyframe or stopframe animation, see Getting started with animation on p. 142.


## Opening a drawing

You can open an existing DrawPlus drawing from the **Startup Assistant**, **Standard** toolbar or the **File** menu.

### To open an existing document from the Startup Assistant:

1. From the Startup Assistant, click **Open**. Recently opened files are shown, such as today, last 7 days and Last 30 days.
2. Select a file to open it.

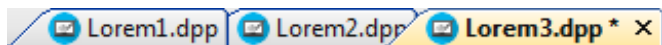
## To open an existing document via toolbar or menu:

1. Click  **Open** on the **Standard** toolbar, or select **File>Open**.
2. In the Open dialog, navigate to, then select the file name and click the **Open** button.



You can also open a range of file types including images, PDF documents, and Adobe Illustrator files.

Once a drawing is opened in its own document window, the window (and drawing) can be made currently active from a Document tab (below) or via the **Window** menu.




## Restore last session



Instead of launching the Startup Assistant, DrawPlus can restore your last session. This option opens the file you most recently saved. You can do this on an ad hoc basis when you open DrawPlus, or choose to always restore the last session by default.


### To restore your last session:

1. From the Startup Assistant, click **Open**.
2. Select **Restore Last Session**. The file opens.

## To always restore the last session:

1. From the drawing's context toolbar, select  **Options**.
2. From the **Options>General** menu option, select **Restore Last Session** on the **On start up** drop-down list.
3. Click **OK**.


 When using this feature, remember to close the DrawPlus program at the end of your session (as opposed to closing individual drawings). To do this, click  at the very top-right of your program.

 For other options to customize DrawPlus, see **Setting program options** in DrawPlus Help.

## Saving your work

DrawPlus saves its documents as .dpp (Drawing), .dpx (Template) or .dpa (Animation) files (for Stopframe and Keyframe animation modes).

### To save your work:

- Click  **Save** on the **Standard** toolbar.
  - or -
  - To save the document under its current name, choose **Save** from the **File** menu.
  - or -
  - To save under a different name, choose **Save As** from the **File** menu.

## Setting measurement units and drawing scale

For precision drawing, you need techniques that allow you to position and draw accurately without effort, that will also be of use at any scaled size. Such techniques make use of rulers and guides for actual-size or scaled drawings.

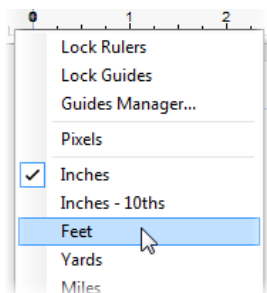
### Rulers

The rulers that surround the page allow you to measure the exact position of an object.

Ruler units used by DrawPlus determine the units displayed on the rulers and the reported units shown when positioning and scaling objects (either around the object or on the **Hintline**). You can change the ruler units without altering the document's dimensions. Unit settings are saved with your DrawPlus drawing; as a result loading different drawings, templates, etc. may change your working measurement units.

### To change the measurement unit:

- Right-click on a ruler and select an alternative measurement unit.

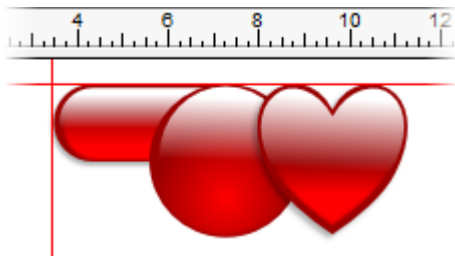




Ruler Units are equivalent to Page Units unless you're working on a scale drawing. For example, one ruler centimetre equals one centimetre on the printed page.

## Creating guides

If you want to position objects repeatedly on the same horizontal or vertical boundary then **guides** can be used. DrawPlus lets you set up horizontal and vertical **guides**—non-printing, red lines you can use to align one object with another.



Guides can be created (and positioned) either by dragging from a ruler or via the **Guides Manager** (right-click any ruler). Both methods let you add guides to the current page, or, if creating a folded document, guides across a page spread.

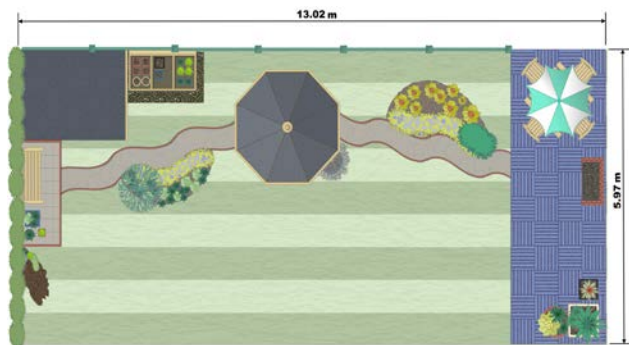
### To show/hide guides:

- To **show** or **hide** guides, check or uncheck **Layout Tools>Guides** from the **View** menu.




## Drawing scale

You can create **scale drawings** (such as a home/garden design or model diagram) by setting a ratio other than 1:1 between page units and ruler units. For example, you might wish to set one page centimetre equivalent to 0.5 metre, a good scaling ratio for designing gardens of a typical size.



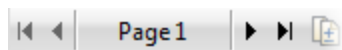
Use **Dimension tools** (see p. 49) in conjunction with scale drawings for on-the-page measurements, which automatically update as you move objects.

### To change the drawing scale:

1. Choose  **Drawing Scale Options** from the context toolbar (shown with the Pointer Tool selected). Choose
2. Check the **Scale Drawing** box.
3. Use the input boxes to set the drawing scale as a proportion between the Page Distance (in **page units** that define the document's actual printing dimensions) and the Ruler Distance (in on-screen **ruler units** that represent the "real world" objects you're depicting).

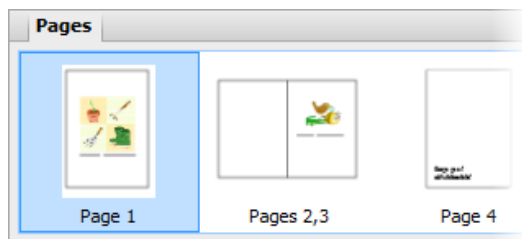
## Viewing pages

Once you've got a page in view, you can use the scrollbars at the right and bottom of the main window to move the page and pasteboard with respect to the main window. As you drag objects to the edge of the screen the scroll bars adjust automatically as the object is kept in view.



The Hintline toolbar at the bottom of the screen displays the current page number and provides a number of controls to let you navigate around your pages.


As an alternative, the Pages tab shows your pages as thumbnails, which when selected, will display that page in your workspace.



### To navigate pages:

- Click  **Previous page**,  **Next page**,  **First page** or  **Last page** on the Hintline toolbar.

### To go to a specific page:

1. Display the **Pages tab** (docked at the bottom of your DrawPlus workspace) by clicking the  button.
2. Click on a thumbnail to jump directly to that page.

## Zooming

The **Hintline** toolbar also allows the user to view and/or edit the page at different levels of detail. You can use the **Zoom Tool**, **Pan Tool**, **Current Zoom**, **Zoom Out/In** (with slider), and **Fit Page** options.




If you're using a wheel mouse, you can scroll the wheel forward or back to move up or down the page. Try combining the **Ctrl** key and scrolling up or down for immediate in/out zoom control.

## Adding and deleting pages

DrawPlus lets you add a page after the last page in your drawing. You can also add one or more pages before or after a currently selected page; you can also copy objects from a chosen page.

### To add a new page:

- From the last page of the current drawing, click the  **Next Page** button on the Hintline toolbar.

### To delete one or more pages:

- On Page Manager's **Delete Page** tab, specify the number of pages to delete and the page after which pages should be deleted.



The document format (as determined in **File>Page Setup**) will determine whether or not you can add or delete pages. For example, Folded documents have a fixed number of pages.

# Lines, Curves, and Shapes



3



## Selecting one or more objects

Before you can change any object, you need to select it using one of several tools available from the top of the **Drawing** toolbar.



### Pointer Tool

Click the **Pointer Tool** to select, move, copy, resize, or rotate objects. You can select and rotate an object around a centre of rotation.

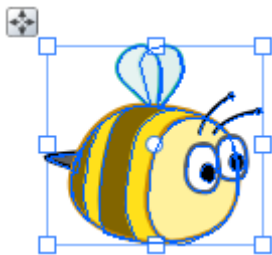


### Node Tool

Click to use the **Node Tool** to manipulate the shape of objects, or move or copy objects.

### To select an object:

- Click on the object using one of the tools shown above. For the Pointer Tool, small "handles" appear around the object indicating selection.



For the Node Tool, editable nodes are displayed for lines—sliding handles are additionally shown for adjustment of QuickShapes and text. If objects overlap, use the **Alt** key while clicking repeatedly until the desired item is selected.



If an object won't select, it may be on another layer. Try clicking **Edit All Layers** on the Layers tab to allow selections to be made on any layer.

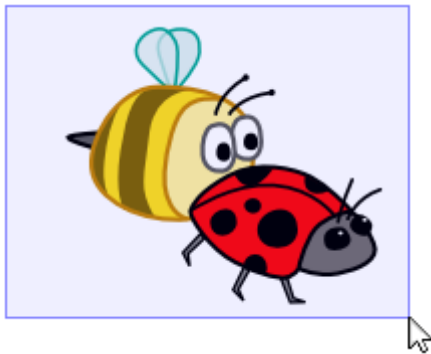


## Selecting multiple objects

It is also possible to select more than one object, making a **multiple selection** that you can manipulate as if it were one object, or turn into a grouped object (p. 80).

### To select more than one object (multiple selection):

1. Choose the **Pointer Tool**.
2. Click in a blank area of the page and drag a "marquee" box around the objects you want to select.



Release the mouse button. All of the objects within the marquee box are selected and one selection box, with handles, appears around the objects. To deselect, click in a blank area of the page.

- or -

3. Click on the first object for selection.

4. Press the **Shift** key down then click on a second object.
5. Continue selecting other objects to build up your multiple selection. Handles (or a bounding box, depending on the tool) appear around the multiple selection.

### To select all objects on the page:

- Choose **Select All** from the **Edit** menu (or use **Ctrl+A**).

### To add or remove an object from a multiple selection:

- Hold down the **Shift** key and click the object to be added or removed.

If you have one or more objects selected, you can select all other unselected page objects instead; the originally selected objects become deselected.

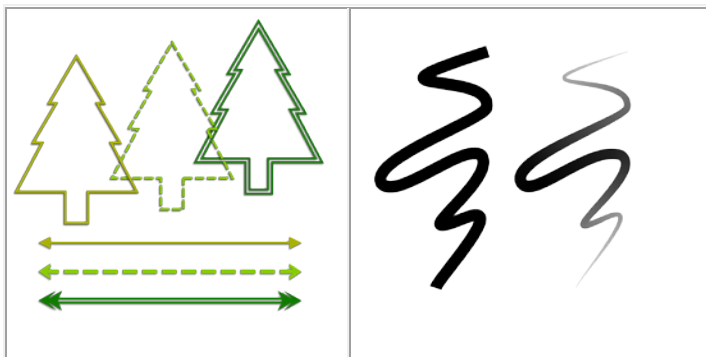
### To invert a selection:

- From the **Edit** menu, select **Invert Selection**.



For very precise object selection, you can draw a lasso around an object to select it (press the **Alt** Key down with the selection tool enabled, then drag around the object ).


## Drawing lines and shapes



Lines can be either straight or curved, and can have properties like **colour** and **width** (thickness). They can also adopt specific **line styles**, **ends**, and **caps**.

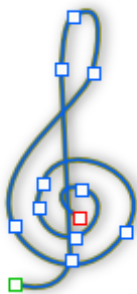
If you're using a pen tablet or using simulated pressure sensitivity (with DrawPlus's Pressure tab), you'll be able to draw realistic lines of varying width and opacity using pressure sensitivity—just like drawing with real pencils and pens.

### To draw a freeform line:

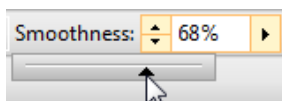
1. Choose the  **Pencil Tool** from the **Drawing** toolbar.
2. Click once, then drag across the page, drawing a line as you go. The line appears immediately and follows your mouse movements.
3. To end the line, release the mouse button. The line will automatically smooth out using a minimal number of nodes.





Note the little squares indicating its nodes—at the two ends, and at each point where two line segments come together.

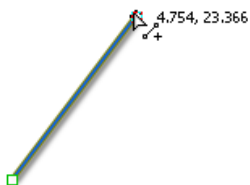


- (Optional) To set the degree of smoothing to be applied to the line (and subsequent lines), set the **Smoothness** value on the context toolbar above your workspace.



## To draw a straight line:

- 

 From the **Drawing** toolbar's Line Tools flyout, click the **Straight Line Tool**.
- Click where you want the line to start, and drag to another point while holding down the mouse button, then release the mouse button. The straight line appears immediately.







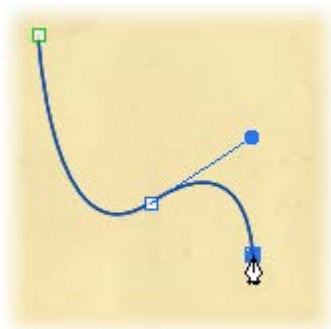
Any kind of open line (that is, one that hasn't been closed to create a shape) can be extended, and you can use any of the three line tools to do so.

### To extend a line:

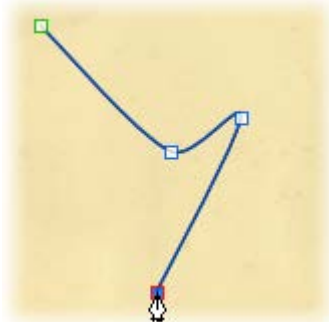
1. Move the cursor over either of the end nodes, a small cursor will appear. Click at that location.
2. The line that you drag out will be a continuation of the existing line, as a new line segment.

### To draw a curved line:

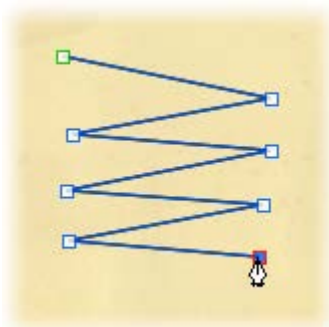
1. Choose the  **Pen Tool** from the **Drawing** toolbar's Pen Tools flyout.
2.    From the displayed context toolbar, choose to create your drawn segments in **Smooth**, **Smart**, or **Line Segments** creation **Mode**.
  - **Smooth Segments:** draws Bézier curves smoothly segment-by-segment, with manual on-curve and off-curve adjustment via nodes and control handles, respectively.



- **Smart Segments** (default): automatically determines slope and depth for a rounded, best-fitting curve. No control handle adjustment is normally necessary.



- **Line Segments**: creates a zigzag line without curving through nodes.

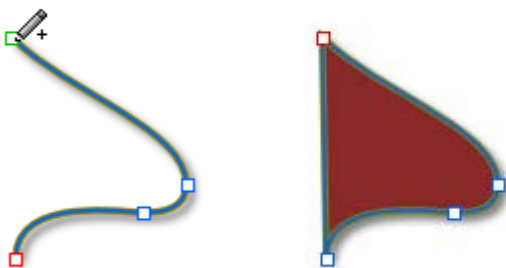


See DrawPlus Help for an in-depth look at drawing lines in each of these modes.


## Drawing shapes

When a line (or series of line segments) forms a complete, enclosed outline, it becomes a new **closed** object called a **shape**. Because shapes have an interior region that can be filled (for example, with a solid colour, vector or a bitmap), they have fill properties as well as line properties.

You can make a shape by closing a curve—extending a freeform line or a segmented straight line back to its starting point. Shapes have an interior which is filled with the current **default fill** (see Setting fill properties on p. 92) when the shape is closed.




### To close an existing curve (with a straight line):

1. Select the curve with the **Node Tool**, **Pencil** or **Pen Tool**.
2. Click  **Close Curve** on the context toolbar. A Straight segment appears, closing the curve.

### To close a curve (without new segment):


1. Select the curve with the **Node Tool**.

- Using the  node cursor, click on an end node and drag the curve onto the other end node and release the mouse button to create a shape.



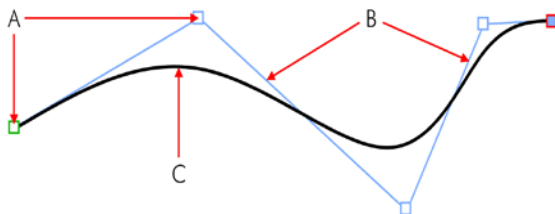
If you're trying to draw an outline made up of many independent curves (e.g., a cartoon ear, rose, etc.) and you want to retain the fill colour, you can fill each curve without closing them. This is made easy by using the **Fill-on-Creat** feature.

### To fill an unclosed curve automatically:

- Select the Pencil Tool, Pen Tool, or Brush Tool.
- Enable  **Fill-on-Creat** from the context toolbar, and select a suitable fill from the Colour tab. You'll also need to ensure **Select-on-Creat** is enabled on the context toolbar (Freehand and Brush tools only).
- Draw a freeform line, pen line, or brush stroke into a curve. The resulting curve is filled with the current fill colour.

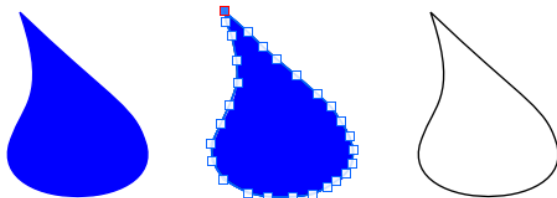
## Drawing B-Spline curves

The **B-Spline Tool** draws smooth curves when you create open or closed shapes. B-spline, also known as Basis spline, uses a mathematical formula. It is this calculation that produces really nice elegant curves. When you use the B-Spline Tool, control points are connected together as you draw and a polygon is constructed. The polygon controls the position and direction and calculates the smoothest possible curve between two points on the page.





*A - control point, B - control polygon, C - B-spline curve*

When you still want nice curves and your object may need some flat sections, you can clamp control points to create sharp corners and straight lines. You can also convert B-Splines to Bezier for flexible editing as you prefer. The B-Spline Tool is especially useful for tracing curved objects such as a musical note to make perfect duplicates, or the tear example shown.



## Creating curves with the B-Spline Tool

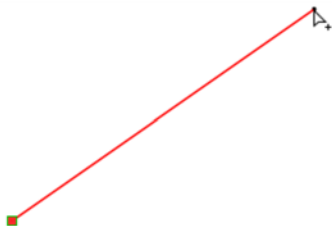
### To create an open curve:

1. Click arrow next to the  **Pen Tool** on the **Drawing** toolbar to display the Line Tools flyout.
2. From the flyout, select the  **B-Spline Tool**.
3. Position your cursor on the page where you want to start drawing.

- Click once to add the first control point.

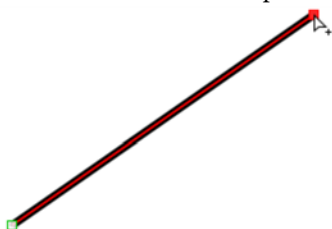


- On the page, position the cursor at the next point.



A polygon line extends from the current point.

- Click once to add a second point.

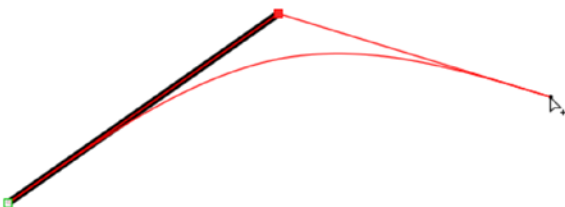


A straight B-spline curve is added to the page and follows the polygon line.



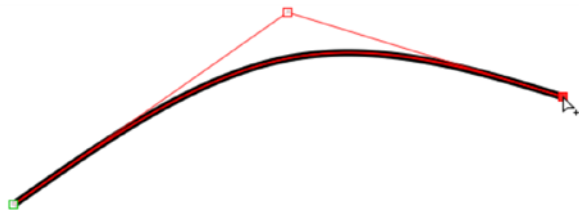
To draw a **sharp corner or a straight line**, press the **Alt** key.

- Position the cursor at the next point.



The polygon line extends from the current point. The B-spline curve created by the polygon displays.

- Click to add another point and repeat for as many more as you need.



The control polygon extends and the B-spline curve updates as you do this.

- When you are finished with the curve, press the **Esc** key to cancel the selection.

### To create a closed shape:

- With the **B-Spline Tool** selected, position your cursor on the page and click to add the first control point as before.
- Position the cursor at the next point and click again.
- Position the cursor again in a place and click for each subsequent point required.
- To close the shape, position the cursor over the first control point and click once followed by **Esc**.




### Creating sharp corners or straight lines

You can create sharp corners or straight lines by clamping control points of your B-spline curve to the control polygon. If you clamp one



control point, you will get a sharp corner but not a straight line or a curve. If you clamp two adjacent control points, you'll get a perfect straight line between them. You can hold the **Shift** key if you want to select and clamp multiple control points concurrently.


### To use clamping:

-  1. With the curve or shape selected, on the **Drawing** toolbar, select the **B-Spline Tool**.
2. Select the control points you require.
3. On the context toolbar, click  **Clamp Curve** to clamp, or  **Unclamp Curve** to unclamp any control points.

### Editing B-splines

You can edit your B-spline curve by manipulating its control points in a similar way that you would when moving nodes around after having drawn a line or a shape with the Pen or Pencil Tool.

### To edit a B-spline:

-  1. With the curve or shape selected, on the **Drawing** toolbar, select the **B-Spline Tool**.
2. Select a control point.
3. Drag the control point into a new position. The control polygon gives you a preview of how the curve will change as you drag.

Other editing options available are creating sharp corners or straight lines within your shape or curve, and also converting a B-spline to a Bézier.


## Using QuickShapes



**QuickShapes** are pre-designed objects that you can instantly add to your page, then adjust and morph into a variety of further QuickShapes. QuickShapes are added from a flyout containing a wide variety of commonly used shapes, including boxes, arrows, hearts, spirals and other useful symbols.

Morphing to new shapes can be carried out after you add the QuickShape to the page (or as you add by double-clicking on the page).

### To create a QuickShape:

1. Click the down arrow on the  QuickShape button on the **Drawing** toolbar, then select a shape from the flyout.

The button takes on the icon of the shape you selected.


2. At your chosen cursor position, click and drag on the page to draw out your QuickShape to a chosen size (use the **Shift** key to lock the aspect ratio; the **Ctrl** key to scale from its centre point; or both together).

New QuickShapes adopt the currently set line and fill in DrawPlus.

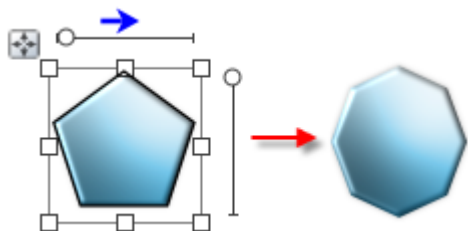


**Ctrl**-double-click to place a default-sized QuickShape on the page.

## To adjust the appearance of a QuickShape:

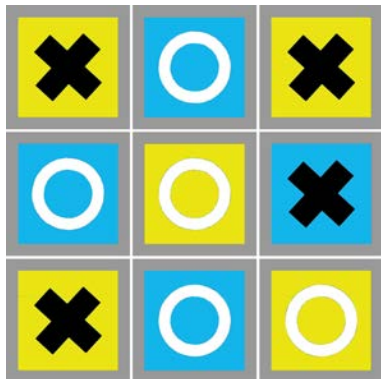
1. With the  **Node Tool** (**Drawing** toolbar) selected, click on the QuickShape to reveal sliding handles around the shape. These are distinct from the "inner" selection handles. Different QuickShapes have different handles.
2. Drag any handle to change the appearance of the QuickShape.

For example, by dragging the top sliding handle to the right of the shape below will produce a different shape variant:



## Flooding areas

The **Flood Tool** lets you quickly flood areas with colour. The Tool will look for any edges that are visual boundaries in your drawing. It then creates a shape which floods the area between the edges. This gives you the option of easily flooding closed sections of an object's areas.




The noughts and crosses example was flooded with colour using the **Flood Tool**. The tool flooded the noughts, crosses, squares and border objects even though they were separate items. You could also easily flood any traces that you have done with the Pen Tool.

Areas are flooded by pixels and the shapes you create then become editable like any other object you might want to transform.


## Specifying flood settings

There are some settings that accompany the **Flood Tool** which can be specified before or after you have flooded.

### To specify flood settings:

1. On the **Drawing** toolbar, click the arrow next to the  **Freeform Paint Tool**.

This will display the Vector Edit Tools flyout.


2. From the flyout, select the  **Flood Tool**.
3. On the **Context** toolbar, specify the settings shown below.





If you don't want to bother with these settings and you just want to start flooding, see *To flood an area* on p. 40.

- **Tolerance:** This defines the difference from the starting pixel where the boundary will be drawn. Any pixel which is less than the tolerance in difference to the starting pixel, and is connected to the starting pixel by other similar pixels will be filled. Any connected pixel which is more different than the tolerance will be considered a boundary and will not be filled.
- **Feature Size:** This controls the accuracy of the flood. A smaller value ensures an accurately shaped flood.
- **Inflate / Deflate:** The created flood will be resized based on this value. **Inflate** (positive values) can be used to ensure there are no gaps. **Deflate** (negative values) can be used for artistic effect.
- **Apply Line Style:** Automatically apply the line style to the created flood using the style currently set in the **Line** tab.
- **Select-on-Create:** Upon flooding, the flood object is automatically selected for editing.

## Flooding an area

Once you have applied the optional flood settings, you can start flooding. Based on the settings, DrawPlus will flood the visual boundary of an area with a colour or fill specified in the  **Fill** swatch.

### To flood an area:

1. On the **Drawing** toolbar, click the arrow next to the  **Freeform Paint Tool**. This will display the Vector Edit Tools flyout.
2. From the flyout, select the  **Flood Tool**.

3. On the **Colour** tab, pick a colour for the  **Fill/Line Swatch**.



You can also apply preset solid colours or **transparency effects**.


4. Select a visual area and left-click it.
5. Repeat as necessary for any additional colours you want. If you have Select-on-Create enabled, you'll need to select the select the Flood Tool again.
6. If Select-on-Create is enabled, once the flood has been created, use the **Clean Curves** option on the **Context** toolbar to remove unnecessary nodes and smoothen the edges of your shape.

## Editing flood shapes

Once you have finished flooding, you can edit flood shapes by using the **Pointer Tool** to select, move and resize them.



## To edit a flooded shape:

1. On the **Drawing** toolbar, select the  **Pointer Tool**.
2. Click and drag an individual flooded shape or the original object away from other objects.
3. Apply any modifications as needed.

## Editing lines and shapes

To edit lines or shapes, you can manipulate their segments, on-curve nodes, and off-curve control handles allowing you to:

- Redraw part of a line
- Reshape a line
- Simplify a line (remove nodes)
- Enhance a line (add nodes)
- Change the type of node or line segment




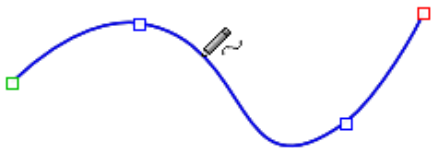
The procedures below relate to lines drawn with the Pencil Tool, but also to curves drawn with the Pen Tool. For simplicity, we'll only use the term line.

## Redrawing part of a line

With the **Pencil Tool**, it's easy to redraw any portion of a line.

### To redraw part of a selected line:

1. Select the line, then the  **Pencil Tool**. Hover the displayed cursor on the line where you want to begin redrawing. The cursor changes to indicate you can begin drawing.
2. Double-click on the line. A new node appears.



3. Keep the mouse button down and drag to draw a new line section, connecting it back to another point on the original line. Again, the cursor changes to include a curve when you're close enough to the line to make a connection. When you release the mouse button, the original portion is replaced by the newly drawn portion.




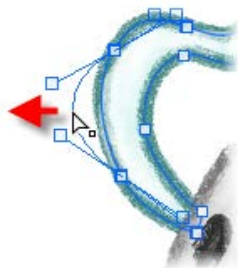
## Reshaping a line

The main tool for editing lines and shapes is the **Node Tool**. You can drag segments or select one or more nodes on the object, then use the buttons on the tool's supporting context toolbar to adjust.



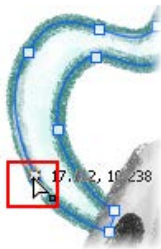
## To reshape a curved line:

1. Click the  **Node Tool** on the **Drawing** toolbar.
2. Select any line on your page. The line's on-curve nodes appear, and the context toolbar also pops up.
3. Hover over a segment and drag the segment to form a new curve shape.

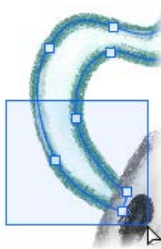


-or-

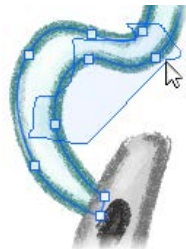
Select nodes and drag. Selection can be by one of the following methods:



*Hover over a single node and click to select the node. **Shift**-click for multiple nodes.*



*Drag out a marquee to select multiple neighbouring nodes*

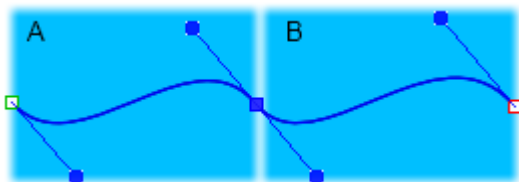


*Drag out a lasso (with **Alt** key pressed) to select multiple nodes otherwise difficult to select via a marquee.*



Once a square **end node** or **interior node** is selected, the node becomes highlighted and off-curve rounded **control handles** for all line segment(s) will appear. A single control handle shows on an end node; a pair of handles will show on a selected interior node.

Remember that a segment is the line between two nodes; each node provides two control handles, with each handle controlling different adjoining segments. One control handle in a segment works in conjunction with the control handle on the opposite end of the segment.




(A) Line Segment 1, (B) Line Segment 2

4. Drag any selected node to reshape adjacent segment(s).
5. Drag one or more control handles to produce very precise changes in the curvature of the line on either side of a node. You can shorten or lengthen the handles, which changes the depth of the **curve** (that is, how far out the curve extends), or alter the handle angle, which changes the curve's **slope**.


## Simplifying or enhancing a line

The more nodes there are on a line or shape, the more control over its shape you have. The fewer nodes there are, the simpler (smoother) the line or shape.

### To adjust the smoothness of the most recent pencil line:

1. Choose the  **Pencil Tool** and draw a freeform line.
2. From the context toolbar, click the right arrow on the **Smoothness** option and drag the displayed slider left to increase the number of nodes.
3. To make the curve less complex, i.e. smoother, drag the slider right to decrease the number of nodes.

### To add or delete a node:

- To **add a node**, click along a line segment with the Node Tool or Pen Tool to add a new node at that point. The new node will be created and will be selected.
-  To **delete a node**, select the line with the Node Tool then the node itself and click the **Delete Node** button on the context toolbar (or press the **Delete** key). The node will be deleted, and the line or shape will jump to its new shape. With the Pen Tool selected, you can also delete a node by clicking on it.

You can also use the Node Tool to reposition the nodes, and reshape the line or shape, by dragging on the new handles.

## Changing nodes and line segments

Each segment in a line has a control handle at either end, so at each interior or "corner" node (where two segments join) you'll see a pair of handles. The behaviour of these handles—and thus the curvature of the segments to either side—depends on whether the node is set to be **sharp**, **smooth**, **symmetric**, or **smart**. You can quickly identify a node's type by selecting it and seeing which button is selected in the displayed context toolbar. Each type's control handles behave differently as described below.

### To change one or more nodes to a different type:

1. Select the object with the **Node Tool**, followed by the node(s) you want to change.
2. Click one of the node buttons on the displayed context toolbar.



A **Sharp Corner** means that the line segments to either side of the node are completely independent so that the corner can be quite pointed.



A **Smooth Corner** uses Bézier curves, which means that the slope of the line is the same on both sides of the node, but the depth of the two joined segments can be different.




At a **Symmetric Corner**, nodes join line segments with the same slope and depth on both sides of the node.

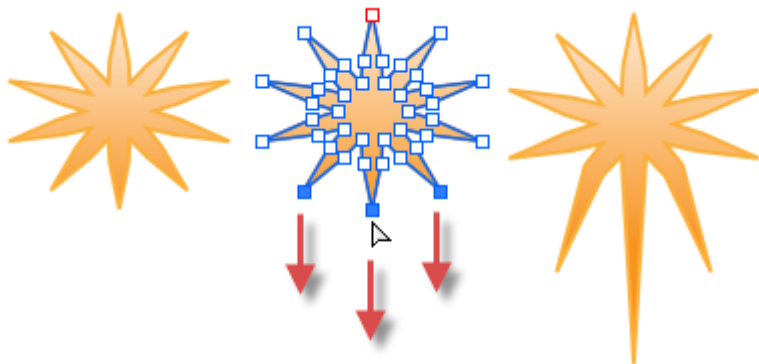


**Smart Corner** nodes automatically determine slope and depth for a rounded, best-fitting curve. If you attempt to adjust a smart corner's handles, it becomes a smooth corner. You can always reset the node to smart—but to maintain smart nodes, be careful what you click on!


## Converting a shape to editable curves


The conversion of QuickShapes to curves provides you with a starting point for your own shapes (below), whereas converting text to curves is one way of incorporating editable letter-based shapes into designs.


 Converting an object into curves cannot be reversed later on!



### To convert an object into curves:

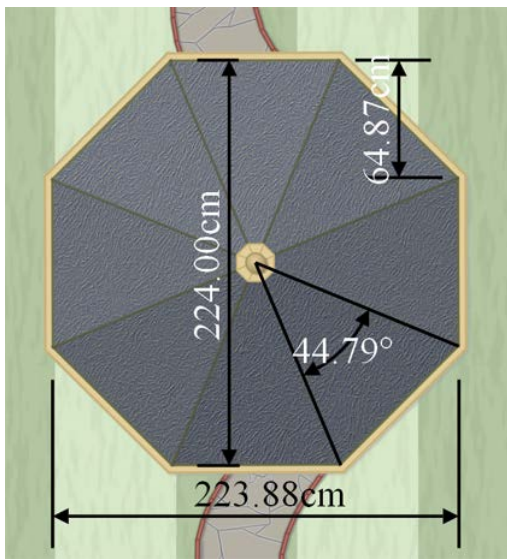
1. Select your QuickShape or text object.
2. Click  **Convert to Curves** on the Arrange tab.

With the  **Node Tool** enabled (Drawing toolbar), edit the curve outline by dragging selected nodes.

 The conversion process loses all of the special properties inherent in QuickShapes and text.

## Adding dimension lines and labels


DrawPlus lets you add **dimension lines** with text **labels** showing the distance between two fixed points in a drawing, or the angle formed by three points. For example, you can draw a dimension line along one side of a box, measuring the distance between the two corner points. If you resize the box, the line automatically follows suit, and its label text updates to reflect the new measurement.




You'll find dimension lines indispensable for planning garden designs (e.g., a garden gazebo plan), technical diagrams, floor plans, or any drawing where exact measurements and scale are important.

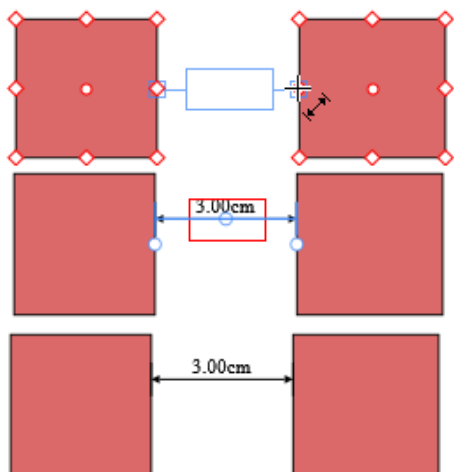
Although they can be drawn anywhere on the page, dimension lines are at their most accurate when attached to **connection points** on objects or when snapped to **dynamic guides** (see DrawPlus Help).




**To draw a dimension:**

-  From the **Drawing** toolbar's Connector Tool flyout, select the **Dimension Tool**. (The flyout shows the icon of the most recently selected tool.)
- Either, for a **linear dimension**, click the respective tool from the Dimension context toolbar:


-  **Auto Dimension Line Tool.**  
 Use to draw vertical, horizontal, or diagonal dimension lines in any direction, with automatic placement of the editable dimension label adjacent to the line.

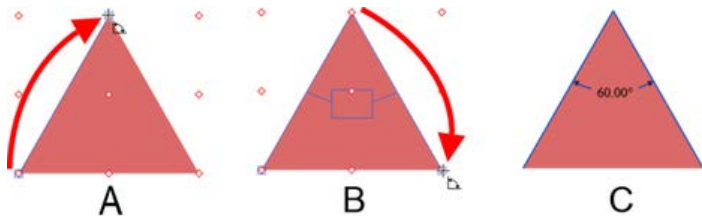
Click where you want to start the dimension line (e.g., on a connection point), then drag and release the mouse button where you want to end the line (maybe on another connection point). The illustrations below show the result of dragging between connection points on two Quick Squares with the Auto Dimension Line Tool enabled.



- 
**Vertical Dimension Line Tool.**  
 Ideal for vertical dimension lines, the label information is always presented vertically with the option to move the label by dragging. Extension lines are used to present the dimension line vertically and to allow for an optional offset.
- 
**Horizontal Dimension Line Tool.**  
 As above but for horizontal dimension lines.
- 
**Slanted Dimension Line Tool.**  
 Designed specifically for drawing diagonal dimension lines.

- or -

For an **angular dimension**, click the  **Angular Dimension Line Tool** then click and drag from a corner node towards the angle you want to measure (A). Release the mouse button over the "target" angle, then move your mouse cursor to the next corner node, then click on that node (B) to set the angle to be measured.



To complete the dimension line, move the mouse again to position the floating line and its label—note that they respond independently—and click when they are where you want them (C). (You can always change the positions later.) The dimension line appears.



We've used a triangle as an example above and made use of the nodes that show by default. However, DrawPlus will allow you to add dimension lines between separate objects, and define your target angle from any point on the object or page.



Instead of displaying an inner angle, drag the dimension line and label to the outer angle to display its obtuse equivalent.

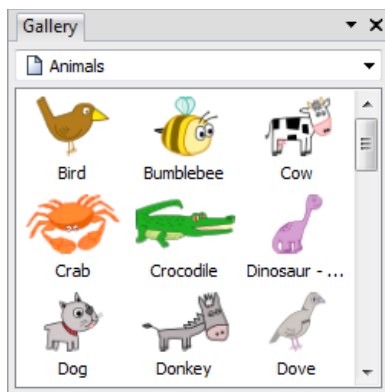


Press the **Esc** key while drawing your dimension line to cancel the operation.

## Adjusting dimension lines

For all dimension tools, a pair of parallel blue **extension lines** with blue end **nodes** appears on the dimension line, along with a node on the label box. Between the two extension lines, the dimension line and its label can "float" by moving the blue nodes.

## Using the Gallery



The Studio's Gallery tab contains pre-built design objects and elements you'd like to reuse in different drawings. You can choose designs stored under Clipart (like Animals), Home, Office, School, ShapeArt, and Web folders.

The Gallery tab also lets you store your own designs in a **My Designs** section if you would like to reuse them—the design is made available in any DrawPlus drawing.

### To view your Gallery:

- Click the Studio's **Gallery** tab.
- Select a folder or category from the drop-down list. The items from the folder's first listed category are displayed by default.

### To use a design from the Gallery:

- Drag any preset design directly onto the page. You can modify, then drag the design back into your own custom category.

### To copy an object into the Gallery:

1. Display the Gallery tab's **My Designs** (or sub-category of that) where you want to store the object.
2. Drag the object from the page and drop it onto the gallery.
3. You'll be prompted to type a name for the design. (You can name or rename the design later, if you wish.) By default, designs are labelled as "Untitled."
4. A thumbnail of the design appears in the gallery, labelled with its name.

### To delete or rename a custom design:

- Right-click its gallery thumbnail and choose **Delete Design** or **Rename Design** from the submenu.



# Using Brushes and Text




4




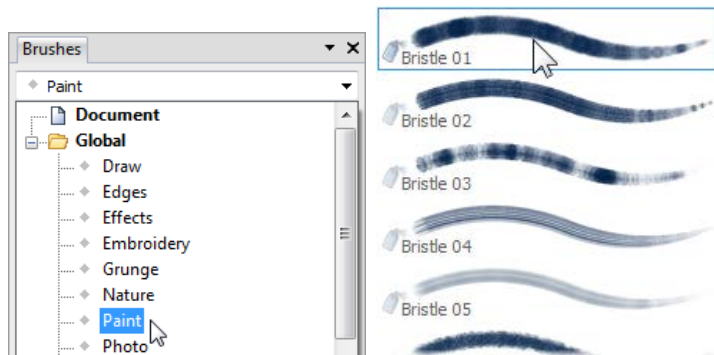
## Applying brush strokes



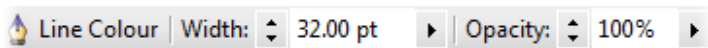
The  **Brush Tool** is used exclusively to apply brush strokes to the page. The tool is used in conjunction with the Brushes tab, and a supporting context toolbar.


### To apply a brush stroke:


1. Select the  **Brush Tool** from the **Drawing** toolbar.
2. Display the Brushes tab and choose a category from the drop-down list, then a brush.





3. Select a **Line Colour**, **Width**, or **Opacity** from the context toolbar.



4. With the  brush cursor, drag across your page to create a brush stroke.

 Photo brushes, available from the Brushes tab (Photo category), can be recoloured just as any other brush type.

  You can also apply a brush stroke around an object's outline (shape, artistic text, picture, etc.) via **Brush Stroke** on the Line tab. See Setting line properties on p. 97.

## Setting brush defaults

See Updating defaults in DrawPlus Help.

## Editing brush strokes

It's possible to alter any previously drawn brush stroke with respect to its properties, brush type, and shape. The **Pointer Tool** or **Node Tool** can be used to select the brush stroke, which will then allow it to be edited.

### To change brush stroke properties:

- With the brush stroke selected, use the context toolbar to adjust the properties of a brush stroke once it has been drawn on the page.

## To change brush stroke type:

1. Select the brush stroke.
2. Go to the Brushes tab and select firstly a brush category, then a brush type from the displayed gallery. The brush stroke adopts the newly chosen brush.



Brush types currently applied to your brush strokes are handily listed in the **Document** folder of the Brushes tab.

## To change the shape of your brush stroke:



A brush stroke possesses very similar characteristics to a plain line. Any brush stroke can therefore be edited, extended, or redrawn with the **Node Tool (Drawing toolbar)** just as for a straight or curved line (see Editing lines and shapes on p. 42). Use for fine-tuning your brush strokes after application.

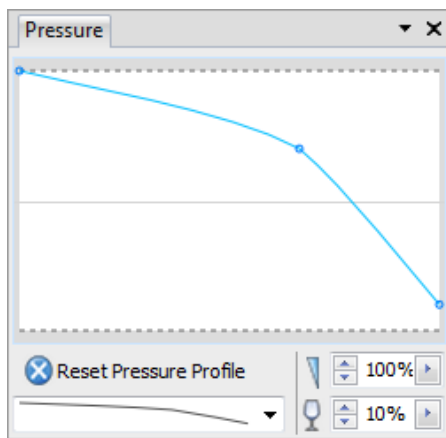
# Pressure sensitivity

## Via a Pen Tablet

Your pen tablet and DrawPlus work in perfect harmony for a truly authentic drawing and painting experience, with in-built pressure sensitivity as you draw and paint. See DrawPlus Help for more information.

## Via the Pressure Tab

If a pen tablet is unavailable to you, DrawPlus can simulate pressure sensitivity when using your mouse (along with DrawPlus's Pressure tab).



This tab is used to set pressure sensitivity globally by using a **pressure profile**.

### To apply a pressure profile:

1. Expand the Pressure tab at the bottom right of your screen, and choose a pressure profile from the drop-down list.



The pressure chart updates to reflect the chosen profile.

2. Apply a brush stroke or draw a line on the page. This will adopt the chosen pressure profile.

The profile is maintained until you reset it or pick another profile from the preset list. As well as using the preset profiles you can also create your own custom profile. (See DrawPlus Help for more details.)



## Entering text

You can create different types of text in DrawPlus, i.e. **Artistic Text**, **Frame Text**, or **Shape Text**, all directly on the page.



*Artistic Text*



*Frame Text*



*Shape Text*

It's easy to edit the text once it's created, by retyping it or altering properties like font, style, and point size.



In general, artistic text (as an independent object) is better suited to decorative or fancy typographic design, frame text is intended for presenting text passages in more traditional square or rectangular shaped blocks; shape text lends itself so well to blocks of body text where shape and flow contribute to the overall layout.

### To enter new artistic text: :


1. Select **A** **Artistic Text Tool** on the **Drawing** toolbar's **A** Text flyout.
2. To create **artistic text** at the current default point size, click where you want to start the text.  
- or -  
For artistic text that will be automatically sized into an area, click and drag out the area to the desired size.

3. To set text attributes (font, size, etc.) before you start typing, make selections on the Text context toolbar. For colour, set the Line/Fill swatches on the Studio's Colour or Swatch tab.
4. Start typing.

### To create frame text: :

1. Select  **Frame Text Tool** on the **Drawing** toolbar's  **Text** flyout.
2. From the positioned cursor, either:
  - Double-click on the page to create a new frame at a default size.  
- or -
  - Drag out a frame to your desired frame dimension.
3. (Optional) Set text and colour attributes as for artistic text before you start typing.
4. Start typing within the frame.

### To enter new shape text:

1. Create a QuickShape either from the Drawing toolbar's QuickShape flyout or by closing a drawn line.
2. With a shape still selected, select  **Artistic Text** (Drawing toolbar) and just start typing.

For existing shapes without shape text, select the shape, then the **Artistic Text Tool**, then begin typing.

## Editing text

Once you've entered either **artistic**, **frame** or **shape text** (see Entering text on p. 60), you can retype it and/or format its character attributes (font, point size, bold/italic/underline, subscript/superscript, OpenType font features, etc.), paragraph properties, and text flow.




For a gradient or bitmap fill, use the Studio's Swatch tab. See p. 102 or p. 105, respectively.

Similarly, opacity is applied from the Colour tab (see p. 107); gradient and bitmap transparency from the Transparency tab.

## Retyping text

You can either retype artistic, frame or shape text directly on the page, or use the Edit Text window—great for managing large amounts of text (overflowed shape text or otherwise) in a simple word processing environment.

### To retype text on the page:

-  From the **Drawing** toolbar's Text flyout, select **Artistic Text**, then click on the text.
- Type new text at the selection point or drag to select text, then type to replace it. To cut, copy, and paste, use the toolbar buttons or standard Windows keyboard shortcuts.



## To create a new line:

- At the position you want to start a new line, press the **Enter** key.

## Formatting text

You can change text formatting (character, paragraph, bullets/numbering and text flow properties) directly on the page via the Text context toolbar or via a **Text Style** dialog.

## To format selected text on the page:

1. Use the  **Pointer Tool** to select the text you want to change.  
Alternatively, drag select on any text with  **Artistic Text** (from the **Drawing** toolbar's Text flyout).
2. Use the Text context toolbar to change text properties (font, point size, bold/italic/underline, subscript/superscript, OpenType font features, text alignment, bullets and numbering, levels, and text fitting).





For greater control over the shape of the artistic text characters, try converting the artistic text to **curves**. For details, see *Converting a shape to editable curves* on p. 48.

## Fitting text to a path


DrawPlus allows you to make artistic text conform to a curved baseline (such as a drawn freeform line or curve), custom shape or a preset shape (QuickShape).



### To fit text to a path:

1. Select the curve or shape.
2. Select  **Artistic Text** on the **Drawing** toolbar's Text flyout.
3. Hover over the curve or shape's outline until you see a  cursor, then click at the point on the line where your text is to begin.
4. Begin typing your text. The text will be placed along the curve or shape.

### To flow text along a preset path:

1. Select your artistic text.
2.  From the context toolbar, click the down arrow on the **Preset Text Paths** button and select a preset curve from the drop-down list on which the text will flow.

# Working with Objects




5



## Copying, pasting, cutting, and deleting objects

### To copy one or more objects to the Windows Clipboard:

1. Select the object(s).
2. Click the  **Copy** button on the **Standard** toolbar.

If you're using another Windows application, you can usually copy and paste objects via the Clipboard.

### To paste an object from the Clipboard:


- Click the  **Paste** button on the **Standard** toolbar.

The standard Paste command inserts a clipboard object onto the page.



To select the type of object to be pasted from the Clipboard, choose **Paste Special** from the **Edit** menu.

### To cut one or more objects to the Clipboard:

1. Select the object(s).
2. Click the  **Cut** button on the **Standard** toolbar.

The object is deleted from the page and a copy is placed on the Windows Clipboard.


### To delete one or more objects:

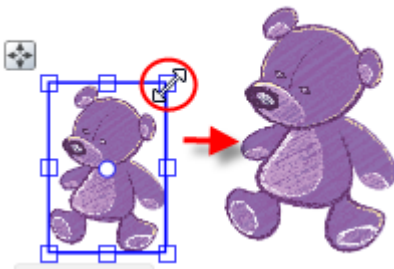
- Select the object(s) with the **Pointer** or **Node Tool** and press the **Delete** key.

## Resizing objects

DrawPlus offers a range of resizing options directly on the object. Most objects in DrawPlus maintain their aspect ratio when being resized. One exception is when resizing QuickShapes, as their versatility lend themselves to being resized without constraint.

### To resize an object to a fixed aspect ratio:

1. Select the object(s) with the  **Pointer Tool**.
2. Position the cursor over one of the object's handles—you will notice that the cursor changes to a double-headed Size cursor.



3. Drag from a corner handle (above) to resize in two dimensions (by moving two edges), while maintaining the selection's aspect ratio (proportions).

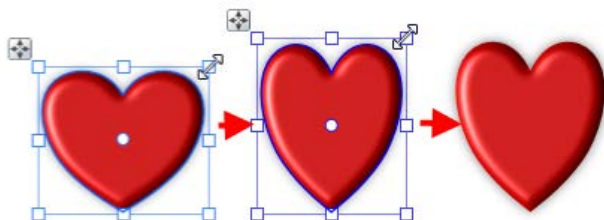


To resize to any aspect ratio, with the **Shift** key depressed, drag from an object's corner handle. This resizes in two directions. If you drag an object's side handles, you'll stretch or squash the object in one direction.



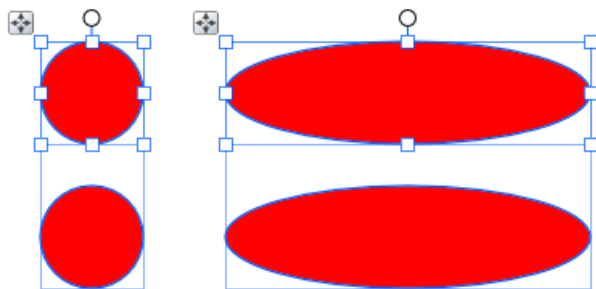
## To resize QuickShapes:

- As above but the object's aspect ratio is not maintained by default on resize.



You can use the **Shift** key as you resize to maintain aspect ratio.

## Smart Sizing




The **Smart Sizing** feature lets you resize multiple objects simultaneously while their relative positions remain unchanged. This is really beneficial when you're manipulating flow and organizational charts as well as other kinds of diagrams, as chart components can be resized without compromising your overall layout.

As an example, you could make all of the objects in your flowchart all slightly bigger or smaller by the same amount whilst each component maintains its current position relative to its own resizing. You can also rotate or shear in smart sizing mode too.



In smart sizing mode Scaling is performed in relation to a selected object within a multiple selection. Objects are rotated together but around their own individual centre points.

## To use Smart Sizing on objects:

1. Select multiple objects for smart resizing. See *Selecting one or more objects* on p. 24.
2. Choose  **Smart Sizing** from the context toolbar (or hold down the **Alt** key). You'll notice DrawPlus will pick a particular object for smart sizing, but you can change it.
3. Select another object in the bounding box as required.
4. Resize, rotate or shear using the selected object's nodes within your bounding box to apply the changes to it. All objects will be changed using the same proportions from the object you manipulated.



Use the **Ctrl** key to resize objects from their centre point.

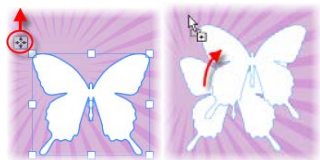
## Replicating an object

DrawPlus lets you replicate objects. The copy is displayed at the new location and the original object is still kept at the same position—your new copy also possesses the formatting of the original copied object. Multiple copies of an individual object can be made by replication or transformation.




For best results, ensure you **rotate** your object before you duplicate or replicate it using any of the techniques described below!

## Making a duplicate



You can easily duplicate an object to make another copy using drag-and-drop.

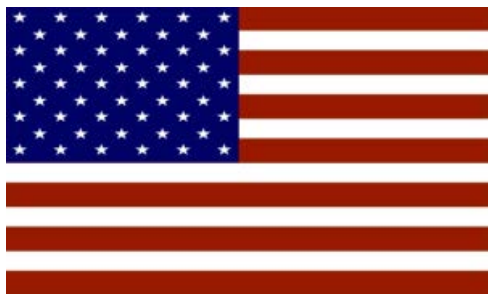
### To make a duplicate:

1. Select the object, then hold down the **Ctrl** key.
2. Drag the object via the  **Move** button to a new location on the page, then release the mouse button.



Use duplication when **rotating or shearing** an object—the result is a new copy at a new angle, possibly overlapping the original object.

## Making multiple copies using The Replicate Tool



You can replicate a single object and easily control the amount of copies you make.




A single star and a stripe were used to replicate the spacing and design of this flag example.




When you select the Replicate tool, it is always started in Replicate mode.

The Replicate Tool works in two modes. Replicate mode copies an object and reproduces it with the amount of columns and rows you need. Spacing mode adjusts the vertical and horizontal distance between the shapes you have replicated from your original object.


### To replicate an object:

1. Select an object. Remember to size the object to be replicated and place it in a convenient starting position—usually the top-left of the page.
2. On the **Drawing** toolbar, select the  **Replicate Tool**.
3. If you need to, rotate the boundary box to set the direction in which duplicates of your selection will be made.
4. Drag a corner handle on the boundary box to start replicating objects.

### To space the replicated objects:

1. Ensure that the replicated objects are selected and grouped.
2. Select the **Replicate Tool**.
3. On the object toolbar of the replicated objects, select  **Spacing**.
4. The tool is switched from Replicate to Spacing mode.
5. To edit the spacing between replicated objects, drag one of the group's bounding box corner handles.

### To add or remove objects:




1. Select the **Replicate Tool** and click the group.
2. To switch to Replicate mode, on the object toolbar, select  **Replicate**.

3. Drag one of the group's boundary box handles either making the boundary area smaller to reduce the amount of replicated objects, or larger to increase them.



You can also adjust the numbers of columns and rows using the Context toolbar and apply accurate numerical settings to spacing.

### To delete individual replicated objects:

1. On the **Drawing** toolbar, select the  **Pointer Tool**.
2. Click to select the replicated group.
3. On the object toolbar, select  **Ungroup**.
4. Click to select individual objects and press **Delete**.
5. Select the objects you want to keep and, on the object toolbar, select  **Group**.

### Applying a transform



The Transform feature lets you make multiple copies of one or more selected objects, with a transformation applied to each successive copy in the series.

For example, a butterfly can be made to fly with a transform of  $15^\circ$  rotation, 113% scaling, 4 copies, and an X offset of 1.5cm.



## To create a transform:

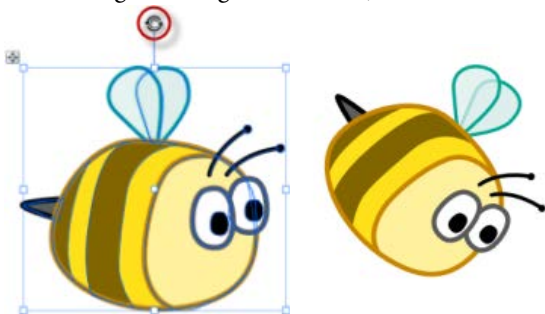
1. Select an object then choose **Transform** from the **Tools** menu.
2. From the dialog, specify the type of transformation (rotation and/or scaling), the number of copies, and a positional offset between copies.

## Rotating and shearing objects

The **Pointer Tool** lets you both rotate and shear (slant) one or more objects.

### To rotate one or more objects around a centre point:

1. Click  **Pointer Tool** on the **Drawing** toolbar.
2. Click to select the object, then hover over the Rotation Handle  and when you see the cursor change, drag in the direction in which you want to rotate the object then release the mouse. (Use **Shift** key for rotating in 15 degree intervals.)



You can also use the corner handles




around the edges of the bounding box to rotate the object.





When rotating objects, dimensions will be temporarily displayed during the operation.

## To change the centre point of rotation:


1. Move the centre of rotation  away from its original position to any position on the page. The marker can also be moved to be outside the object—ideal for rotating grouped objects around a central point.
2. Drag the rotate pointer to a new rotation angle—the object will rotate about the new pivot.

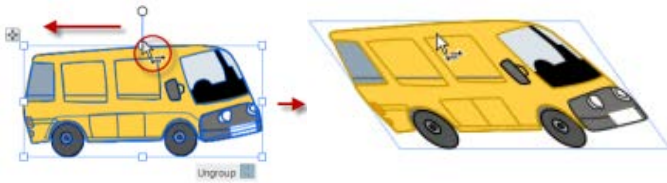
## To rotate selected object by set degrees:

- For 90° anti-clockwise: click  **Rotate Left 90°** on the **Standard** toolbar.
-  For 30°, 45°, 60°, and 90° options left and right, as well as 180°: click the down arrow on the Arrange tab's **Rotate** button and select a value. Once set, clicking the button will rotate the object by the chosen value incrementally.

Besides being able to rotate an object, the Pointer Tool allows you to skew or “shear” it.

## To shear or copy shear an object: :

1. Select  **Pointer Tool** on the **Drawing** toolbar.
2. Click to select the object(s), hover over any side handle (not a corner handle) until you see the Shear cursor.
3. Hold the mouse button down and drag the pointer in the direction in which you want to shear the object, then release.



To copy-shear, use the **Ctrl** key while dragging—this preserves the original object, while shearing the new copied object as you drag.

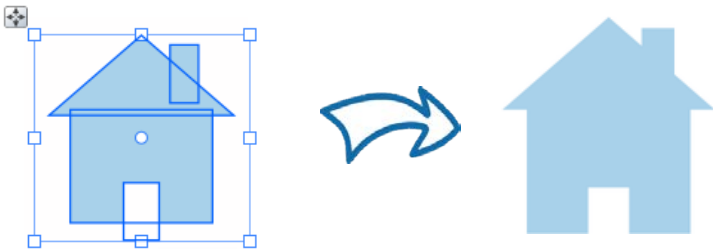
### To undo the rotation or shear (restore the original object):

- Double-click the object with the Shear cursor active.

## Joining objects


Objects you create on the page can be just the starting point in your design. For drawn shapes and ready-to-go QuickShapes, it is possible to treat these objects as "building blocks" in the creation of more complex shapes.

The **Shape Builder Tool** can be used to join together any collection of shapes in a fun and intuitive way, without the need for prior selection of shapes.





## To add shapes together:

1. Select the  **Shape Builder Tool** on the **Drawing** toolbar.
2. Hover over a shape that overlaps another shape. You'll see a cursor shown on hover over, above a shaded area (to indicate the active region).





3. Drag to the neighbouring shape, using the drawn out dashed line as a guide, then release the mouse button.





As well as adding objects together, DrawPlus lets you take away (or subtract) intersecting areas of overlapping shapes.

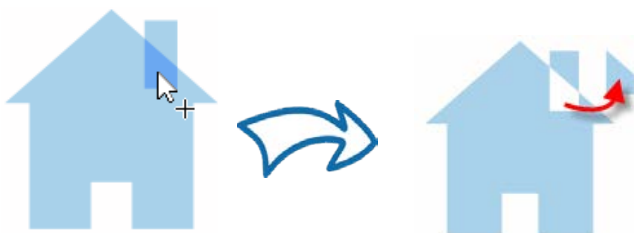
## To subtract intersecting areas:

1. Select the  **Shape Builder Tool** on the **Drawing** toolbar.
2. Hover over any intersecting area, then **Alt**-click to remove it. You'll see a  cursor on hover over.



## To create new shapes from overlapped shapes: :

1. Select the  **Shape Builder Tool** on the **Drawing** toolbar.
2. Click once in the chosen area, then select with the  **Pointer Tool (Drawing toolbar)**. You can then drag the new shape to a new position.



## Using the Arrange tab



Instead of using the Shape Builder Tool, you have the option of using the selection-based Combine tool or "Join" tools such as Add, Subtract, and Intersect using the Arrange tab. See DrawPlus Help for more information.

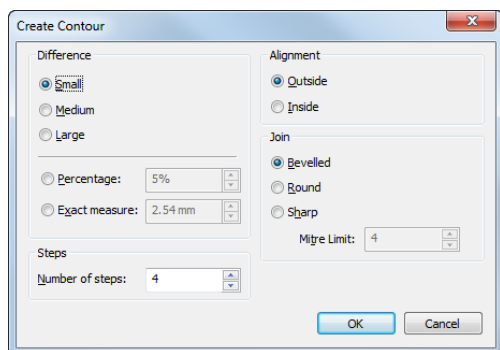
## Creating contours

**Create Contour** lets you reproduce an object with border or perspective effects by creating outlines around text, or by creating a second object to **blend** with the first. Copies of the original object are 'tiered' that increase or decrease in size with increasing or decreasing levels of greyscale. These are progressively placed behind or in front of the object, outside and inside respectively.

For an example contour, please see DrawPlus Help.

### To create a contour:

1. Select an object and from the **Tools** menu, select **Create Contour**. The dialog appears.



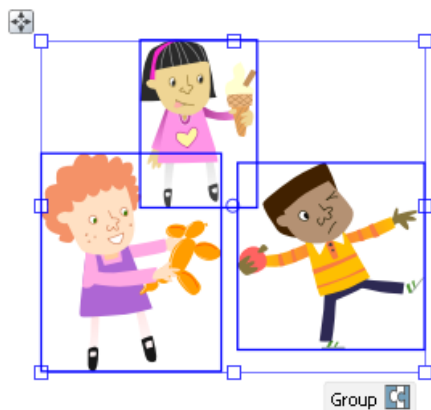
2. From **Difference**, select one of the following:
  - **Small, Medium** or **Large**.
  - **Percentage**.
  - **Exact measure**.

3. Select the **Number of steps** to control the amount of concentric contour objects reproduced. The steps will be evenly spread between the original object and the outermost or innermost contour as specified.
4. From **Alignment**, select **Outside** or **Inside** to create a contour outside the original object or inside it.
5. Select a **Join** setting to determine the corner style used where two lines intersect:
  - **Bevelled** to set flat corners on the reproduced contours.
  - **Round** to set rounded corners on the reproduced contours.
  - **Sharp** to set sharp or flat corners on the reproduced contours, depending on the Mitre Limit setting (below).
6. Set a **Mitre Limit** to indicate how far (number of line widths) DrawPlus extends each line at the junction. If the two outer edges meet within that limit, the result is a sharp corner. If not, you'll get a flat corner!
7. Click **OK**.



Now you can individually select the resulting objects or the original one using the Pointer tool and perform standard DrawPlus tasks, such as moving and colouring. Or can you select all or some objects for grouping.

## Grouping objects



The advantage of converting a set of objects into a group is that it is easier to select and edit the objects all at the same time. The only requirement for grouping is that multiple objects are selected in advance (see p. 24).

### To create a group from a multiple selection:

- Click **Group**  below the selection.

### To ungroup (turn a group back into a multiple selection):

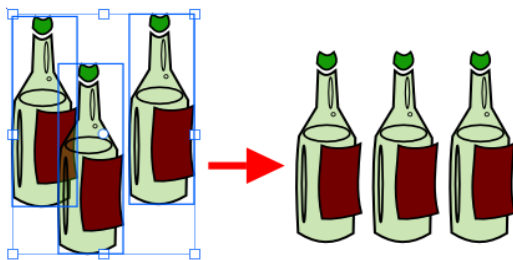
- Click **Ungroup**  below the selection.



Objects within groups can be selected with **Ctrl-click** and edited without having to ungroup your grouped objects.

## Aligning and distributing objects

Alignment involves taking a group of selected objects and aligning or distributing them, or both—the operation is applied to all of the objects selected.





### To align two or more objects:

1. Using the **Pointer Tool**, **Shift**-click on all the objects you want to align, or draw a marquee box around them (or use **Edit>Select All**), to create a multiple selection.
2. From the context toolbar, Align tab, or **Arrange>Align Objects**, select an option for vertical alignment (Align Top, Centre Vertically, or Align Bottom) or horizontal alignment (Align Left, Centre Horizontally, Align Right) of an object. Object means the last selected object for a **Shift**-click multiple selection or the topmost object in Z-order for a marquee multiple selection.

### To distribute objects:

1. Using the **Pointer Tool**, **Shift**-click on all the objects you want to distribute, or draw a marquee box around them, to create a multiple selection.
2. Display the Align tab.

- From the tab, check the **Spaced** option and enter a value in the input box to set distribute objects between a fixed distance.  
- or -  
Check **Include Page** to distribute objects relative to the page edges, instead of between endmost objects.  
- or -  
Check both **Spaced** and **Include Page** to distribute objects between a fixed distance relative to the page edges.
- Select  **Distribute Horizontally** or  **Distribute Vertically** to distribute objects vertically or horizontally, respectively.

## Ordering objects

Think of the objects on a page as being stacked or piled on top of each other. The front-most object is the one on top of the stack. Each time you create a new object, it goes in front of the objects already there. But you can move any object to any **depth** in the ordering sequence, and obtain sophisticated drawing effects by learning how to manipulate the front/back relationship of objects.

As an example, we've used a camera lens to illustrate ordering.



Notice how the lens possesses a "realistic" look by blending overlapped composite objects.





Gradient and solid fills combine to simulate three-dimensional objects (with reflections, highlights and shading).

## To change the selected object's order (dynamically via slider):

- From the Arrange tab, drag the **Depth** slider left to place the object further down the object order (within its layer); drag right to place object further up the order. Ordering occurs as you drag.



## To change the selected object's order (via ordering buttons):

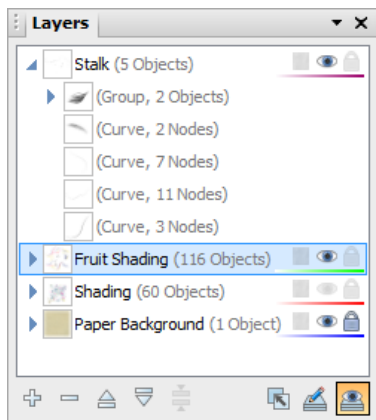
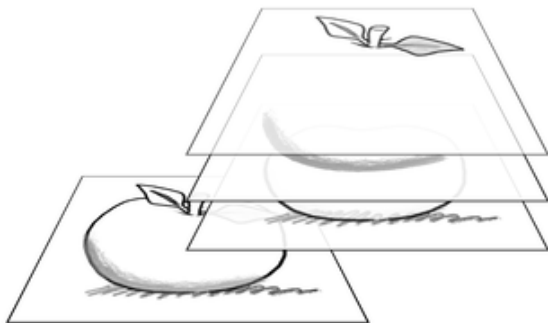
-  To shift the selected object's position to the front of other objects (on top), choose **Bring to Front** on the **Standard** toolbar (or Arrange tab).
-  To shift the selected object's position behind other objects (on the bottom), choose **Send to Back** on the **Standard** toolbar (or Arrange tab).
-  To shift the object's position one step toward the front, choose **Forward One** on the Arrange tab.
-  To shift the object's position one step toward the back, choose **Back One** on the Arrange tab.

## Working with layers

If you are drawing something simple, you don't really need to make use of layers—you can do all your work on the single layer that every new drawing has. However, if you're creating something a little more tricky then layers can be a vital aid in separating objects into independent sets.



You can think of layers as transparent sheets of paper upon which you can draw your objects.




Each layer is situated along with other layers (if present) within a stack on the **Layers tab**—the uppermost layer is applied over any lower layer on the page. You can also expand each layer entry for a tree view of objects associated with that layer (see the Stalk layer opposite). Each object entry can be clicked to select the object in your workspace.

In order to create a new object on a particular layer, you'll first need to "activate" (select) that layer.

### To select a particular layer:

- Click a layer name in the Layers tab.


## To add a new layer:

- In the Layers tab, click the  **Add Layer** button to add a new layer above the currently selected layer.

## To rename a layer:

- To rename a layer to something more meaningful, click on the selected layer's name and type to add your new name (you can also make an insertion point to edit the existing text).

## To delete a layer:

- In the Layers tab, select the layer's name and click the  **Delete Layer** button.



If you delete a layer, all of the objects on it are lost! So if you want to keep any of them, move them to another layer first.

You can move layers up or down in the stacking order to place their objects in front or behind those on other layers, move objects to specific layers, and even merge layers.

## To move a layer in the stacking order:

- Drag the selected layer to a new position in the layer stack.

Remember that objects on layers are drawn in the order in which the layers were initially added to the Layers tab. Put another way: the bottom layer in the Layers tab stack is drawn first then the second bottom, third bottom etc. A background layer should be the bottom layer in the Layers tab stack.

## Layer Properties

Layer properties allow you to assign paper textures, make layers invisible/visible, and/or locked/unlocked.



See Studio: Layers tab in DrawPlus Help for more details.

## Managing objects on layers

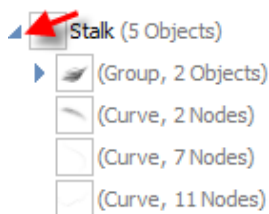
A useful feature of the Layers tab is that you can see objects or even groups of objects, under the layer on which they were created. This gives you the option of selecting an object or group from the tab as opposed to from the page itself. Groups and individual objects can be named, allowing you to more easily locate them in the Layers tab, which in turn locates them in the workspace for you.

### To add objects to a particular layer:

- When drawn, objects are added to the selected layer automatically. This is why it is a good idea to check which layer you are currently working on!

### To select an object on a layer:

1. On the Layers tab, click the **Expand** icon on the chosen layer entry to reveal all associated objects.



This tree view greatly improves the ability to select and manage nested objects in more complex drawings. It's also great for visualizing your object order.

2. Click the object entry in the tab. It will become highlighted and selected on your page.




Trouble locating your **named** object or group? Search for it by using **Find Object** on the **Edit** menu.

### To move an object to another layer:

- Right-click the object in the workspace, and choose **Move Object to Layer**. From the **Move To Layer** dialog, select the specific destination layer, and click **OK**.

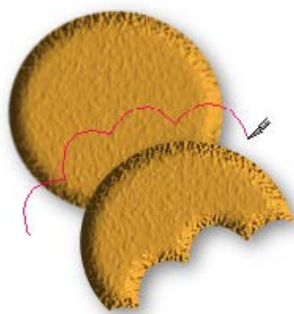
### To hide/show an object on a layer:

- Right-click the object in the Layers tab (or multiple objects via **Ctrl**-click), and select **Visible**. To show again, click the  icon displayed on the object entry.

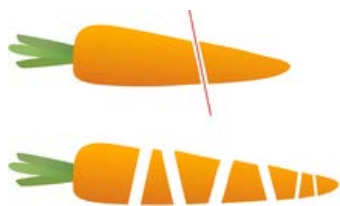
## Cutting up objects



It is possible to cut any object (or picture for that matter) by using the **Knife Tool**. You can cut along a freeform or straight line drawn across your object(s), leaving you with separate fragments of the original.





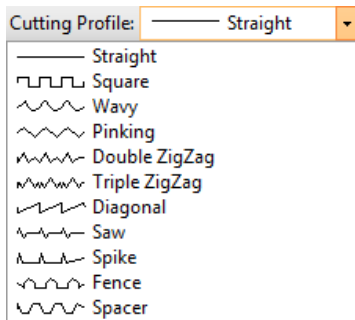
*freeform cut  
(using Bump profile)*



*straight line cut*

## To cut selected objects (freeform or straight line):

1. Select the  **Knife Tool** on the **Drawing** toolbar's  Vector Edit flyout.
2. (Optional) Use **Smoothness** on the tool's context toolbar to set how regular the freeform cutting line is—click the right arrow and drag the slider right for increasing smoothness.
3. (Optional) By default, you'll get a straight cutting profile, but for regular-shaped cuts, pick a **Cutting Profile** from the context toolbar.



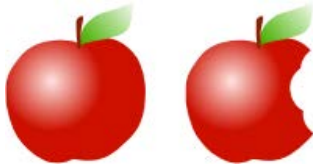
4. Using the cursor, drag a freeform line across any object(s) you would like to split (unselected objects on which the line traverses will not be split). Instead, press the **Shift** key as you drag for a **straight** line.
5. Hover over, then click to remove the unwanted cut area(s).



- or -

With the Pointer Tool, drag the newly split fragments apart instead.

## Erasing and adding to objects






DrawPlus lets you take a "virtual" eraser to your drawing, letting you **remove** portions of your selected object(s) on an individual layer or across multiple layers.






The flip side of erasing is "**adding to**" (i.e., augmenting), a technique to add or "grow" a vector objects' boundaries—great for reshaping an existing object.

## To erase portions of a selected object:

1. Select the  **Erase Tool** on the **Drawing** toolbar's  Vector Edit flyout.
2. (Optional) From the context toolbar, choose a **Nib** style (circle, square, or diamond) and/or set a **Width** to define the erase width that will be cut.
3. Position the  cursor, and drag over an object boundary (or within an object). You'll see the area to be erased being drawn temporarily (use the **Ctrl** key to redefine the erase area while drawing).
4. Release the mouse button to erase the area drawn.

## To add to a selected object:

1. Select the  **Freeform Paint Tool** on the **Drawing** toolbar's  Vector Edit flyout.
2. (Optional) From the context toolbar, choose a **Nib** style (circle, square, or diamond) and/or set a **Width** which will be drawn.
3. Position the  cursor over the object and drag over an object boundary (or within the object). You'll see shading which represents the area to be added. (You can use the **Ctrl** key to redefine the painted area while holding down the mouse button).
4. Release the mouse button to reshape the object to include the newly drawn area.

# Fills, Lines, Colours, and Transparency



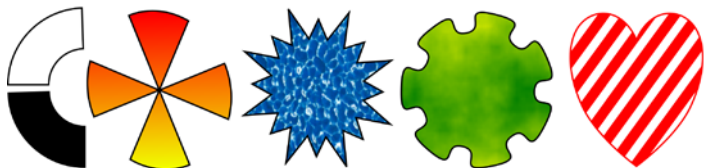
6





## Setting fill properties

Any closed shape, such as a closed curve or QuickShape, or text has an interior region that can be filled. The fill type can be solid, gradient, bitmap or plasma or vector.



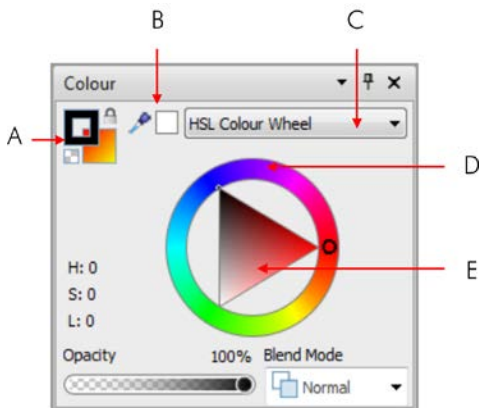
Fill types fall into several basic categories, illustrated above:

- **Solid fills**, as their name implies, use a single colour.
- **Gradient fills** provide a gradation or spectrum of colours between two or more "key" colours. Mesh fills work like gradient fills but with a more complex fill path.
- **Bitmap and Plasma fills** apply bitmapped images or patterns to the object, each with unique properties. Think of bitmap fills as named "pictures" that fill shapes. Plasma (or "fractal") fills use randomized patterns, useful for simulating cloud or shadow effects.
- **Vector fills** are similar to bitmaps but apply repeating patterns, shapes or images such as shading or hatching to the object. Like bitmaps, vectors are also named "images" but the fill is based on coordinates which define where lines are placed.

### Solid colours

Applying a fill is easy, whether you're selecting a colour from the **Colour tab** or the **Swatch tab**.

The **Colour** tab has several models available from a drop-down list—HSL Colour Wheel (shown), HSL Colour Box, HSL Sliders, RGB Sliders, RGB Sliders (Hex), CMYK Sliders and Tinting.

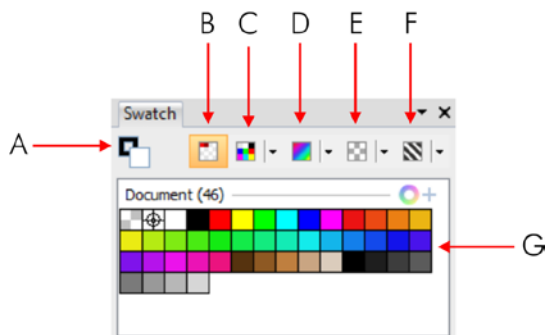


(A) Line/Fill swatches, (B) Colour Picker, (C) Colour Model, (D) Hue wheel, (E) Saturation/Lightness triangle.

On the HSL Colour Wheel, the small circles shown in the wheel and triangle indicate the current setting for hue and saturation/lightness, respectively. Drag either circle around to adjust the values.

The Line/Fill swatches on the tab govern whether the selected colour is applied as a line colour, solid fill, or both simultaneously.

By comparison, the **Swatch** tab hosts a vast array of preset colour swatches for solid, gradient, plasma, vector and bitmap fills. Swatches are stored in palettes which can be managed from within the tab. You can even create your own palettes and palette categories.



(A) Line/Fill swatches, (B) Document Palette, (C) Standard and themed palettes, (D) Gradient palettes, (E) Bitmap palettes, (F) Vector palettes, (G) Current palette.

## CMYK operation

If you intend to create professional CMYK output to PDF or image, you can optionally create a CMYK drawing from scratch (see p. 13). Your drawing, in a CMYK colour space, can be designed using CMYK colours (instead of RGB colours) either using:


- **CMYK Sliders.** (Click the colour model drop-down list on the Colour tab.)  
- or -
- **Standard CMYK Palette.** (Click the **Palettes** button on the Swatch tab.)

## Applying colour

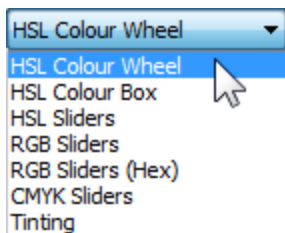
### To apply a solid fill colour via the Colour tab:

1. Select the object(s) and display the Studio's **Colour tab**.
2. Click the Line/Fill Swatch at the top-left of the tab so the Fill Swatch appears in front of the Line swatch.




This defines where the colour will be applied. Alternatively, apply colour to both line and fill simultaneously by clicking  **Link** on the swatch.


3. (Optional) Choose a colour model from the drop-down list.



4. Select a colour from the display.

### To apply a solid fill colour via the Swatch tab:




1. Select the object(s) and display the Studio's **Swatch tab**.
2.  Set the Line/Fill Swatch at the top-left of the tab so the Fill Swatch appears in front of the Line Swatch.

3.  Pick a thumbnail from either the **Document Palette** or from another palette shown in the **Palettes** drop-down list (drag from the thumbnail onto the object as an alternative).

A **Tinting** option in the Colour tab's drop-down list allows a percentage of shade/tint to be applied to your colour.

### To apply a gradient, Vector, bitmap, or plasma fill to one or more objects:



As for applying a solid colour fill with the **Swatch** tab but:

- Instead of using a solid colour palette, pick a relevant category from the  **Gradient**,  **Vector** or  **Bitmap** galleries, and pick your required thumbnail from the displayed presets (drag from the thumbnail onto the deselected object as an alternative).

For solid, gradient or plasma fills, you can then edit **colour(s)** and **shade/tint** (lightness). For gradient and plasma fills, the fill **path** (coverage) can also be edited (see Working with gradient fills on p. 102).

### To apply no fill:

Set an empty interior for objects by using the:

- **Colour tab:** Click  **None** in the bottom-left corner of the Line/Fill Swatch, which represents either None (an empty interior for objects with line/fill properties) or Original (for pictures only, to reset the object to its original colours).  
- or -
- **Swatch tab:** Choose the first swatch,  **None**, from any gallery.

## Blend modes

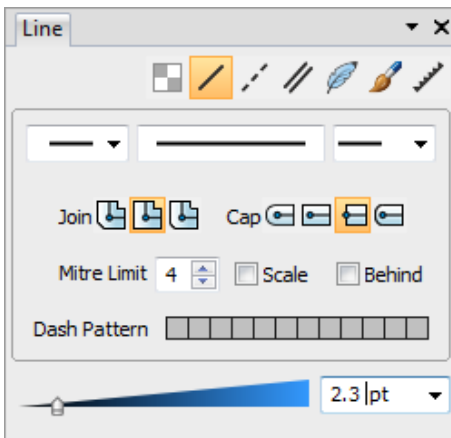
The **Colour** tab hosts a **Blend Mode** drop-down list for blending overlapping object colours together in various ways. You'll find blend modes described in Understanding blend modes in DrawPlus Help.

## Setting line properties



All lines, including those that enclose shapes, have numerous properties, including colour, style, line ends, width, join (corner), and cap (end).

Using the Studio's Line tab, you can adjust **plain line** properties for any freeform, straight, or curved line, as well as for the edge of a shape, image or artistic text.





To change line colour, see Setting fill properties (p 92).

## Changing line style





A series of buttons arranged along the top of the Line tab set the line style.



**No line, Solid, Dash, Double, and Calligraphic** styles can be applied to freeform lines, and outlines of shapes, images and artistic text alike.



The additional two line effects,  **Brush Stroke** and  **Edge Effect**, let you apply a brush (stroke, spray or edge) effect to the outlines of artistic text, images or objects.



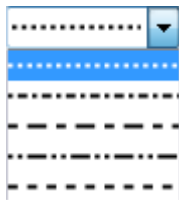
A brush stroke can be recoloured. However, applying a brush as an edge takes on the colour of the edge of the image which cannot be recoloured.

You can see your current brush in the Line tab and select a new brush from the Brushes tab. **Brush Stroke** styles can also be added to freeform lines.


## To change line style:

- Click a button to set the line style. Only one style can be set at any one time. Pick another button to jump to that style.

Once a style is selected you can choose line ends for most styles (except Brush Stroke and Edge Effect). For some styles, variations are also available. For example, for a Dash or Double line style, additional dash patterns (below) and double line options can be selected.



## To select a line end:

- From the  drop-down lists, pick a line start and end.

Other styles such as Dash and Calligraphic offer further customization of the chosen style.



## Changing line width



On a selected line, curve, or shape (opposite), drag the **Width** slider in the Line tab. To turn off the line, set the box to 0pt.



If you want to set the line width to that of a hairline size, see below!

## Hairline widths

Use Hairlines when you need to output the thinnest possible line width for special printing cases, such as when producing artwork for laser cutting. The hairline width for vector output is configurable.

### To set a hairline width on your line:

- On the Line tab, set the Width box to 'Hairline'. Your hairline shows as a 1 pixel-wide line.

### To set a line width for vector output:


1. From **Tools>Options**, select **Drawing Quality>Hairline Options**.
2. Set the **Hairline width on vector device** value, choosing to always express the value in inches with the supporting check box.

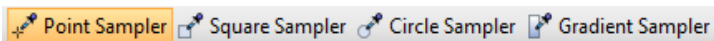
## Sampling colours

Use the **Colour Picker Tool** to sample (and then reuse) a colour from anywhere on your page. The picked colour can then be made the current line or fill colour in DrawPlus.

Various sampling methods can be used depending on the type of object fill or screen area to be sampled.

### To sample colours:

1. On the Drawing toolbar, click  **Colour Picker**.
2. From the context toolbar, choose a **Colour Picker Type** (e.g., Point Sampler).



3. (Optional) If you use the Square or Circle Sampler, set a **Colour Picker Size** appropriate to the area you want to sample.

Gradient Sampler offers a **Gradient Picker Sensitivity** option, for controlling the level or detail to which the gradient is sampled.


4. Hold the mouse button down, and drag to the target area then release. For gradient sampling, rather than clicking, you sample by dragging a line across your chosen colour gradient.

The sampled colour(s) is picked up in the Colour tab's **Picked Colour** swatch.



5. Click the Colour tab's **Line** or **Fill** swatch, then the Picked Colour swatch to transfer the colour to the chosen swatch. You can then apply the colour to any object (this will then be stored automatically in the Swatch tab's Document Palette for further use).



Use the **Colour** tab's  **Colour Picker** (point sampler only) to sample colours anywhere on your computer screen—click, hold the mouse button down, drag to the target area, and then release.

## Working with gradient fills

Gradient fills are those that use small "spectrums" with colours spreading between at least two defined **key** values. Specifically, gradient fills can be **linear**, **radial**, **elliptical**, **conical**, **square**, **three colour**, and **four colour** types.



*Linear*



*Radial*



*Elliptical*



*Conical*



*Square*



*Three  
Colour*




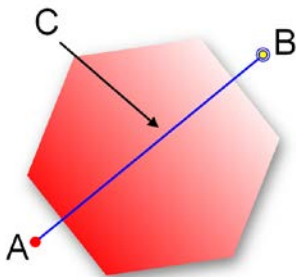
*Four  
Colour*

## Applying a gradient fill

There are several ways to apply a gradient fill as a line colour or object fill: using the Fill Tool or via the Swatch tab. Using the Fill Tool, you can vary the fill's path on an object for different effects.

## To apply a gradient fill (Fill Tool):

1. Select an object.
2. Click the  **Fill Tool** on the **Drawing** toolbar.
3. Click and drag on the object to define the fill path (a solid line). The object takes a simple linear fill, grading from the current colour of the object, ending in white (objects filled with white will grade from white to black, to show contrast).






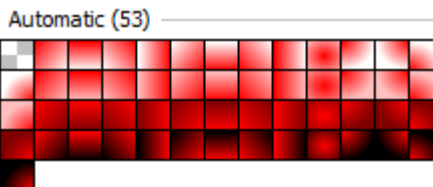
*(A) Start Handle colour, (B) End Handle colour, and (C) Fill Path*

4. To alter the gradient fill colours, change the **Start Colour** and/or **End Colour** on the Fill context toolbar.

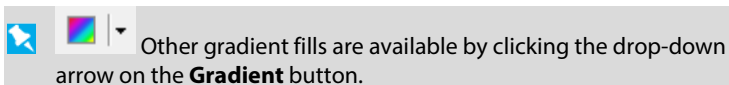
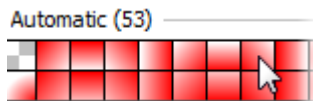
From the Swatch tab, automatic fills let you apply a gradient fill (Linear, Radial, Elliptical, or Conical) which dynamically change depending on the colour of a selected object's solid fill or Start/End handles.

## To apply a gradient fill (Swatch tab):

1. Select an object.
2. Click the Swatch tab and choose a line or fill colour. Ensure the  **Line** or  **Fill** swatch is set accordingly.
3. From the Swatch tab, click the  **Gradient** button. The Automatic palette appears.



4. From the Automatic category, click the thumbnail for the fill you want to apply.



## Editing the fill path

You can use the **Fill Tool** to edit the object's **fill path**, defining the placement of the spectrum across the object.

If an object using a gradient fill is selected, you'll see the **fill path** displayed as one or more lines, with circular handles marking where the spectrum between each key colour begins and ends. Adjusting the handle positions determines the actual spread of colours between handles. You can also edit the fill by adding, deleting, or changing key colours.

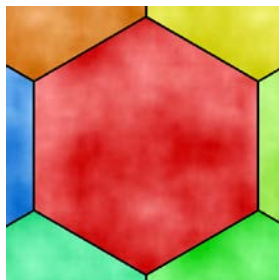
For details of how to edit and manage gradient fills, see DrawPlus Help.

The editing of gradient fills is a complex operation and is covered in greater detail in the DrawPlus Help.

## Working with bitmap and plasma fills



A **bitmap fill** uses a named bitmap—often a material, pattern, or background image. DrawPlus supplies an impressive selection of preset bitmap fills on the Swatch tab, and you can also import your own.



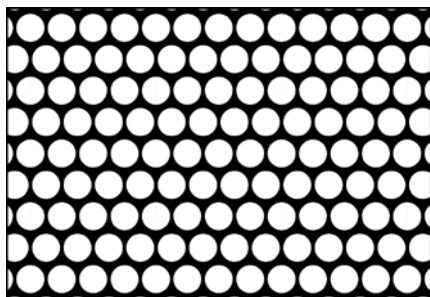
A **plasma fill**, sometimes called a fractal fill, is a bitmapped pattern with dark and light regions, useful for simulating cloud or shadow effects. Again, the Swatch tab hosts a selection of these fills.

Once you've applied either type of fill to an object using the Swatch tab (see Setting fill properties on p. 92), you can adjust the fill's tint with the Shade/Tint slider in the Colour tab (use Colour mode drop-down list),

and use the Fill Tool to edit the object's **fill path**, defining the placement of the fill across the object.

For details of how to edit and manage bitmap and plasma fills, see DrawPlus Help.

## Working with vector fills



**Vector** fills are named vectors and are tiled similar to bitmaps. You can use vector fills to hatch in areas of shade on objects, or as a background pattern. DrawPlus provides a host of preset vector fills on the Swatch tab. These are bricks and tiles, dots and screens, and lines and hatches.

As with bitmaps you can create and import your own vector fills.

After applying a vector fill to an object using the Swatch tab (see Setting fill properties on p. 92), alter the fill's tint with the Shade/Tint slider in the Colour tab (use Colour mode drop-down list). Use the Fill Tool for editing the fill.

For details of how to manipulate vector fills, including scaling, spacing and saving them, see DrawPlus Help.

## Setting opacity



**Key point!** In DrawPlus, **opacity** is a property of colour, and can be set directly from the Colour tab. **Transparency** refers to object-based gradient or bitmap **transparency effects**, set via the Transparency tab or Transparency Tool.

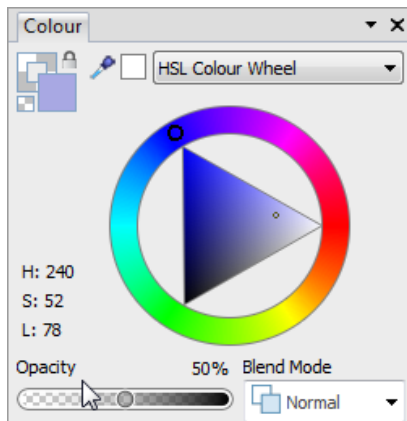
Opacity is great for highlights, shading and shadows, and simulating "rendered" realism. It can make the difference between flat, ordinary visuals and sparkling realism!

Opacity is the inverse of transparency—fully opaque (100%) is no transparency (0%), and vice versa. It works rather like fills that use "disappearing ink" instead of colour. The less opacity in a particular spot, the more "disappearing" takes place there, and the more the object(s) underneath show through.



*Butterflies showing 100% opacity, 50% opacity, and 25% opacity (from left to right).*





The **Opacity** slider (Colour tab) can be used to alter the opacity of a specific colour, whether that colour is a solid fill (in an object or on a line), or a handle's colour on a gradient fill path. Opacity can be applied locally to each object; the default is 100% opacity, i.e. the object is fully opaque.

For solid fills, the opacity change will be made uniformly across the object's interior (as above). However, for gradient fill paths, different opacity levels can be assigned with colour to handles along the fill path. The combination of different colours and semi-transparency allow interesting colour blends to be made.



Gradient fill paths are explained in detail in **Working with gradient fills** on p 102.

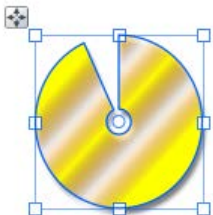
## To apply solid opacity:

1. Select the object.
2. From the Studio's **Colour tab**, drag the slider to the left for a reduced **Opacity** setting (e.g., 20%); drag right to increase opacity. This makes objects appear semi-transparent, or if set to 0%, fully transparent.

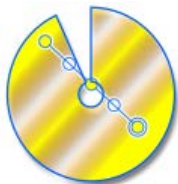


## To apply solid opacity (to a fill path):

1. Select the object with a gradient fill and display the Studio's **Colour** tab.



2. Click the  **Fill Tool** on the **Drawing** toolbar's  Fill flyout. The fill path is displayed.



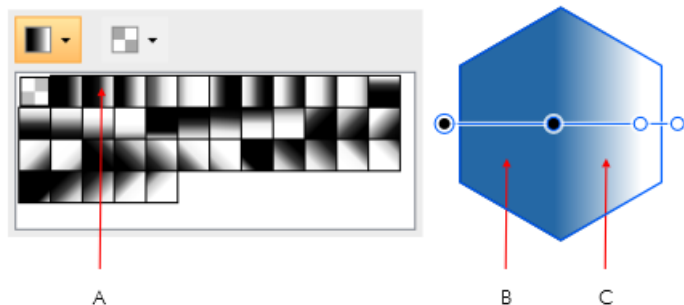
Click on any displayed handle along the fill path (the handle with a double outline is selected). Use **Shift**-select for selecting multiple handles.

3. From the Colour tab, drag the slider to the left for a reduced opacity setting. You'll notice the new opacity setting influencing the fill's appearance.



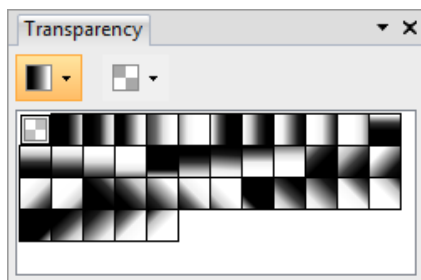
## Using transparency effects

While uniform opacity can be applied along with colour via the Colour tab (see Setting opacity on p. 107), it's possible to apply gradient transparency via the Transparency tab or Transparency Tool independent of colour. Bitmap transparency can also be applied exclusively via the Transparency tab.





*(A) Linear Transparency, (B) Transparency path, (C) Effect on graphic*

Transparency can also be applied along a custom drawn transparency path using the Transparency Tool, in the same way as the equivalent fill path (see DrawPlus Help). Transparency paths are easily editable.



Let's check out the Transparency tab. As with the Swatch tab, there are galleries for both gradient and bitmap transparencies.

## To apply gradient or bitmap transparency effects:

1. With your object selected, go to the Transparency tab.
2. For gradient or bitmap transparency, click the drop down arrow on the  **Gradient** or  **Bitmap** button, respectively. Select a category from the flyout, then click a thumbnail in that category.

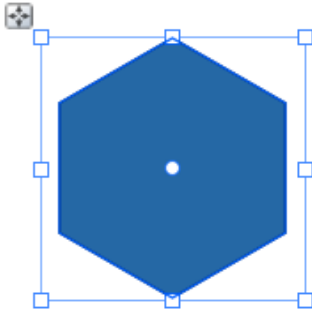
- or -


Drag the desired thumbnail from the gallery to an object.

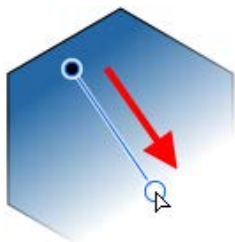
3. The transparency is applied to the object(s).

## To apply gradient transparency with Transparency Tool:

1. Select an object.



2. Click the  **Transparency Tool** on the **Drawing** toolbar.
3. Click and drag on the object to define the transparency path. The object takes a simple linear transparency, grading from 0% transparency (100% opaque) to 100% transparency (0% opaque) in the direction you drag.



You've got control over where the path starts and ends, and the direction in which the path will be drawn. You can even click again to redraw the path.

## Editing gradient transparency

Once you've applied a transparency, you can adjust its **path** on the object, and the **level** of transparency along the path. You can even create more complex transparency effects by adding extra handles to the path and assigning different levels to each handle. For details of how to edit and manage gradient transparency, see DrawPlus Help.



You cannot alter the values in a bitmap transparency.

# Pictures



7




## Importing pictures


Windows Bitmap (\*.bmp,\*.rle)  
 Raw files (\*.raw,...) (\*.crw;\*.cr2;\*.nrw;\*.nef;\*.orf;\*.dng)  
 Adobe Digital Negative Format File Decoder (\*.dng)  
 AutoCAD Drawing (\*.dwg)  
 AutoCAD DXF (\*.dxf)  
 Windows Enhanced Metafile (\*.emf)  
 Encapsulated Postscript (\*.eps,\*.ps)  
 Graphic Interchange Format (\*.gif)  
 JPEG 2000 (\*.j2k,\*.jp2)  
 JPEG File Interchange Format (\*.jpg,\*.jpe,\*.jpeg,\*.jfif)  
 JPEG-XR (\*.jxr,\*.wdp,\*.hdp)  
 PC PaintBrush (\*.pcx)  
 Portable Network Graphics (\*.png)  
 Adobe Photoshop Image (\*.psd)  
 Paint Shop Pro files (\*.psp,\*.tub,\*.rfr,\*.PSPTube,\*.PSI)  
 Sun Raster (\*.ras,\*.sun)  
 Serif Metafile Format (\*.smf)  
 Serif PhotoPlus Picture (\*.spp)  
 Scalable Vector Graphics (\*.svg)  
 Compressed SVG (\*.svgz)  
 Targa Bitmap (\*.tga)  
 Tagged Image File Format (\*.tif,\*.tiff)  
 WebP (\*.webp)  
 Windows Metafile (\*.wmf)

A wide range of picture formats can be imported directly into DrawPlus, including vector graphics and metafiles.

Any imported picture ends up as an object you can select, move, scale, shear, rotate—and even cut or crop using the **Knife** or **Crop Tool** on the **Drawing** toolbar. The Cutout Studio lets you cut the subject of your picture out from its background (and vice versa).

### To import a picture from a file:

1. Click  **Insert Picture** on the **Drawing** toolbar.
2. From the dialog, locate and select the file to import, then click **Open**.

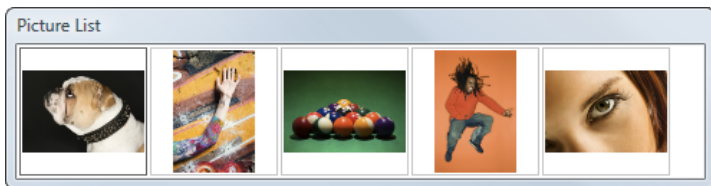
The dialog disappears and the mouse pointer changes to the  Picture Size cursor. What you do next determines the initial size, placement, and aspect ratio (proportions) of the picture.

3. Insert the picture at a default size by simply clicking the mouse.

- or -

Set the size of the inserted picture by dragging out a region and releasing the mouse button.

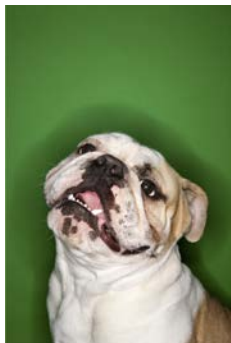
If you want to import multiple pictures simultaneously, you can select a range of pictures from within the same dialog. Each image can then be added to the page selectively from a **Picture List** flyout.



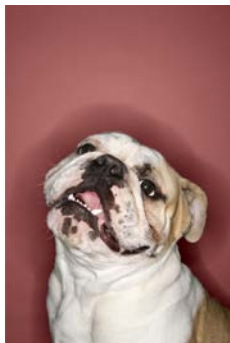
## Using Cutout Studio

**Cutout Studio** offers a powerful integrated solution for cutting objects out from their backgrounds. Depending on the make-up of your images you can separate subject of interests from their backgrounds, either by retaining the subject of interest (usually people, objects, etc) or removing a simple uniform background (e.g. sky, studio backdrop). In both instances, the resulting "cutout" image creates an eye-catching look for your design.

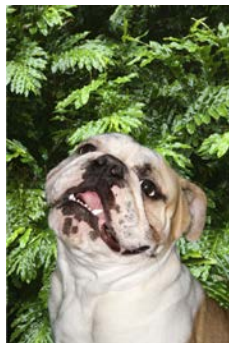




*An initial image on a coloured background.*




*Cutout Studio "paints" transparency on the background. The tint indicates areas to be discarded.*



*Once cut out, a different image can be used as a more attractive background.*

## To launch Cutout Studio:

1. Select an image to be cut out.
2. Select  **Cutout Studio** from the context toolbar. Cutout Studio is launched.

## Choose an output

You can choose an output type prior to selecting areas for keeping/discarding; either an alpha-edged or vector-cropped bitmap from the **Output Type** drop-down list. Choose the latter for more well-defined edges.

## Selecting areas to keep or discard



A pair of brushes for keeping and discarding is used to enable parts of the image to be selected. The tools are called **Keep Brush** and **Discard Brush**, and are either used independently or, more typically, in combination with each other.

### To select image areas for keeping/discarding:

1. In Cutout Studio, click either  **Keep brush** or  **Discard brush** from the left of the Studio workspace.

2. (Optional) Pick a **Brush Size** suitable for the area to be worked on.




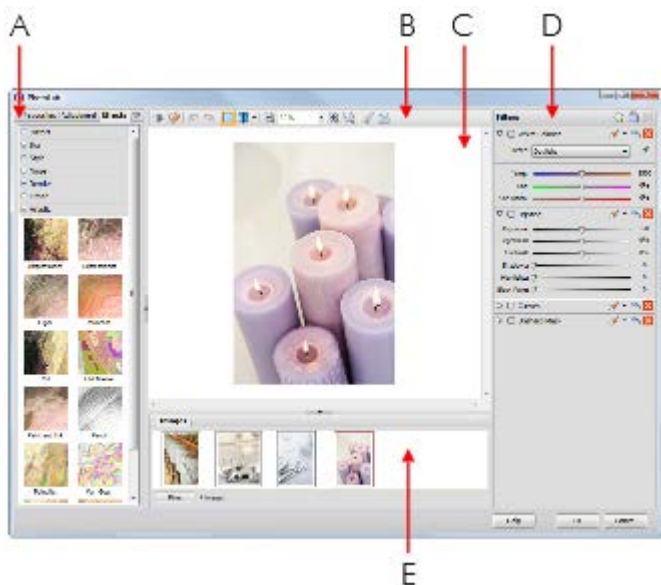
3. (Optional) Set a **Grow Tolerance** value to automatically expand the selected area under the cursor (by detecting colours similar to those within the current selection). The greater the value the more the selected area will grow.
4. Using the circular cursor, click and drag across the area to be retained. It's OK to repeatedly click and drag until your selection area is made—you can't lose your selection unless you click the **Reset** button. The **Undo** button reverts to the last made selection.
5. If you're outputting an alpha-edged bitmap, you can refine the area to be kept/discarded within Cutout Studio (only after previewing) with Erase and Restore touch-up tools. Vector-cropped images can be cropped using standard DrawPlus crop tools outside of the Studio.
6. Click  **OK** to create your cutout, or  **Cancel** to abort the operation.

You'll see your image on the page in its original location, but with the selected areas cut away (made transparent).

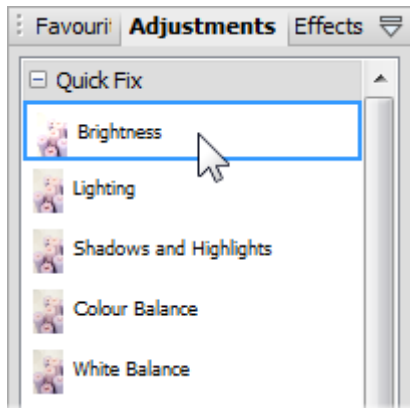
## Applying PhotoLab filters

**PhotoLab** is a dedicated studio environment that lets you apply adjustment and effect filters to photos, individually or in combination.

Photos present in your drawing display in the **Images** tab, which is hidden by default. To display this tab, as illustrated below, simply click the  button at the bottom of the dialog.



(A) filter tabs, (B) Main toolbar, (C) Main workspace, (D) filter stack, (E) Images tab





Filters are stored in the **Favourites**, **Adjustments**, and **Effects** filter tabs, and are grouped into categories.

For example, the **Adjustments** tab provides the **Quick Fix** and **Pro Edit** categories, while the **Effects** tab offers a wide range of creative effect categories.



You can add your own custom filters to the Favourites tab. (See DrawPlus Help.)

## Applying filters

1. Select the photo you want to work on. (If the photo is framed, select it and click  **Select Cropped Object**.)
2. Click  **PhotoLab** on the context toolbar.
3. For ease of use, when you open PhotoLab, the **Filters** stack on the right contains some commonly-used filters (such as **White Balance** and **Lighting**). These filters are disabled by default.

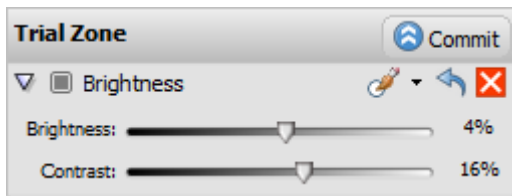
To apply one of the default filters, click its  **Enable/Disable** control to enable it, and then adjust the filter settings by dragging the sliders.

To disable, reset, and delete a filter, see DrawPlus Help.

## To add a new filter:


1. Browse the filter thumbnails displayed on the **Favourites**, **Adjustments**, and **Effects** tabs, and click the one you want to apply.

The selected filter is added to the **Trial Zone**, and the main window shows a preview of your photo with the filter applied.






2. Experiment with the filter settings in the **Trial Zone**—you can drag the sliders, or enter values directly—to suit your requirements.
3. (Optional) To replace the trial filter, click a different thumbnail.

 Selecting a new filter always replaces the current filter.

4. To apply the filter, click  **Commit** to add it to the **Filters** stack. Repeat to apply additional filters.
5. To apply all filters in the **Filters** stack and close PhotoLab, click **OK**.

## Retouching

PhotoLab's main toolbar provides some useful retouching tools. These are commonly used to correct photos before applying colour correction and effects.

-  **Red-eye tool**, to remove red eye from a human subject.
-  **Spot-repair tool**, to remove blemishes from human skin and material surfaces.
-  **Clone Selection Tool**. To erase objects from a photo or to repair damage like scratches, marks and tears.

For instructions on using the retouching tools, see DrawPlus Help.

## Autotracing

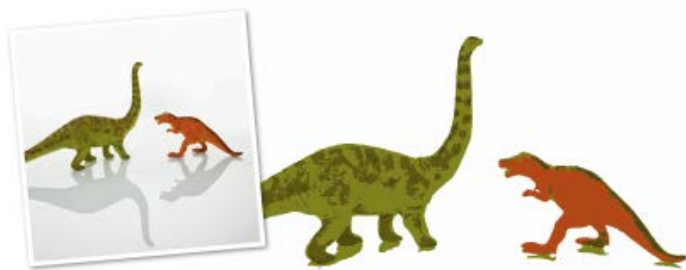
Instead of manually tracing a design, it's possible to automatically convert bitmaps into vector objects by using **autotracing**. Its main function is for speedily reworking bitmapped **logos** (for further design modification), but its use is not confined to this. In fact, both greyscale and colour **photos** can equally be autotraced for eye-catching artistic effects.

For each of these uses, DrawPlus offers a studio environment and a specific preset profile which will produce optimum results while autotracing artwork of your chosen type.

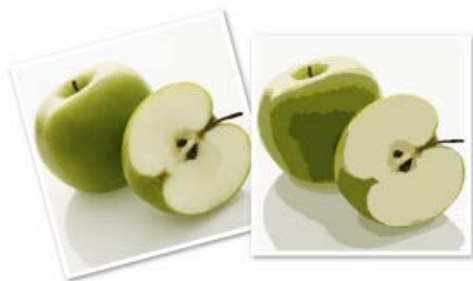
- **B/W Image Trace**. For black and white tracings of photos, scanned images, and line drawings.



- **Logo Image Trace.** For tracing pictures such as logos, signatures, or other designs with antialiasing.




- **Photo Image Trace.** For colour tracing of photos.





## To autotrace a selected image:

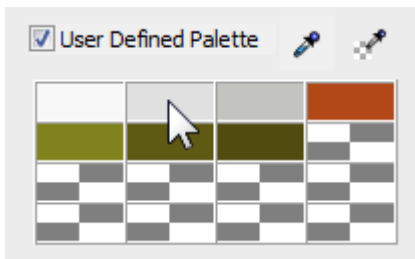
1. Click the drop-down arrow on the  **AutoTrace** button (on context toolbar) and select a profile from the menu.


- or -


Click  **AutoTrace** and choose a profile from the profile selection screen.

2. The AutoTrace studio appears with the original artwork displayed, along with adjustable sliders, a colour palette (logo profile only), or a collapsible preview window (photo profiles only) showing how your output will look once traced.
3. (Optional) Adjust the sliders at the right of the workspace (each unique to the profile used); your profile settings will be modified.
4. Click  **Trace** to trace your logo, photo, or other bitmapped artwork. It's best to keep clicking this button to update your main window after any adjustment. If you want to abort the autotracing process, you can click the **Cancel** button on the progress bar.
5. (Optional) For fine-tuning your traced output, several options are possible:
  - Click  **Adjust** to access **Merge**, **Fill**, and **Node tools** for fine-tuning your vector output.
  - For removing colours in traced logo output, right-click on the palette colour you want to remove.





You can **add** a new colour or **replace** an existing colour by left-clicking on an empty or occupied colour swatch and dragging the  **Colour Selector** to any colour on your computer screen. Remember to click **Trace** to refresh the view.

6. When you're happy with your traced output, click  **Accept**.



All slider settings are described in full in the Help pane which accompanies the AutoTrace studio. Also covered are procedures for tracing greyscale and colour photos.

The autotracing procedure above differs slightly when applied to greyscale or colour photos, i.e. instead of comprehensive palette control you have a photo preview.

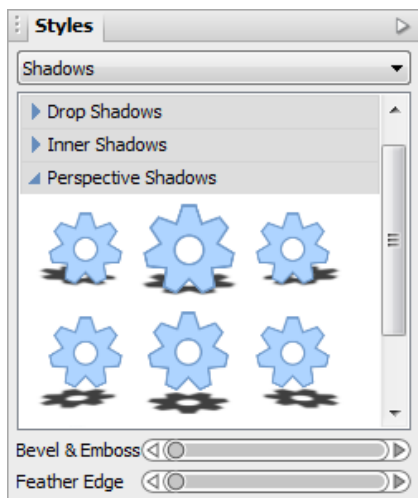
# Effects



8



## Using graphic styles



The **Styles tab** contains multiple galleries of pre-designed styles that you can apply to any object, or customize to suit your own taste! Galleries exist in effect categories such as 3D, Bevels, Blurs, Edges, Shadows, and other 2D and 3D filter effects, with each category having further subcategories.

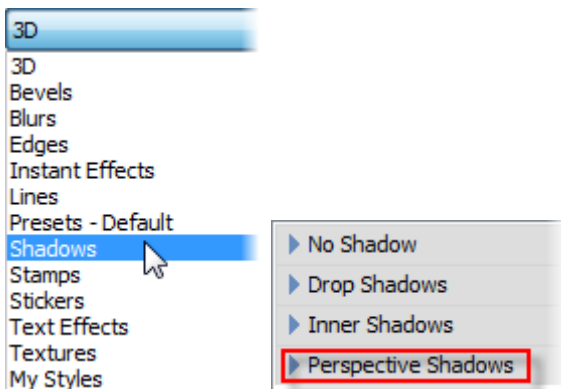
The Styles tab also lets you store your own graphic styles in a **My Styles** section if you would like to reuse them—the style is made available in any DrawPlus drawing. You can add and delete your items within each category, with the option of naming elements to facilitate rapid retrieval.



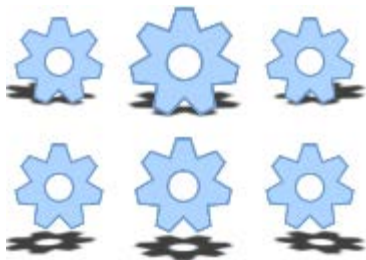
You can create your own categories and subcategories from the Style tab's **Tab Menu** by selecting **Graphic Style Manager** from the menu.

## To apply a graphic style to one or more objects:

1. Display the **Styles** tab.
2. Expand the drop-down menu to select a named style category (e.g., Shadows), then pick a subcategory by scrolling the lower window.



3. Preview available styles as thumbnails (cog shapes are shown by default) in the window.



4. Click a style thumbnail to apply it to the selected object(s).

## Applying 2D filter effects

### Applying bevels and embossing effects



You can apply some depth to your objects by applying an embossing effect.

- From the Styles tab, adjust the **Bevel & Emboss** setting on your selected object. The greater the value, the greater the embossed effect.


### Applying feathered edges




Feathering applies a softer edge to your objects, such as embellishments or cut materials. The effect is especially useful for presenting a photo on the page.

- From the Styles tab, pick a **Feather Edge** setting. This is the distance inside the object's outline within which feathering will be applied.

## Advanced 2D filter effects

 For more advanced control of filter effects, a **Filter Effects** dialog can be used to apply filter effects to an object.

### To apply 2D filter effects:

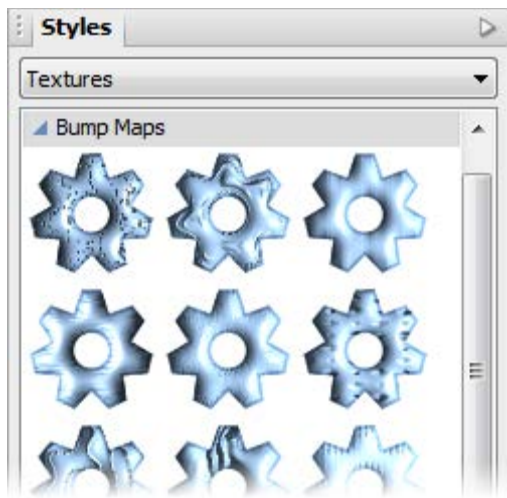
1. With an object selected, click  **Filter Effects** on the **Drawing** toolbar. The Filter Effects dialog appears.
2. To apply a particular effect, check its box in the list at left.
3. To adjust the properties of a specific effect, select its name and vary the dialog controls. Adjust the sliders or enter specific values to vary the combined effect. (You can also select a slider and use the keyboard arrows.) Options differ from one effect to another.
4. Click **OK** to apply the effect or **Cancel** to abandon changes.

## Applying 3D filter effects


3D filter effects go beyond 2D filter effects (shadows, bevel, emboss, etc.) to create the impression of a textured surface on the object itself. Keep in mind that none of these 3D effects will "do" anything to an unfilled object—you'll need to have a fill there to see the difference they make!




The Studio's Styles tab is a good place to begin experimenting with 3D filter effects. Its multiple categories each offer a gallery full of predefined effects, using various settings.




You'll see a variety of remarkable 3D surface (Glass, Metallic, Wood, etc.) and texture presets in the Instant Effects and Textures categories, respectively. Click any thumbnail to apply it to the selected object. Assuming the object has some colour on it to start with, you'll see an instant result!

Alternatively, you can customize a preset, or apply one or more specific effects from scratch, by choosing  **Filter Effects** from the **Drawing** toolbar. If you want to keep the effect for future, you can save it.

### To apply 3D Effects:

1. With an object selected, choose  **Filter Effects** from the **Drawing** toolbar.
2. Check **3D Effects** in the Filter Effects dialog.
3. Adjust the "master control" sliders here to vary the overall properties of any individual 3D effects you select.

- **Blur** specifies the amount of smoothing applied (in point size). Larger blur sizes give the impression of broader, more gradual changes in height.
  - **Depth** specifies how steep the changes in depth appear (in point size).
  - The  button is normally down, which links the two sliders so that sharp changes in Depth are smoothed out by the Blur parameter. To adjust the sliders independently, click the button so it's up.
4. Check a 3D effect in the 3D Effects list which reflects the 3D effect you can achieve.

## Adding drop shadows



You can apply simple drop shadows by using the

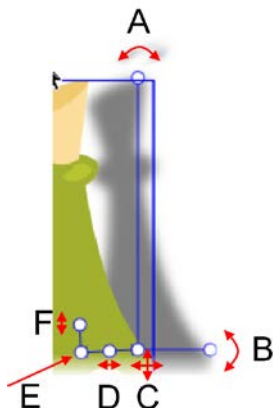
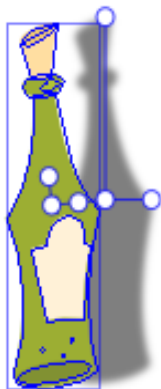


**Shadow Tool.** When applied, the selected object is given a sense of depth.



The **Shadow Tool** offers freeform control of the drop shadow effect. With its on-the-page control nodes and supporting Shadow context toolbar, the tool offers various adjustments such as Opacity, Blur, and X and Y Shear. Nodes appear on the object for fine control.






**Simple shadow**  
(drag from object  
centre)

Node controls:  
(A) Shear X/Scale Y, (B) Shear Y/Scale X,  
(C) Reposition shadow, (D) Opacity,  
(E) Lock Point, (F) Blur.  
(showing control nodes)



With subtle Shear and Scale adjustments you can produce **skewed shadows** for realistic 2D lighting effects. The example opposite has had adjustments to Shear X and Shear Y, with blurring and reduced opacity.

## Applying drop shadows with Shadow Tool

1. With an object selected, click the  **Shadow Tool** on the **Drawing** toolbar. You'll notice control nodes appear which allow adjustment as described in the annotated illustration above.

2. Drag across the object to create a drop shadow (note additional nodes being created).
3. Change blur, opacity, shear, or scale accordingly by node adjustment (or via the displayed context toolbar).



If you want to create simple shadows without additional control of the above properties, disable **Advanced** on the context toolbar, then drag the shadow to a new position.

### To change a shadow's colour:

- Select a colour from the Studio's Colour tab.

### To remove the shadow from an object:

- Double-click the object while the Shadow Tool is selected.

## Creating blends

Blends enable you to create shapes between two separate shapes on the page. These could be identical in shape but have different line/fill properties or be differently shaped. For the latter, the blending process “morphs” one shape into the other shape.

Each step creates an intermediate shape, where the colour, transparency, and line properties may all change, along with the object shape, during the blend process.



For identical shapes:



For different shapes (e.g. a blend between a Quick Ellipse and a Quick Petal):



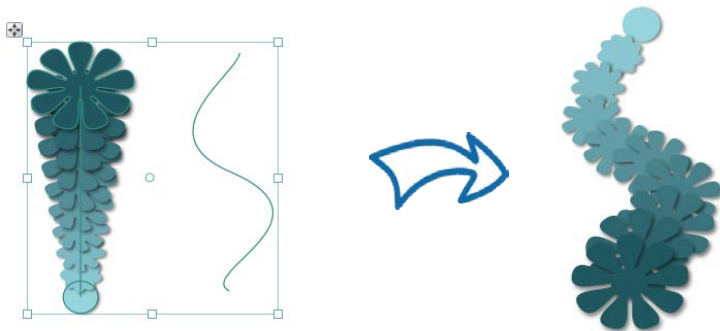
### To create a blend with the Blend Tool:

1. On the **Drawing** toolbar, click the arrow next to the  **Replicate Tool**.
2. From the flyout, select the  **Blend Tool**.
3. (Optional) From the displayed Context toolbar, choose:
  - The number of “morph” **Blend Steps** to be taken between both points (to increase/decrease the smoothness of the blend).
  - A Position Profile or Attribute Profile for non-uniform blends—use for rate or transform and blend, respectively.
  - A **Colour Blend Type** which defines how colour distribution occurs between the originating and destination object.
4. Hover over the object to display the Blend cursor.

- Click and drag the cursor, drawing a dashed line as you go, to your destination point (this must be on an object) and release.

## Blending on a path

DrawPlus allows you to make your blended objects conform to a drawn freeform line or curve.



### To fit a blend to a line or curve:

- Select the line or curve and the previously blended object.
- From the **Tools** menu, select **Fit Blend to Curve**.

## Using stencils

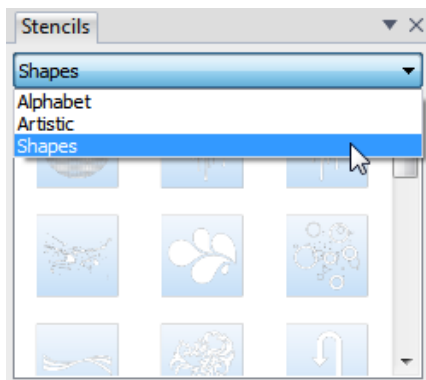


The **Stencils** tab provides a selection of ready-to-go, fun stencils that will add impact to any page. Whether you paint over them with the **Brush Tool**, or use them to cut out a design from a picture, stencils provide endless opportunities for creativity.

If you're feeling really creative, you can create your own stencils by dragging objects to the **Stencils** tab.

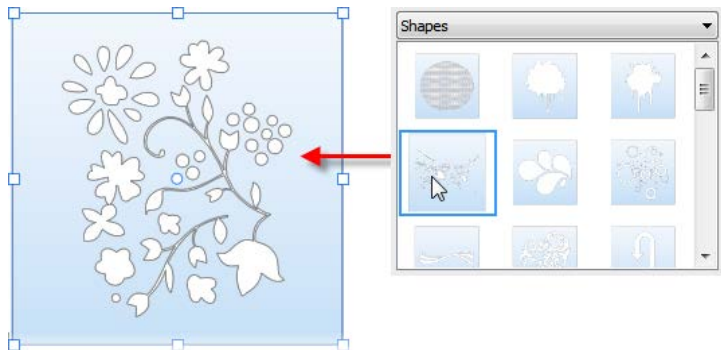
### To add a stencil to your page:

1. On the **Stencils** tab, click the drop-down list to select a category.




The lower gallery displays thumbnails of the stencils available in the selected category.

- Click and drag a thumbnail from the gallery onto your page.



### To paint over stencils:

- Add a stencil to your page.
- From the **Drawing** toolbar, click the  **Brush Tool**.
- Choose a brush type from the **Brushes** tab and set your brush colour on the **Colour** tab. (See Applying brush strokes on p. 56.)





Brushes in the **Effects**, **Paint** and **Spray** categories are particularly suited to stencil work.

- Paint over the stencil with your chosen brush.



Swap to different brush colours or brush types using respective Colour and Brushes tabs.

5. From the **Drawing** toolbar, select the  **Pointer Tool**.
6. Click the stencil, then select  **Lift Stencil** below the stencil.

The stencil is removed, revealing the painted design beneath it.



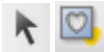


Any brush strokes applied outside of the white and blue sections will show when you lift the stencil. To avoid this, hold down the **Ctrl** key on your keyboard when you click **Lift Stencil**.

### To create multiple stencils:

1. Add stencils to your page and position them as required.
2. Paint over your stencils.



3.  From the **Drawing** toolbar, select the **Pointer Tool** and then click each stencil in turn. Click **Lift Stencil** below each stencil to remove it.



Take care when painting over your stencil, because any paint applied outside of the blue area will show when you lift the stencils.





# Stopframe/ Keyframe Animation



9



## Getting started with animation

A clear distinction has to be made between two types of animation techniques, both possible from within DrawPlus:

- **Stopframe animation:** also known as Stop motion animation, involves the animation of static objects frame-by-frame. In the film industry, Stopframe animation is used within widely known productions based on figures made of clay or other bendable material.
- **Keyframe animation:** performs movement of computer-generated objects from basic shapes to cartoon characters (used traditionally in Stopframe animation). Using the power of computing, smooth playback of animated objects is easily achieved between key moments in your animation, defined by the user as **Keyframes**.

DrawPlus lets you export Stopframe or Keyframe animations to a variety of different formats. For more details, review *Exporting animations* (see p. 151).

For now we'll look at how to set up both Stopframe and Keyframe animations within DrawPlus.

### To begin a new Stopframe or Keyframe animation:

1. Start DrawPlus (or choose **File>Startup Assistant** if it's already running).
2. Select **New Drawing>New Keyframe Animation** or **New Drawing>New Stopframe Animation** from the Startup Assistant.
3. In the right-hand pane, review the document types available.
4. Select a document type thumbnail from a category in the right-hand pane.



To customize document settings, see **Animation Custom Settings** in DrawPlus Help.

## To begin a new Stopframe or Keyframe animation from scratch:

- Either:
  - Select **New>New Stopframe Animation** from the **File** menu.
  - or -
  - Select **New>New Keyframe Animation** from the **File** menu.

A new document window opens in the respective Animation mode.



You can convert any drawing into either animation type from the **File** Menu.



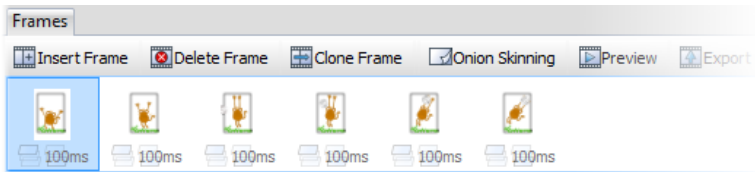
Modify Page Setup such as page size and orientation from the Pages context toolbar.

## To save an animation:


- Choose **File>Save**. DrawPlus saves animation documents in the proprietary .dpa format.

## Working with Stopframe animation


In Stopframe animation mode you'll be working predominantly with the Frames tab. It is ideally suited for animation because of its width and easy control of individual frames (stopframes are spread along the tab for easier management).



### To view the Frames tab:

- Unless the tab is already displayed, click the  handle at the bottom of your workspace to reveal the tab.

### To clone the current frame to a new frame:

- Select a frame in the Frames tab, and choose  **Clone Frame**.

The frame is added after the selected frame.

### To generate a new blank frame:

- Choose  **Insert Frame** from the Frames tab.

### To navigate between frames:

- Click on any visible frame to display its objects on screen (objects can then be edited).

### To rename a frame:

- Right-click a frame and choose **Properties**. In the **Name** field, type in a new frame name. The new name is shown on the Hintline toolbar.

## To change frame sequence:

- Drag the selected frame to a new position in the frame order. When the dragged frame's thumbnail creates a slightly wider space between two frames than usual, release the mouse button to place the frame to be moved.



## To delete a selected frame:

- Click  **Delete Frame** from the Frames tab.

## Onion Skinning

Onion skinning is a standard animation technique derived from cel animation, where transparent sheets enable the artist to see through to the preceding frame(s). It's useful for enabling precise registration and controlling object movement from frame to frame.

### To turn onion skinning on or off:

1. From the Frames tab, click the  **Onion Skinning** button to turn onion skinning on or off.
2. (Optional) To set more than one previous frame to be visible, click  **Properties**, then set the number of frames in the **Onion Skinning** input box.

The preceding frame's objects will show behind those of the currently selected frame.

## Previewing Stopframe animations

You can **preview** your animation prior to export at any time either directly from your Frames tab (shown in a Preview window) or from within your default web browser.

### To preview in the Preview window:

- Click  **Preview** on the Frames tab.

The animation loads into the Preview window and begins playing at its actual size and speed. You can use the control buttons (Play, Stop, etc.) to review individual frames.

### To preview in a web browser:

- Select **Preview in Browser** from the **File** menu. The animation loads your default web browser and begins playing.

## Working with Keyframe animation

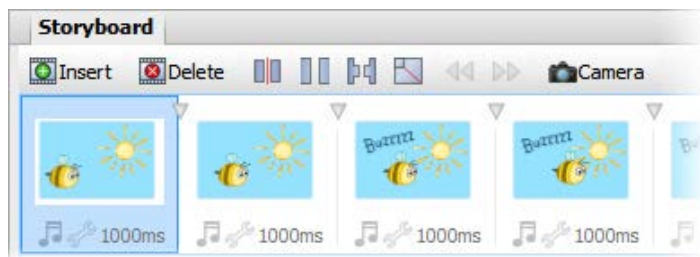


We'll assume that you've entered Keyframe animation mode either from scratch (via **File>New>New Keyframe Animation**) or have converted your existing drawing to Keyframe animation mode (using **File>Convert to Stopframe Animation**).

Essentially, the technique lets you create only user-defined **keyframes** through which objects animate, with each keyframe containing **Key objects** which can be assigned a position, rotation, attributes, etc.

Intermediate steps between Key objects are created automatically and produce a smooth professional-looking inter-object transition (this is called **Tweening**); Tweened objects are created as a result.

The Storyboard tab is the workspace for laying out your animation "story" in a chronological keyframe-by-keyframe sequence (from left to right).





## Supporting tabs

Keyframe animation mode also presents other tabs that support the Storyboard tab. These are exclusively used within keyframe animation (and do not show in normal or stopframe animation mode), i.e.

- The **Easing tab** is used for applying linear or non-linear changes between key objects with use of editable envelopes (e.g., to change object position, morph, scale, rotation, skew, colour, and transparency).
- The **Actions tab** allows objects and keyframes to be attributed actions which will run (e.g., go to a URL or designated marker) when an event is triggered (e.g., MouseOver, Rollovers, etc.).

A keyframe camera, masking, and sound/movies can also be used in keyframe animation.


See DrawPlus Help for more information.

## Getting started




To learn how to create a new Keyframe animation, or convert an existing drawing, see *Getting Started With Animation* on p. 142.

### To view the Storyboard tab:

- Unless the tab is already displayed, click the  handle at the bottom of your workspace to reveal the tab.

We'll assume that you've drawn objects on the first keyframe. You can run forward these automatically throughout your animation by creation of additional keyframes—this builds up your animation "story" quickly. Other methods exist to run objects forward (and backwards) but let's concentrate on the insertion of keyframes to do this.


## To insert keyframes:

1. From the Storyboard tab, select a keyframe and choose  **Insert**.
2. From the dialog, choose the **Number of keyframes** to add to the Storyboard tab. Set a default **Keyframe duration** for each created keyframe.
3. Choose to add keyframe(s) at a **Location** before or after the currently selected keyframe or before/after the first or last keyframe.
4. (Optional) Check **Insert blank keyframes** if you don't want to include run forward objects in your keyframes. Blank frames are useful "filler" frames that add breaks in your animation for messages, logos, etc.
5. Click **OK**.

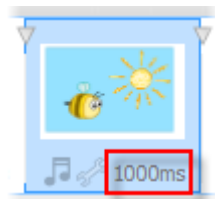
## To view or edit a particular keyframe:

- Select a keyframe in the Storyboard tab.

## To delete a keyframe:

- Select the keyframe and choose  **Delete**.

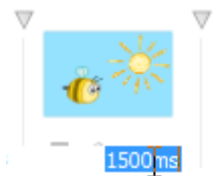
## Keyframe duration



Keyframe duration represents the amount of time in between each individual keyframe.

## To set the duration of an individual keyframe:

- Click the keyframe's duration (e.g., 1500ms) under its thumbnail, and, when selected, type a new value then click away.



The total duration of your animation is shown on your last keyframe, e.g. (5.0s).

## Previewing keyframe animations



From the Storyboard tab, you can **preview** your animation at any time either in a web browser or in Flash Player (This is a DrawPlus install option). This is a quick way of checking it prior to export.

## Exporting animations and presentations

Exporting your stopframe animation, keyframe animation or rostrum presentation outputs it to a media file that can be shared or viewed, either standalone or when included as part of a web page.

DrawPlus lets you export to a variety of formats as indicated below:

Export	Stopframe	Keyframe	Rostrum Presentation
Flash SWF	✗	✓	✓
Flash Lite/i-Mode	✗	✓	✗
Video	✓	✓	✓
Animated GIF	✓	✓	✗

### To export your animation as a Flash file:

1. Choose **Export>Export as Flash SWF** from the **File** menu.
2. From the dialog, provide a ShockWave Flash file name and folder location, and click the **Save** button. You'll see an export progress dialog appear until the Flash file is created.

### To export to Flash Lite/i-Mode:

1. Choose **Export>Export as Flash Lite/i-Mode** from the **File** menu.
2. From the dialog, provide a ShockWave Flash file name and folder location, and click the **Save** button. You'll see an export progress dialog appear until the file is created.

**To export animation as video:**

1. Choose **Export>Export As Video** from the **File** menu.
2. From the displayed dialog's Basic tab, select your chosen export type from the **File type** and **Template** drop-down list according to the type of output video format you require. The presets offered are designed to provide excellent quality output, from small resolutions (360p) to high definition resolutions (1080p) as well as for DVD authoring.
3. (Optional) For Keyframe and Stopframe animations, click **Match project settings** to set an approximate video frame size based on your animation project's Page size (set in Page Setup).
4. Specify a name for file in the **Filename** box, clicking **Browse** and selecting a new location if you first wish to choose an alternate drive or folder to store your file.
5. (Optional) Set an export **Quality**.
6. Click the **Export** button. Your project will then be composed and converted into the specified format and you will be shown a progress bar during this process.




Keyframe animations exported as video do not support audio.



Rostrum camera presentations do not support audio export.

Within Stopframe animation, this option lets you create an animated GIF by default, which we'll focus on here. For keyframe animation, you can export a single keyframe as any type of image format.

## To export as an animated GIF:

1. Choose  **Export** from the Frames tab.
2. Click the **Export** button (or **Close** to simply record the settings if you plan to preview in a browser first).
3. Provide a file name and folder location, and click **Save**. Don't worry if you have extra white space around your image. Any unused border area will be cropped automatically, just as you saw in the Preview window.



# Print, Publish and Share



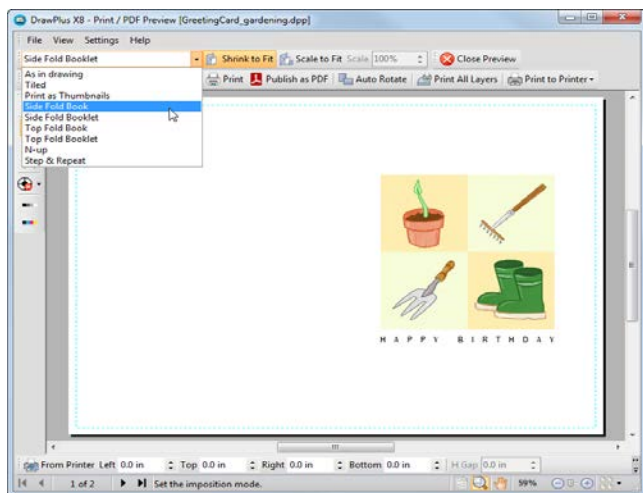
10





## Interactive Print/PDF Preview

The **Print/PDF Preview** mode changes the screen view to display your layout without frames, guides, rulers, and other screen items. Supporting toolbars allow for a comprehensive and interactive preview of your pages before printing or publishing as PDF.



Print Preview is interactive because a main feature is to provide **print-time imposition**. Put simply, this allows you to create folded books, booklets, and more, **at the printing stage** from unfolded basic page setups. Other interactive features are also available while in Preview mode.

- Select installed printers, and choose which pages to print and how they print (to printer, file or separation).
- Add and adjust printer margins.
- Switch on/off page marks when generating professional output.


## To preview the printed page:

1. From the **File** menu, select **Print/PDF Preview**.

In Print/PDF Preview, your first printer sheet is displayed according to your printer's setup.

2. (Optional) Choose an installed printer from the **Printer** toolbar's drop-down list.
3. (Optional) Adjust printer margins from the **Margins** toolbar.
4. Review your design using the page navigation controls at the bottom of your workspace.

## To print:

- From the **Printer** toolbar, select  **Print**.  
- or -

From the **File** menu, select **Print**.

The standard Print dialog is then displayed, where settings are carried over from Preview mode.



## To publish as PDF:

- From the **Printer** toolbar, select **Publish PDF**.  
- or -

From the **File** menu, select **Publish PDF**.

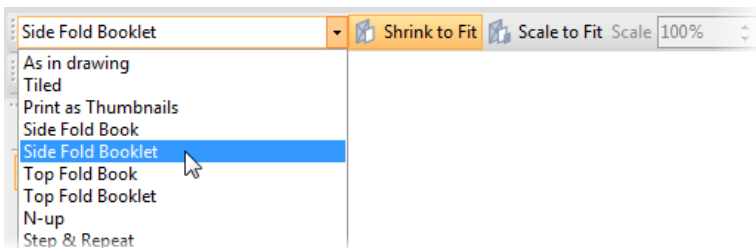
The standard **Publish PDF** dialog is then displayed.

## To cancel Print Preview mode:

- Select  **Close Preview** from the top of your workspace (or click the window's  **Close** button).

## Print-time imposition

During preview, you can enable imposition of your drawing, choosing a mode suited to your intended final drawing (book, booklet, etc.). Each mode displays different toolbar options on the context-sensitive **Imposition** toolbar. Document imposition is not limited to desktop printing—it can also be used when creating a press-ready PDF for professional printing.

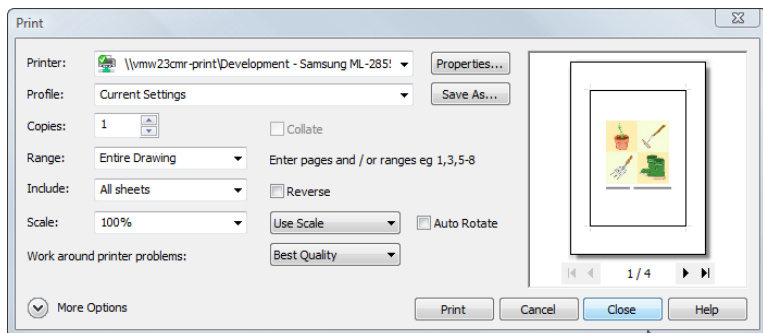


## To choose an imposition mode:

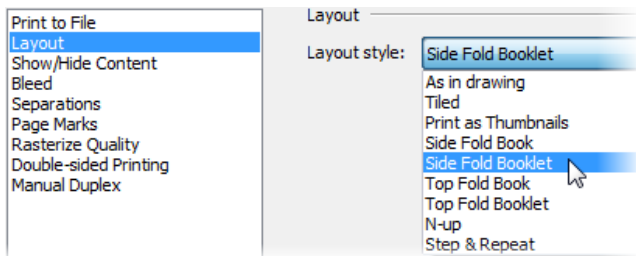
- From the **Imposition** toolbar, select an option from the **Imposition Mode** drop-down list.

## Printing basics

DrawPlus supports printing directly to a physical desktop printer (e.g., All-in-ones, Inkjet and Laser printers) or to an electronic file such as Adobe Acrobat PDF (see p. 161). Printing your document to a desktop printer is one of the more likely operations you'll be performing in DrawPlus. The easy-to-use Print dialog presents the most commonly used options to you, with a navigable "live" Preview window to check your print output.



The dialog also supports additional printing options via the **More Options** button including **Double-sided Printing**, **Manual Duplex**, and many other useful printing options. One particular option, called **Layout**, allows for print-time imposition of your document—simply create a booklet or other folded document at the print stage.




For a detailed description of each option, see Interactive Print/PDF Preview in DrawPlus Help.



If you're working with a service bureau or commercial printer and need to provide PDF output, see Publishing as PDF on p. 161.

## To set up your printer or begin printing:

1. Click  **Print** on the **Standard** toolbar. The Print dialog appears.
2. Select a currently installed printer from the **Printer** drop-down list. If necessary, click the **Properties** button to set up the printer for the correct page size, etc.
3. Select a print profile from the **Profile** drop-down list. You can just use **Current Settings** or choose a previously saved custom profile (.ppr) based on a combination of dialog settings; **Browse** lets you navigate to any .ppr file on your computer. To save current settings, click the **Save As** button, and provide a unique profile name. The profile is added to the drop-down list.  
Note: If you modify profile settings, an asterisk appears next to the profile name.
4. Select the number of copies to print, and optionally instruct the printer to **Collate** them.
5. Select the print **Range** to be printed, e.g. the Entire Drawing, Current Page, or range of pages. For specific pages or a range of pages, enter "1,3,5" or "2-5", or enter any combination of the two.

To print selected text or objects, make your selection first, then choose Current Selection appearing in the **Range** drop-down list **after selection**.

Whichever option you've chosen, the **Include** drop-down list lets you export all sheets in the range, or just odd or even sheets, with the option of printing in **Reverse** order.

6. Set a percentage **Scale** which will enlarge or shrink your print output (both page and contents). A 100% scale factor creates a full size print output. Alternatively, from the adjacent drop-down list, choose **Shrink to Fit** to reduce your document's page size to the printer sheet size or **Scale to Fit** to enlarge or reduce the document page size as required.
7. Keep **Auto Rotate** checked if you want your document page to automatically rotate your printer's currently set sheet orientation. When you access the Print dialog, if page and sheet sizes do not match, you'll be prompted to adjust your printer sheet orientation automatically (or you can just ignore auto-rotation).
8. Click **Print**.

## Publishing as PDF

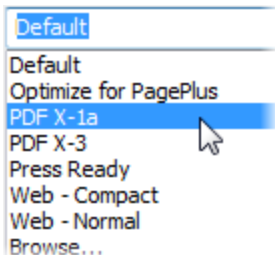
DrawPlus can output your drawings to Adobe PDF, ideal for both **screen-ready** distribution and **professional** printing. In DrawPlus, ready-to-go PDF profiles are available for both uses, making PDF setup less complicated.



DrawPlus lets you operate in a CMYK colour space from document setup to professional PDF output. This involves starting with a new drawing (p. 13) using a CMYK Primary colour space (p. 94), designing using CMYK colours, and publishing a PDF-X1a-compliant PDF file (using the PDF/X-1a printer profile).

### To export your document as a PDF file (using a profile):


1. Choose **Publish as PDF** from the **File** menu.
2. Select a profile for screen-ready or professional output from the **Profile** drop-down list.



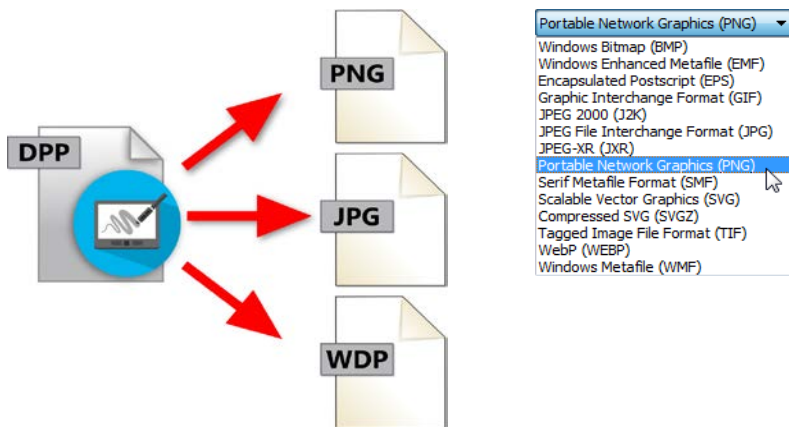
The dialog updates with the selected profile's new settings. The Compatibility is set according to the profile and doesn't need to be set.

3. Select the **Range** to be published, e.g. the Entire Drawing, Current Page, or range of pages. For specific pages or a range of pages, enter "1,3,5" or "2-5", or enter any combination of the two.

Whichever option you've chosen, the **Include** drop-down list lets you export all sheets in the range, or just odd or even sheets.

4. Set a percentage **Scale** which will enlarge or shrink your published output (both page and contents). A 100% scale factor creates a full size print output.
5. (Optional) Click  **More Options** and make any additional settings as required.
6. Click **OK**.

## Exporting objects and drawings

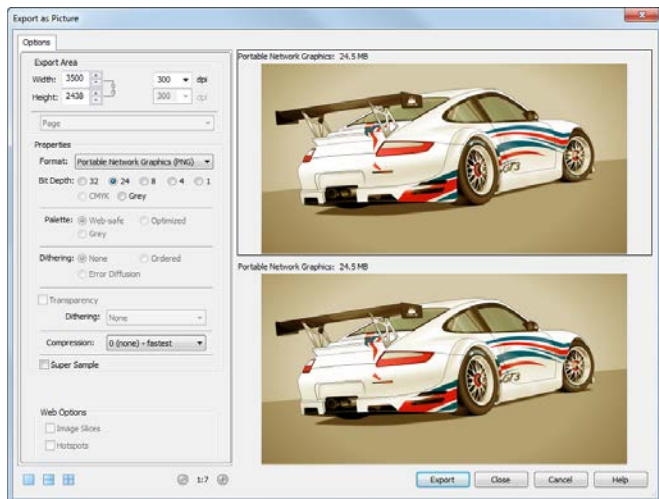


You can export at any time by using **Export as Picture** or **Dynamic Preview**; the former lets you compare export settings, the latter allows editing during preview—great for pixel-accurate editing of your intended output!

### Exporting as picture

Especially if you're exporting graphics for the web, you can take advantage of the **Export as Picture** dialog, which will greatly help you in reducing file sizes and download times as far as possible while maintaining image quality. The dialog lets you export the individual page, all pages, just a selected object(s), or a user-defined region. You can also see how your picture will look (and how much space it will take up) before you save it! For visual comparison, its multi-window display provides side-by-side WYSIWYG previews to compare different formats, or the same format at differing bit depths.





## To export as a picture:

1. Choose **Export>Export as Picture** from the **File** menu.
2. (Optional) From the **Export Area** section, you can scale the picture to a new size if desired (change **Width** and **Height**), or adjust the **dpi** (dots per inch) setting. For graphics to be used on-screen, it's best to leave these values intact.
3. From the drop-down list, choose if the export can be based on the whole **Page**, **All Pages**, **Selected Area**, or **Selected Objects**.
4. From the **Properties** section, select the intended graphics file format from the **Format** drop-down list. The remaining box area will display different options depending on your chosen graphics format. Change settings as appropriate to the file format selected.
5. (Optional) From the **Web Options** section, you can control web elements in your picture, i.e. you can check **Image Slices** or **Hotspots** if you've create these elements and want them exported.

- Click **Export**. If you click **Close**, DrawPlus remembers your preferred format and settings.
- From the Export dialog, navigate to a folder of your choice, enter a File name, then click **Save**.



When **exporting Stopframe animations**, an Animation tab is shown in the dialog for frame export control.




For converting DrawPlus objects into pictures on the page, use **Tools>Convert to Picture**.


## Defining a region for export





DrawPlus lets you export a specific region in your design. The region, shown as a bounding box, is actually a layer **overlay** which can be resized, repositioned over the export area and shown/hidden. The Export as Picture dialog is used for the actual export process.

### To define an export region:

- From the **Standard** toolbar, click  **Overlays** and select **Export Overlay** from the drop-down list. A bounding box is overlaid over your page.


2. Drag a corner (or edge) handle to resize the box; reposition the box over the export area.
3. (Optional) Name the Export Overlay layer in the **Export Name** box on the context toolbar (this labels the export overlay in the Layers tab and provides the default file name at export).
4. Click **Export**  shown under the box. The Export as Picture dialog is displayed, from which you can modify and choose an export file format (described previously).



You can also create a **Bitmap Fill**  or a **Vector Fill**  (from either the bounding box or the context toolbar), which will add your selection as a swatch under the relevant category (**My Bitmaps** or **My Vector Fills**).

When the overlay is applied, the bounding box is automatically selected (it shows the selection colour of the overlay layer). Clicking away from the box will deselect it (showing the box Colour), but it can be reselected at any time (e.g., for repositioning).

### To select the box:

- From the **Standard** toolbar, select  **Overlays** and then **Export Overlay**.

## Exporting multiple pages

If you have multiple pages in your drawing, you can export any currently viewed page or all pages.

### To export the current page:

- From the Pages tab, select a page you wish to export. When you export, the Export as Picture dialog will default to export the page,

unless objects on the page are selected.



## To export all pages:

- From the dialog, select **All Pages** in the drop-down list.



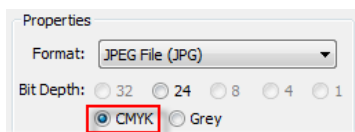
For example, exporting a four-page project called mydesign.dpp will create four files called mydesign00.png, mydesign01.png, mydesign02.png, and mydesign03.png.

## Exporting as CMYK TIFF or JPEG

For professional printing, you can create a drawing in a CMYK colour space (see DrawPlus Help), which offers colour predictability during design, processing, and output. You can either publish your design as a PDF document (p. 161) or export as picture, with both options maintaining a CMYK colour space.

### To export as a CMYK TIFF or JPEG picture:

- In the Export as Picture dialog, enable **CMYK**.



## Presentations with the Rostrum Camera



A rostrum camera in television production and filmmaking uses slides to animate a still picture or object. The **Rostrum Camera** feature in DrawPlus uses slides to transform the content in your document into an animated presentation, cartoon, slideshow or storyboard. Each slide you create for the content is in effect a rostrum camera position. The camera positions are panned over the content slide-by-slide.

You can configure the transition time when moving from one slide to another, and control fading, panning and zooming. Layers can determine if slides are revealed progressively or layer-by-layer.

A presentation can be previewed as it is created, or shared with others when it's finished by exporting it as a Flash file or video. In the example we've used here, the presentation starts at the first slide at the top and pans down through each slide to finish at the final slide at the bottom.

## Starting a new presentation

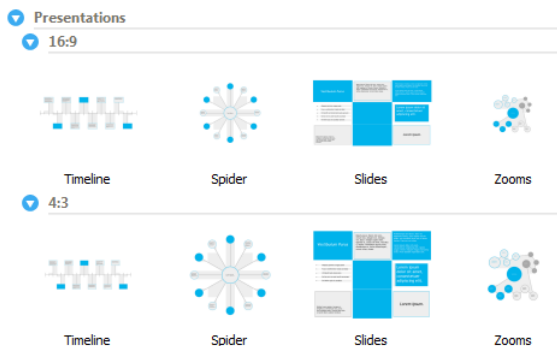
New presentations can be created in two ways:

- Using a **preset page layout**, i.e. a page array of already created but empty slides that can have objects added to them.
- By **creating your objects first**, you can insert a slide over the existing content using the Rostrum Camera. You repeat the process for other slides, linking slides together.

Taking either approach results in a set of connected slides, each 'filled' with slide content.


### To create a presentation from a preset page layout:

1. From the Startup Assistant, select **New Drawing**, then **Create>New Drawing** from the middle pane.
2. From the Presentations category in the main pane, navigate the available sub-categories. Layouts are presented in sub-categories for either 16:9 or 4:3 aspect ratio slides.




3. Select a thumbnail. The new presentation opens as a new document.
4. Inside each greyed out slide, design your slide content, starting with the slide labelled as '1'.



## To create a presentation from scratch:




1. Add objects on the page intended for each slide.
2. From the **Drawing** toolbar, select  **Rostrum Camera**.
3. Position the shaded slide over the first set of objects to enclose them.

The first slide you add is always number one in your sequence as indicated on the slide.



4. Drag the  icon next to the slide to the next set of objects (i.e. proposed Slide 2) and release the mouse button. This is the next camera position.
5. Repeat for each new set of objects.

 You can insert additional slides in the sequence by dragging out from any slide's  icon. The slide sequence order is updated accordingly.

 The circle icon next to your slide indicates if the slide is either selected () or deselected (). The colour changes according to the layer's identifying colour.



You can use the Rostrum Camera over multiple pages. When the presentation gets to the last slide on your first page, you can jump to the next page and start a new slide sequence.

## Slide positioning

The position of slides in relation to each other dictates the camera position, i.e. the extent and direction of panning. Slides and content rotated by 90° also produce camera rotations.

## Rostrum camera ratio

The rostrum camera aspect ratio can be 16:9 or 4:3.

### To set the rostrum camera ratio:

- With your rostrum camera selected, on the Context toolbar, click the **Rostrum Ratio** drop-down list and set the ratio.


## Editing slides

The Slides tab stores in sequence the individual slides that comprise your presentation. The properties of each slide can be edited. You can change transitions between slides, configure transition times and set hold times between each slide. You can also determine how layers are revealed.





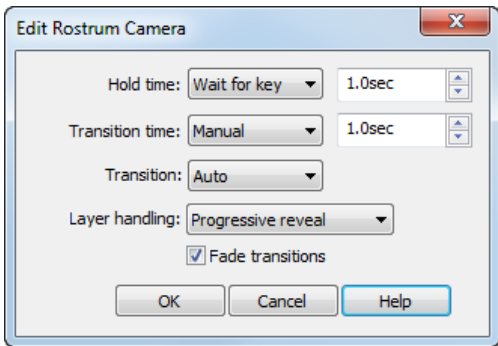


## To view the Slides tab:

- Unless the Slides tab is already displayed, click the  handle at the bottom of your workspace.

## To edit a rostrum camera slide:

1. On the **Drawing** toolbar, click  **Rostrum Camera** and select a slide on the page. The **Slides** tab shows all camera positions in your drawing.
2. Click the  icon on the slide you want to edit. The Edit Rostrum Camera dialog appears.



3. Select hold, transition, and layer handling options from the dialog.
4. Click **OK**.

## To delete a slide:

- Select a slide in the **Slides** tab and press the **Delete** key.

## **Previewing rostrum camera presentations**

As a quick way of checking prior to export, you can preview your presentation at any time and view it in either a web browser or in Flash Player.

## **Exporting rostrum camera presentations**

You can export your presentations to Flash and video formats. For more information, see [Exporting animations and presentations](#) on p. 151.



# Additional Information



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## Contacting Serif

### Help with your Product

#### On the web



[community.serif.com](http://community.serif.com)

Get answers and ask questions in the Serif community!

### Additional Serif information

#### On the web

Serif website

[www.serif.com](http://www.serif.com)

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Nottingham, NG11 7GW, UK

Phone

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+44 800 376 1989  
800-794-6876 (US, Canada)

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(0800) 376 7070  
+44 800 376 7070  
800-489-6703 (US, Canada)

Customer Service

0845 345 6770  
800-489-6720 (US, Canada)

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